## 890IT-Series Wheel Clamp TIRE CHANGER

# INSTRUCTION MANUAL READ THIS ENTIRE MANUAL BEFORE OPERATION BEGINS

Model 893-IT 20" turntable with internal clamping range 12"-23", external clamping range 10"-20"

Model 898-IT 24" turntable internal clamping range 15"-28", external clamping range 13"-24"

For servicing single piece automotive and most light truck tire/wheel assemblies

# Safety Instructions Operating Instructions Installation Instructions Maintenance Instructions

READ these instructions before placing unit in service. KEEP these and other materials delivered with the unit in a binder near the machine for ease of reference by supervisors and operators.

#### RECORD THE FOLLOWING INFORMATION WHICH IS LOCATED ON THE SERIAL NUMBER DATA PLATE.

Serial Number:	Model:	
Factory Code:		

Technical Standard Code Q/YGM001--2006 This product has passed the examination.



Operators Protective Gear and Equipment A



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 operator's 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.

#### **▲** WARNING

A Failure to follow danger, warning, and caution instructions may lead to serious personal injury or death to operator or bystander or damage to property. Do not operate this machine until you read and understand all the dangers, warnings and cautions in this manual.

For additional tire, wheel, and/or inflation information contact the following:

RUBBER MANUFACTURERS ASSOCIATION 1400 K Street N.W. Washington, DC 20005 (202) 682-4800 www.rma.com

TIRE GUIDES, INC.

The Tire Information Center 1101-6 South Rogers Circle Boca Raton, FL 33487-2795 (561) 997-9229 www.tireguides.com

#### **Owner's Responsibility**

To maintain machine and user safety, the responsibility of the owner is to read and follow these instructions:

- Follow all installation instructions.
- Make sure installation conforms to all applicable Local, State, and Federal Codes, Rules, and Regulations; such as State and Federal OSHA Regulations and Electrical Codes.
- Carefully check the unit for correct initial function.
- Read and follow the safety instructions. Keep them readily available for machine operators.
- Make certain all operators are properly trained, know how to safely and correctly operate the unit, and are properly supervised.
- Allow unit operation only with all parts in place and operating safely.
- Carefully inspect the unit on a regular basis and perform all maintenance as required.
- Service and maintain the unit only with authorized or approved replacement parts.

  Keep all instructions permanently with the unit and all decals on the unit clean and visible.

This tire changer comes with a very detailed and easy to understand instruction manual. This manual **assumes** that the customer has used a wheel clamp style tire changer previously, or has operators that have operated a wheel clamp style tire changer. If this is your first tire changer purchase and you have not operated a wheel clamp style tire changer, it is strongly recommended to have a person/trainer who is familiar with this style of tire changer train you in the operation. This tire changer is very similar to many other tire changers on the market. The distributor that sold this unit will be glad to give you a training session at their location or guide you to someone who can provide a service call to your location for training (a service charge would apply). The distributor also offers telephone technical support and trouble-shooting suggestions as needed. This does not take away from the responsibility you have to read and understand this complete manual.

This responsibility is no different than when you purchase an automobile. The automobile dealer assumes you know how to operate and drive a motor vehicle. Safe operation is your responsibility and the dealer assumes you know how. Seek training as needed.

# **A** DANGER

**▲** EXPLOSION HAZARD – NEVER EXCEED 40 PSI WHILE SEATING BEADS

A Explosion Hazard Never inflate tire above manufacturer's recommended pressure after bead is seated.

#### **SAFTTY LABEL INSTRUCTION**





electrical shock hazard!



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



When breaking bead, the bead breaking blade will quickly move leftwards.



Note: when pressing the tire, the opened clamp cylinder may injure the hand of the operator. Remember, do not touch the side wall of the tire.



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



Do not stand behind the column to

Avoid injuring the persons when swinging arm



When rapid inflation, ensure the wheel clamped.

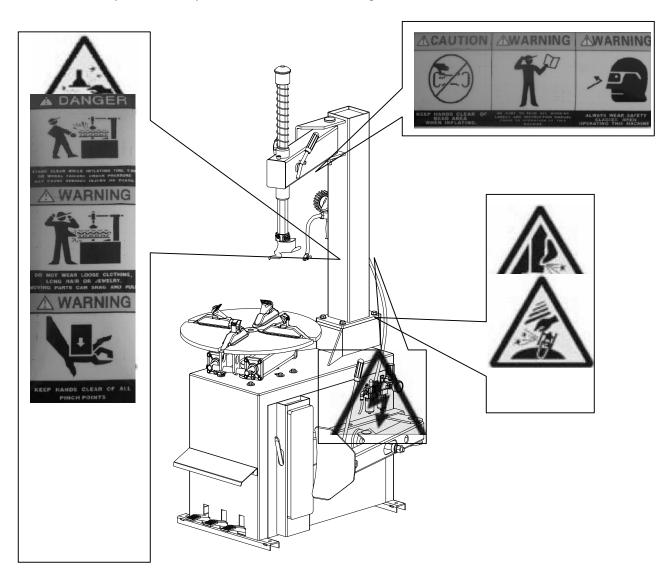
When operating, do not wear long hair, loose clothing or jewelry.

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

#### **SAFETY LABEL POSITION DIAGRAM**

Pay attention to keep the safety labels clean and readable at all times. Replace any label that is not clear, torn or missing.

Operators review the safety labels clearly and understand the meaning of each label.



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#### CHAPTER I BRIEF INTRODUCTION

#### 1.1 BRIEF INTRODUCTION

This series of equipment is the tire changer with fixed column and rocker arm tire changer. It is suitable to mount, demount and inflate all types of automotive and most light truck tire/wheel assemblies. When used properly, the operation is convenient, safe and reliable.

This series of machine can be divided into 4models. They are LC890, LC850, LC800 (cylindrical column) and LC112 (square column) The corresponding models with the quick inflation function are:GT890,GT850,GT800 (cylindrical column). Among them LC890 and GT890 and be equipped with the assistant to adapt to demount and mount the low profile and stiff tires.

#### 1.2 EQUIPMENT OVERALL DIMENSION (EXCLUDING THE ASSSISTANT)

model	height (mm)	length (mm)	width (mm)	Net weight kg
LC(GT) 890	2040	1135	870	223/233
LC(GT) 850	1820	985	780	200/210
LC(GT) 800	1858	975	895	210/220
LC112	1815	965	795	190

#### 1.3 TECHNICAL PARAMETER

Operation pressure: 8-10bar

motor: 50Hz 380V 0.75Kw (standard) 50Hz/60Hz 220V/110V 1.1Kw(optional)

turntable speed: 6rpm noise: <70dB (A)

#### 1.4 APPLICATION SCOPE

model	Max. wheel diameter	Max. wheel width	rim diameter (outer clamp)	rim diameter (inner clamp)
LC890 (GT)	1250mm(49")	400mm(16")	10"~20"	12"~23"
LC850 (GT)	960mm(37")	305mm(12")	10"~18"	12"~21"
LC800	960mm(37")	305mm(12")	8"~20"	10"~22"
GT800	960mm(37")	305mm(12")	10"~20"	12"~23"
LC112	960mm(37")	305mm(12")	10"~18"	12"~21"

(LC800 has adopted the enlargement of the movement base and clamp diameter for demount and mount the motorcycle tire.

#### 1.5 ENVIRONMENT REQUIREMENT

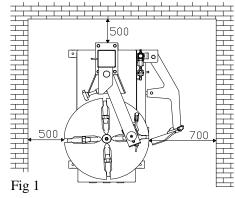
ambient temperature 0 °C ~45 °C relative humidity 30 ~95% Sea level max.1000M

Without dust and flammable and explosive gas

The minimum operation space around the machine is indicated in FIG 1.

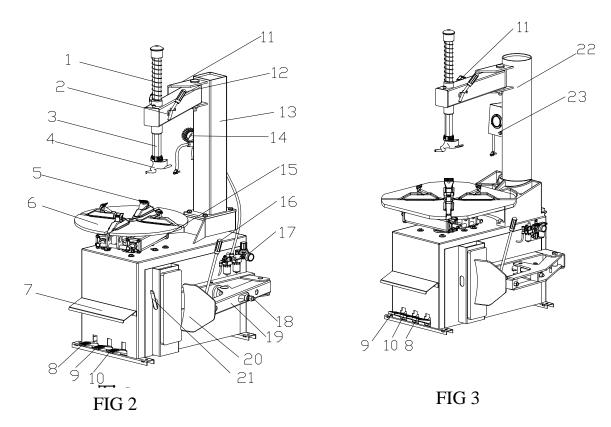


If installed outdoors, you must provide shelter to protect from the weather. It is forbidden to use in the site with the flammable gas!



#### CHAPTER II CONFIGERATION AND OPERATION

Know Your Unit - Compare this illustration with the unit before placing it into service. Maximum performance and safety will be obtained only when all persons using the unit are fully trained in its parts and operation. Each user should learn the function and location of all controls. Prevent accidents and injuries by ensuring the unit is properly installed, operated, and maintained.



1 vertical shaft spri

5 claw

9 clamp pedal

13 column

17 air source fitting

21 crowbar

r valve

6 turntable

10 tire press pedal

14 inflation gun

18 bead breaking cylinder

22 air tank

3 hexagon shaft 7 operation label

11 limit handle

15 clamp cylinder

23 inflation gauge box

19 tire press arm

4 uemount head 8 turntable pedal

12 lock handlel

16 blade handle

20 bead breaking blade

#### CHAPTER III INSTALLATION AND CALIBRATION

Before installation, carefully read this manual. The unauthorized change on the parts and spare parts of the machine will cause damage to the machine. Installation personnel should have the specific electrical knowledge. Operators must be trained and authorized. Before installation, carefully read the equipment list. If any question, please contact our company.

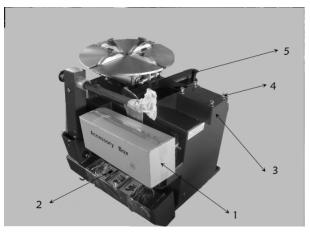
To ensure the success of the installation, please prepare the following common tools: Two wrenches (10"), one socket wrenches, one hexangular wrench, one tung and one screw driver. One hammer and one multi-purpose meter.

#### 3.1 DEPACKAGE

- 3.1.1 According to the de-package instruction on the package box, detach the box and remove the package material. Check to see if the machine has damage or not and if the spare parts are completed.
- 3.1.2 Keep the package material far away from the working site and remove it properly.

#### 3.2 INSTALLATION

3.2.1 After un-packaging the package carton, take out accessory boxes (FIG 4-1) ,bead breaking arm (FIG 4-5) and column assembly (FIG 4-2). Position the body according to the FIG1.4. Remove the bolt (FIG 4-4), elastic washer and plate washer on the body.



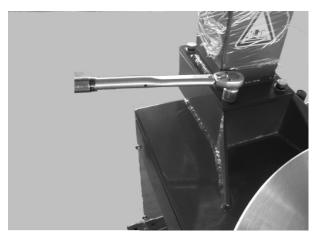
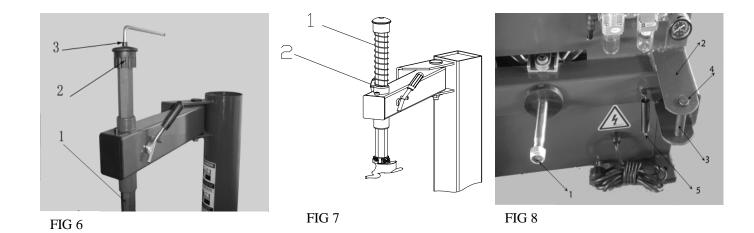


FIG 4 FIG 5

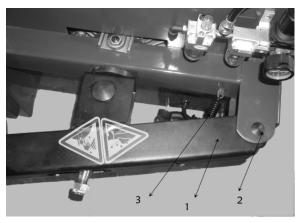
- 3.2.2 Place the column on the body. The direction of the warning label is forwards. Make the holes on the column base plate align to thread holes on the body. Once again assemble the removed the bolt (3,2,1), elastic washer and plate washer and plate washer removed in 3.2.1 The torque is 70 N·M (FIG5) Use torsion wrench to tight.
- 3.2.3 Use the wrench to remove the screw (FIG 6-3) hexangular shaft (FIG6-1) and take off the vertical shaft cap (FIG 6-2). When removing the screw on the vertical shaft cap, you need to use the lock handle to lock the hexangular shaft to avoid sliding off to avoid damage to the machine or injury to personnel!

Install the vertical shaft spring (FIG7-1) on the vertical shaft. Mount the vertical shaft cap and mount the removed screw and assemble the hand wheel into the nut bushing of the rocker arm (FIG 7-2).

3.2.4 Remove the lock nut at the front end of the bead breaking cylinder piston rod (FIG 8-1) and use the wrench to remove the nut on the bead breaking arm bolt (FIG8-4) Remove the bolt (FIG8-3) and hang the spring (FIG8-2)



3.2.5 Position the bead breaking arm shaft bushing into the bead breaking support plate on the body (FIG 9-1) to align the hole and install the bead breaking bolt (FIG 9-2) and assemble the nut to lock (FIG 8-4). Insert the piston rod(FIG10-2) through the hole of the bead breaking slide bushing(FIG10-1). The surface of the slide bushing should be outwards (FIG 10). Assemble the removed nut (FIG 8-1) into the front end of the piston rod. The nut will be assembled. The distance from the edge of the bead breaking blade to the bead breaking rubber is  $30\sim40$ mm (FIG11). Hang the spring. (FIG9-3).



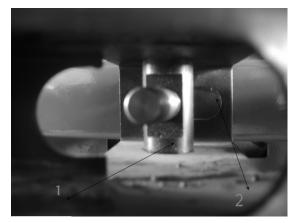


FIG 9 FIG 10

Note: If the machine is the one with the quick inflation, please open the side panel and insert 2 pieces of Ø12pu hose at the inlet of the quick deflation valve into the 2 Ø12nozzle and then install the side panel.

3.2.6 If being equipped with the tool box, you must fix firmly and the column completely installed.

#### 3.3 AIR SOURCE FITTING INSTALLATION:

When the machine leaves the factory, the air source fitting has been detached and placed in the accessory box.

3.3.1 Take out the air source fitting from the accessory box and the screw and remove the oil and dust. Use the screw to fix it on the right side of the body (fig12).





FIG 11 FIG 12

3.3.2 Connect the air hose. Detach the adapter on the Ø8 PU hose on the side wall of the body and insert it into the elbow. See the fig13/14. The adapter is to keep the hose from sliding into the body.



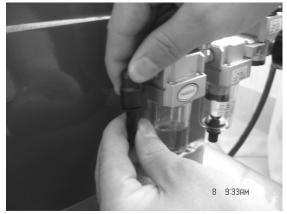


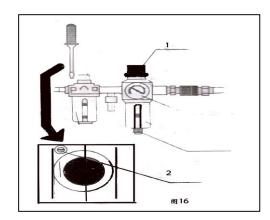
FIG 13 FIG 14

3.3.3 Connect the inflation gun or inflation gauge box: Inlay the adapter of the inflation gun or inflation gauge box into the groove (fig15) on the open nut on the air source fitting. Tighten the open nut and then connect the air source.

3.3.4 Air source has been adjusted before ex-factory. If it needs change, adjust again: **Pressure**: Lift up the pressure adjustable button( FIG16-1) and twist clockwise and the air pressure will increase. Meanwhile, if counterclockwise, the air pressure will decrease. **Oil Feed:** Use screw driver to twist the screw (FIG16-2). If clockwise, the oil dropping speed will slow. If counterclockwise, it will become faster.







#### CHAPTER BEAD LOOSENING, DEMOUNT AND MOUNT TIRE

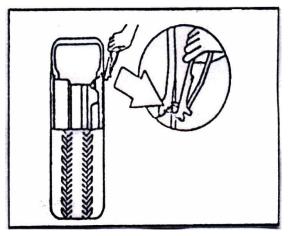
#### **OPERATING INSTRUCTIONS**

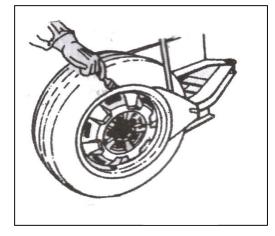
The unit must be properly operated and properly maintained to help avoid accidents that could damage the unit and injure the operator or bystanders. This section of the Operating Instructions manual reviews the basic operations and use of controls. These instructions should be reviewed with all employees before they are allowed to work with the machine. Keep these instructions near the machine for easy reference.

CAUTION - This machine may operate differently from machines you have previously operated. Practice with a regular steel wheel and tire combination to familiarize you with the machine's operation and function.

4.1 BEAD LOOSENING, and DEMOUNT TIRE

4.1.1 Deflate the air in the tire completely and pull out the core. Use the special tool to detach any wheel weights on the rim (FIG17). NOTE: Loosening the beads on a partially or fully inflated tire is unsafe and causes excessive wear on pivots with friction against the bumper pads. Deflate the tire completely to prolong the life of your machine.





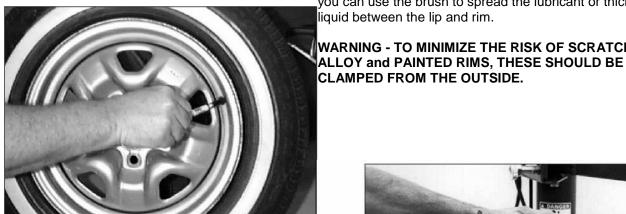
**FIG 17 FIG 18** 

4.1.2 Place the tire between the bead breaking blade and tire pressing runner clog. (Fig18) Then step down the tire press pedal to detach the rim from the tire(fig2-10 or 3-10). WARNING - Watch your fingers and legs! 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 tire detached from the rim on the turntable and step the clamp pedal(fig2-9; 3-9) to clamp the rim. Place the wheel WITH DROP CENTER UP on the turntable, and clamp in position. Press the wheel down while clamping. You can select the outer clamp and inner clamp to clamp the wheel according to the rim type. To detach the lip smoothly,

you can use the brush to spread the lubricant or thick soap liquid between the lip and rim.

WARNING - TO MINIMIZE THE RISK OF SCRATCHING

CLAMPED FROM THE OUTSIDE.

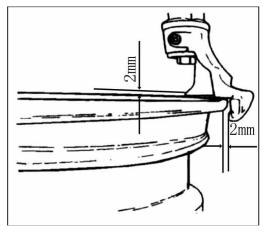


WARNING! - ON CHEVROLET CORVETTE WHEELS WITH THE OPTIONAL LOW PRESSURE SENSOR INSTALLED. BREAK THE BEAD AT 90 DEGREES OFFSET FROM THE VALVE STEM. DAMAGE TO THE WHEEL WILL RESULT IF THE BEAD IS BROKEN AT ANY OTHER POINT ON THE RIM.



4.1.3 Position the hexangular shaft (FIG 2-3) to the working position to make the demount tool close to the rim of the wheel. And use the hand wheel (FIG 7-2) to push against the rocker arm and then use the lock handle (FIG 2-12) to lock. Position the mount/demount head in contact with the rim edge and lock it into place: the tool automatically moves away from the rim edge vertically. Turn the adjustment knob until the mount/demount head clears from the rim flange about 2 mm (1/16"): this is necessary to avoid rim damage (FIG19).

The angle of the demount tool has been calibrated according to the standard rim. Adjust as necessary for different size rims.



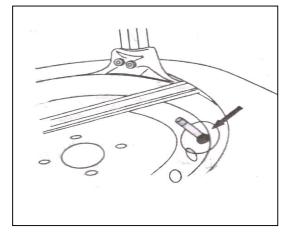
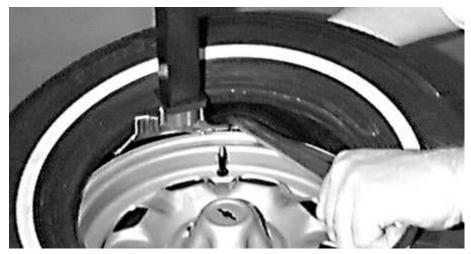


FIG 19 FIG 20

4.1.4 Use the bead lifting crowbar to detach until the lip to the hump of the demount tool (FIG20). Press down the turntable rotation pedal (FIG2-8) to rotate the turntable clockwise until the entire lip completely detached. Depress the tabletop pedal to rotate the wheel clockwise. The demount head will guide the upper bead up and over the edge of the wheel. Push down on the tire across from the demount head during table top rotation to utilize the drop center area of the wheel. This reduces the tensional force on the top or first bead during demount. If desired, the bead lifting tool can be removed after lifting the bead onto the finger.

Lift and hold the tire at an angle so that the lower bead is resting in the drop center directly across from the demount head, and is loose below the demount head. Insert the smooth curved end of the bead lifting tool down over the forward end of the mount/demount tool and below the lower bead. Lift the bead up and over the knob on the demount head. Depress the table top pedal to rotate the wheel. The demount head will guide the bead up and over the edge of the wheel. Continue rotation until lower bead is demounted.





At times during the mounting and demounting procedure, the bead lifting tool may encounter resistance or come under load. Keep one hand firmly on the tool to avoid possible tool disconnect. Use the reversing feature to back out of jam ups.

Normal table top rotation for demounting is clockwise. Depress the table top pedal to rotate this direction. To rotate the table top counterclockwise, lift the pedal up with your toe.

In the process of demounting tire, you should keep your hands and the other parts of your body as well as clothing from the movable parts to prevent injury.

4.1.5 If handling the tube tire, to avoid the damage on the tube, you should keep the valve stem of the tire 10cm from the right side of the demount tool when demounting. 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.

#### 4.2 MOUNT TIRE:

This information must be read and followed carefully to prevent accidents and injuries during mounting.

Check tire and wheel carefully before mounting. Make sure the tire bead diameter and wheel diameter match exactly. Consult the Rubber Manufacturer's Association for approved rim widths for tire sizes. Attempts to force a bead seat on mismatched tires and wheels can cause the tire to violently explode, causing serious personal injury or death to operator and/or bystanders.

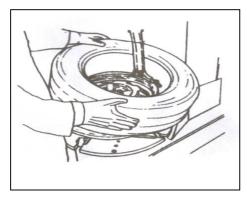
Never mount a tire and wheel handed to you by anyone without checking both tire and wheel for damage and compatibility. Be extra cautious of persons without knowledge of tire service. Keep bystanders out of service area.

Never mount a damaged tire. Never mount a tire on a rusty or damaged wheel. Damaged tires and/or wheels may explode. If you damage the tire bead during mounting, STOP! Remove the tire and mark it as damaged. Do not mount a damaged tire.

WARNING - LIBERAL LUBRICATION OF THE TIRE AND RIM IS NECESSARY TO MOUNT TIRE CENTERING CORRECTLY AND GET A PROPER ON THE RIM. BE SURE YOU ARE USING APPROVED LUBRICANT ONLY.

# WARNING - OBSERVE THE ROTATION DIRECTION OF THE TIRE, IF REQUIRED. SOME TIRES HAVE A COLOR DOT THAT MUST BE KEPT ON THE OUTSIDE OF THE WHEEL.

- 4.2.1 Clean the dirt and rust on the rim and lock it on the chuck. Lock the rim on the turntable.
- 4.2.2 Spread the lubrication liquid or soap liquid around the tire beads. Tilt the tire against the rim and keep the front end upwards. Press down the hexangular shaft to move the demount arm to contact with the rim and lock. The left lip above the tail of the demount tool and the right lip will be positioned under the front end of the demount tool (FIG 21). Depress table top pedal and rotate the wheel to mount the lower bead. Use the drop center of the wheel to reduce the tensional force on the bead by pressing down on the tire directly across from the mount head. Rotate table top until lower bead is fully mounted.



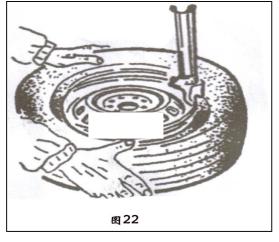
**FIG 21** 

For top bead, rotate the table top until the valve stem is at the 5 o'clock position. Lift the upper bead up and over the rear of the mount head. Press down on the tire between the mount head and the valve stem to hold the tire in the drop center. Depress table top pedal and rotate tire until the bead is mounted. Continue to press down on tire during the remaining mounting process.

If table top rotation stalls, reverse the table top momentarily until the tire bead is again loose on the wheel. Reposition the tire on the mount head; make sure the bead is correctly positioned in the drop center of the wheel, then attempt mounting again.

4.2.3If there is tube, place it in the tire and plug the core. And assemble the lip according to the above mentioned

step (FIG22). In the process of clamping the rim, do not reach your hands in between the rim and the claw to avoid the damage to the personnel.



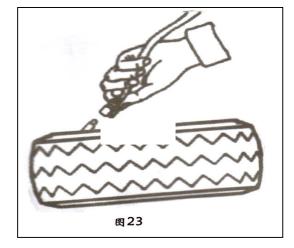


FIG 22 FIG 23

4.2 INFLATION:



### **CAUTION, WARNING, DANGER**



Check for proper inflation gauge operation. Accurate pressure readings are important to safe tire inflation. Refer to the Operating Maintenance section of this manual for instructions.

If the rim has been clamped from the outside for tire mounting, release the clamps, lift the tire, and move the clamps to the center of the table top. THE RIM MUST BE UNCLAMPED WHEN INFLATING BUT ONLY AFTER BEADS HAVE BEEN SEATED.

If the wheel/tire has a diameter larger than 14 inches and is difficult to bead seal, the clamps should be moved to the center of the table top for the bead seal operation.

Tire failure under pressure is hazardous. This tire changer is not intended to be a safety device to contain exploding tires, tubes, wheels, or bead sealing equipment. Inspect tire and wheel carefully for match, wear, or defects before mounting. Always use approved tire bead lubricant during mounting and inflation.

The inflation pedal, located at the rear of the left side of the machine, controls the flow of air through the inflation hose.

NOTE: The clip-on chuck on the end of the hose should always be an open style with all parts in proper working order.

ATTENTION! WHEN OPERATING THE BEAD SEATER IT IS MANDATORY TO WEAR SAFETY GLASSES TO PROTECT EYES.

The Inflation pedal operates in 3 positions as described below.

**Position 1** (All the way up at rest) - Tire Pressure – With the inflation hose attached to the tire valve and the pedal in this position, the air gauge will register the air pressure in the tire. Whenever your foot is removed from the pedal, it will return to this position.

**Position 2 (Pushed down to the mid level) - Tire Inflation** – This is the first activated position. With the inflation hose attached to the tire valve and the pedal in this position, line pressure is allowed to flow through the valve and into the tire for inflation. Tire pressure is **not** indicated on the gauge in this position. The pedal must be released to read pressure.

**Position 3** (**Pushed down all the way to lowest level**) - **Bead Sealing** – This is the second and last activated position. With the inflation hose attached to the tire valve and the pedal in this position, line pressure is allowed to flow through the valve and to the inflate bead seal jets on the table top for bead sealing.

Use Position 3 for bead sealing only. Do not use this position without a tire and wheel positioned on the table top. Dirt and debris could be blown into the air with enough force to injure the operator or bystanders. Do not use this position to inflate a tire.

When the inflation pedal is held in position 2, the pressure should be checked every few seconds to prevent over inflation. This cycling helps to prevent over inflation of the tire. Tires can still be over inflated and explode with the use of this technique and if all of the instructions in this manual are not followed completely. It is the operator's responsibility to follow all instructions and to control inflation pressure as specified in these instructions. Tires requiring inflation beyond 60 PSI should be inflated in a safety cage.

Tire inflation is performed in three steps: Bead Seal, Bead Seat, and Inflation.

#### **Bead Sealing**

- 1. Position valve stem in front of operator and connect the inflation hose. Hold tire up against upper edge of the wheel. Be sure tire's top bead is over the bottom of the valve stem.
- 2. Depress inflation pedal to position 2 and hold about 1 second to begin air flow through tire valve, then depress pedal to position 3 and hold briefly less than 1 full second. The blast of air from the jets will expand tire and seal the beads.
- 3. Release the inflation pedal and allow it to return to position 1. Verify that both beads are completely sealed to the wheel. Repeat these steps if beads have not sealed. It may be necessary to wait a few seconds for the air storage tank to recover before attempting again.

Note: If tire and wheel are properly lubricated and operator cannot achieve bead seal after 3 or 4 attempts, the valve core may be removed from the valve stem to allow more air flow into the tire to assist with bead seal. After bead seal is achieved, remove the chuck and reinstall the valve core.

#### **Bead Seating**

Operator should keep hands, arms, and entire body away from the tire during the remaining bead seat and inflation procedures. Do not stand over tire, as personal injury could result.

NEVER increase air pressure to exceed 40 PSI when attempting Bead Seat. If operator is unable to obtain Bead Seat, something is wrong. Deflate tire completely, inspect tire and wheel, and correct any problems found, relubricate both tire beads, and reattempt Bead Seal and Seat procedures. Follow all safety instructions in this manual and on machine.

1. Once tire pressure is indicated on the air gauge (inflation pedal in position 1; foot removed from pedal), continue to inject air into the tire in short intervals. Check the pressure frequently. Stand back during bead seat. Keep hands, arms, and entire body away from tire during this procedure. Tire beads should move outward and "pop" into their bead seat position as pressure inside the tire increases. If this does not happen, a problem exists. Investigate carefully.

Check tire pressure frequently. Never exceed 40 PSI while seating beads. Once seated, never exceed tire manufacturer's recommended air pressure. Tires can explode, especially if they are inflated beyond their limits. At all pressure levels when inflating through the valve stem, keep hands, arms, and entire body away from inflating tire. An exploding tire, wheel, or bead sealing equipment may propel upward and outward with sufficient force to cause serious injury or death to operator or bystander.

#### Inflation

beyond these limits. Keep hands, arms, and entire body back from inflating tire. Avoid distraction during inflation. Check tire pressure frequently to avoid over inflation. Excessive pressure can cause tires to explode, causing serious injury or death to operator or bystander. THE RIM MUST BE UNCLAMPED WHEN INFLATING BUT ONLY AFTER BEADS HAVE BEEN SEATED.

This machine is equipped with an inflation gauge for monitoring the inflation of the tire and the inflation pressure (FIG 22).

- 1. Connect the inflation hose with the tire air core. See FIG23. Make sure both beads are seated. When both beads are seated, the tire is ready for inflation.
- 2. Replace the valve core if it was removed.
- 3. Depress the inflation pedal to position 2 to inflate the tire. Release air pressure from tire by pressing the manual release valve button (inflation hose must be attached to the valve stem).

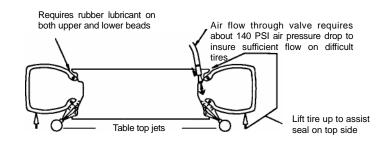
#### STAGES OF INFLATION

Review these descriptions and diagrams carefully.

Refer to them as necessary during bead sealing, bead seating, and inflation to verify that you are proceeding properly and safely.

#### **Bead Sealing**

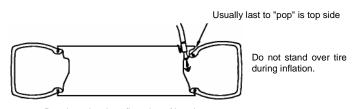
A 140 PSI air blast from the table top jets creates an air curtain to aid in bead sealing. Never exceed 10 PSI in the tire during bead sealing. The tire will contain about 1/2 to 2 PSI when bead seal is obtained.



#### **Bead Seating**

Bead seating usually occurs on the long tapered side of the wheel first and the shorter side last. Bead seating will usually require at least 7 PSI in the tire. 40 PSI is the maximum safe pressure at this stage regardless of tire operating pressure.

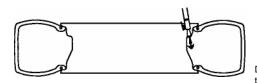
Most European import cars and many aftermarket alloy wheels are very tight and can be difficult to bead seat. Also note that asymmetrical hump and run-flat tires are extremely difficult to bead seat. Follow tire manufacturer's recommended procedure for bead seating.



Requires visual confirmation of bead seat

#### Inflation

After the beads are seated, the tire is inflated. Do not inflate the tire above the manufacturer's recommended pressure as stamped on the tire sidewall. The typical inflation pressure for automobile tires is between 24 and 45 PSI. Light truck inflation pressure typically covers a wider range.



Do not stand over tire during inflation.

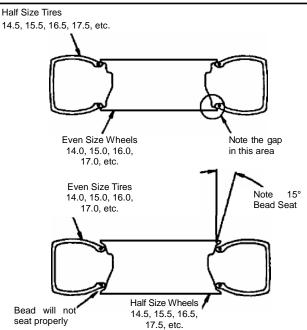


#### **MISMATCHED TIRES AND WHEELS**

Never attempt to mount and inflate mismatched tires and wheels.

Mismatched tire and wheel combinations explode, causing personal injury or death to operator and bystanders.

For safety, do not attempt to mount and inflate mismatched tires and wheels.



#### READ...

Mounting and inflating the wrong size tire can get you hurt. Read the size on the tire and make sure it matches the rim. Be especially careful about putting a smaller tire on a larger rim, such as a 16-inch tire on a 16.5-inch rim. Inflation of a mismatched tire and rim can cause an explosion.

#### INSPECT...

Before you put any tire on a rim, inspect the rim for rust, tough spots, bent edges, or cracks that could prevent the tire from seating right. If you spot any of these problems, don't mount the tire until the rim has been checked by your shop foreman. Inspect the tire for bead damage.

#### MOUNT...

Once you've made sure the tire is OK and the right size and the rim is OK, mount the tire safely. NEVER, ever lean over the tire when you're inflating it. If a tire does explode, it will go straight up. You don't want to be over the tire if that happens. Also, never over-inflate the tire, even if the bead doesn't seat. Never inflate over 40 PSI. If the tire wasn't seated, something is wrong. Deflate the tire and check it and the rim again. If it doesn't work the second time, try another tire.

FAILURE TO READ AND FOLLOW ALL WARNINGS AND INSTRUCTIONS IN THIS MANUAL CAN LEAD TO SERIOUS PERSONAL INJURY OR DEATH TO OPERATOR OR BYSTANDER.

THE OWNER IS RESPONSIBLE FOR MAINTAINING THE OPERATION INSTRUCTIONS AND DECALS FOR THIS MACHINE AS WELL AS PROVIDING THEM TO ALL OPERATORS.

#### TIRE FAILURE UNDER PRESSURE IS HAZARDOUS!

This tire changer Will Not Restrain Exploding Tires, rims or other related equipment.

TIRES CAN EXPLODE, ESPECIALLY IF INFLATED BEYOND SPECIFIED LIMITS. DO NOT EXCEED TIRE MANUFACTURERS RECOMMENDED AIR PRESSURE. AN EXPLODING TIRE, RIM, OR BEAD SEATING EQUIPMENT MAY PROPEL UPWARD AND OUTWARD WITH SUFFICIENT ENERGY TO CAUSE SERIOUS INJURY OR DEATH TO OPERATOR AND/OR BYSTANDERS

#### **Chapter V MAINTANENCE & REPAIR**

#### NOTE:

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 push the air supply switch to the off position 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. Or the running and reliability of the machine will be affected and the personnel near the machine or the operator will be injured.

The following position should be monthly maintenance:

Keep the machine and working area clean.

Use the diesel oil to clean the hexangular shaft (FIG24), Use the machine oil to lubricate.

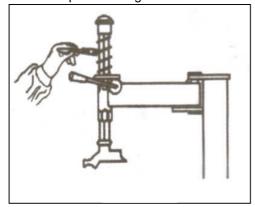
Use the diesel oil to clean the turntable claw and its guide and use the lithium base oil to lubricate (FIG25),

Periodically check the lubrication oil level in the oil fog device. If the oil level lower than the oil scale, please feed in the SAE30 lubrication oil in time (FIG 26)

Periodically drain out the water and impurity in the oil water separator.

Periodically check and adjust the tension of the drive belt. Properly adjust the adjust nut in A and B to realize the proper tension. (FIG27) .

Check all the connect parts and tight the loosen bolt.



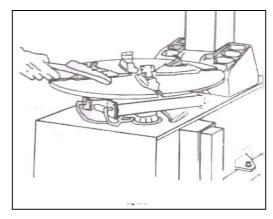


FIG 25

FIG 24

#### **HEXANGULAR SHAFT & LOCK PLATE LOCK GAP ADJUSTMENT**

When press downward the hexangular lock handle, the hexangular shaft will vertically slide under the effect of the weight of the hexangular shaft 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 shaft. If you can not realize this situation, you can reach the target to lock the hexangular shaft through adjusting the position of the screws and nuts. (FIG 28)

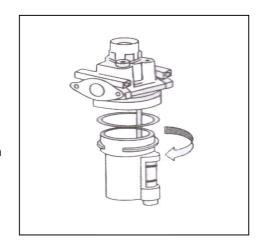
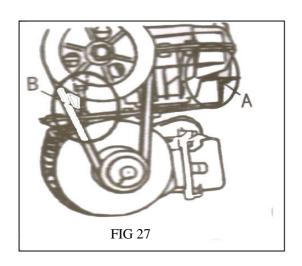
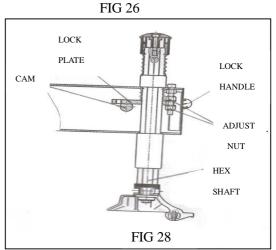


FIG 26





#### CHAPTER VI INSTALLATION & OPERATION OF THE ASSISTANT ARM

#### 6.1 INSTALL THE LEFT ASSISTANT

6.1.1 PL330 left assistant can be equipped on the tire changer which can handle the tire with the diameter of 20" to help complete the demount on the stiff and low profile tire. We can use it to handle the work which if difficult and impossible to do only by the operators.



Before installation, the power and air source must be cut off!

- 6.1.1 The left and right side of the base plate of body of the tire changer which can handle the tire with the diameter of more than 20" all have the installation hole for the left assistant prepared. Before installation, you can remove the side panel and take off the installation rubber plug. If there being the tool box, you should detach the tool box.
- 6.1.2 Detach the package of the PL330assistant. Check the accessory according to the pack list. After confirmation, takeout the base assembly(fig29) and install the screw and washer on it.



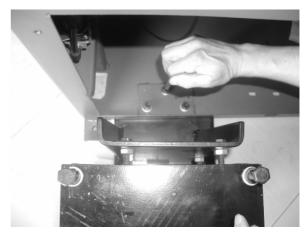
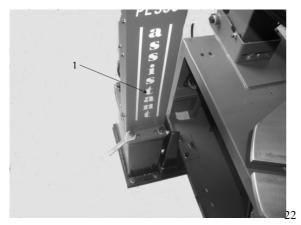


FIG 29

FIG 30

- 6.1.3 Push the platform of the base plate of the base assembly into the body through base plate on the left-back side of the body. Align the thread hole to the reinforce hole and use the bolt and washer to fix. (fig30).
- 6.1.4 Install the body bracket (fig31-1) on the seat assembly. Align. Use the screw removed before to fix and not tighten
- 6.1.5 Use the fix supporting bracket (fig32) to connect the body bracket and the body and insert the screw to fix.
  6.1.6 Connect the air source hose(fig33-2) and use Y Tee to connect the outlet hose and the other end connect with the inlet of the assistant pressure adjusting valve.



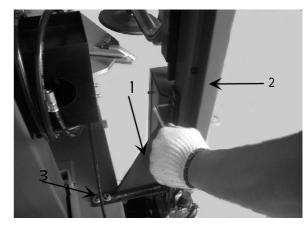
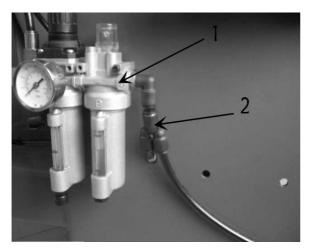


FIG 31 FIG 32

6.1.7 Connect the air source, insert the press cone roller connect rod (fig34-1) into the rotation shaft hole(fig 34-2) of the rotation arm. Handle manual direction change valve to make the tip of the press cone roller coincide to the center of the turntable (fig35). If not coincide, use the screw to adjust the position of the base to realize the proper fit. After adjustment, fix the bolt.



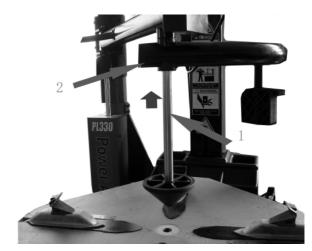


FIG 33 FIG 34

6.1.8 According to the fig36, fix the fix bracket on the body and fixes the tool box on the fix bracket and then use the lock nut to tight.

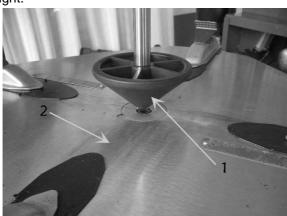
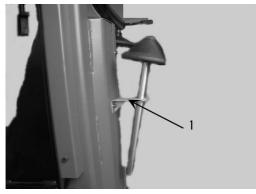




FIG 35

6.1.9 As fig37, fix the cone support on the body bracket and install the press cone on the bracket.6.1.10Loose the nut below the base and turn the screw clockwise until it against the ground and tight (fig38) and install The side panel and tool box removed in the 6.1.1. At this moment, the installation of the left assistant completed.





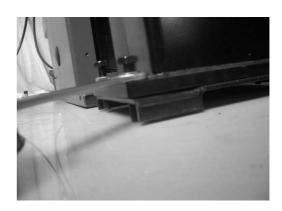


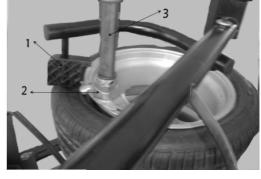
FIG 38

#### 6.2INSTALL THE RIGHT ASSISTANT

6.2.1After detach the tire from the rim according to the instruction of the chapter IV, we can execute the following operations.

6.2.2 First, position the claw according to the dimension of the tire and then clamp the rim by the claw and position the tire press cone roller at the center of the rim(fig39). Push down the manual valve to press down the rim until the external rim of the rim is lower than the surface of the claw. At this moment, you can immediately lock the rim. Lift up the support arm and place it at the working position and take off the press cone roller and place it on the support.





39 FIG

6.2.3 Use the press(fig40-1) to press down the tire section by section rim detached from the mouth and use the brush to spread the lubricant on edge of the lip. Position the demount tool(fig40-2) in the demount position. Place the press beside of the demount tool to press down the lip and insert the crowbar below the demount tool in between the rim and lip(fig41), Lift up the press and move it to the position opposite to the demount tool and press the lip into the tire detach groove and then rotate the crowbar to lift the lip onto the demount tool (fig42). Rotate the turntable to

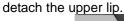






FIG 41 FIG 42

6.2.4 DETACH THE LOWER LIP: Use the disk to lift up the bottom or the tire from the bottom of the mouth (fig48) and detach the lower lip (fig43) according to the step (4.1.5).





FIG 43 FIG 44

#### 6.2.5 MOUNT TIRE

First, according to the step  $(4.2.1) \sim (4.2.3)$ , install the lower lip and use the press to press the lower lip as shown In the fig45. Rotate the turntable by about 90°. And then clamp the press in the demount tool (fig46) and continually rotate the turntable until the completion of the operation.6. 2.5

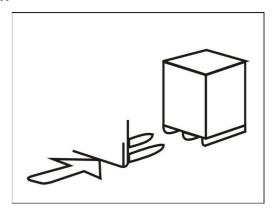




FIG 45 FIG 46

#### **CHAPTER** TRANSPORTATION

When transport the machine must apply the original package and place According to the mark on the package. The machine must be transported by the forklift with the corresponding tonnage (FIG69) and the stacked layer will not exceed 3layers.

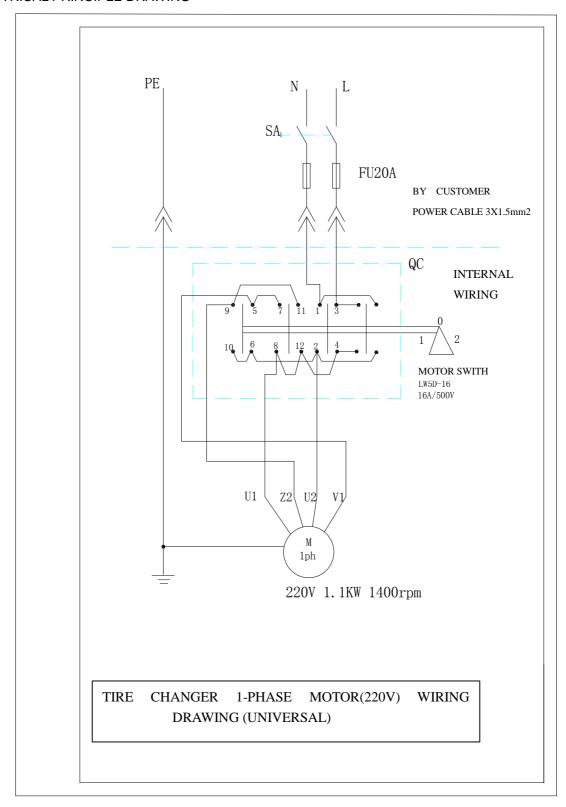


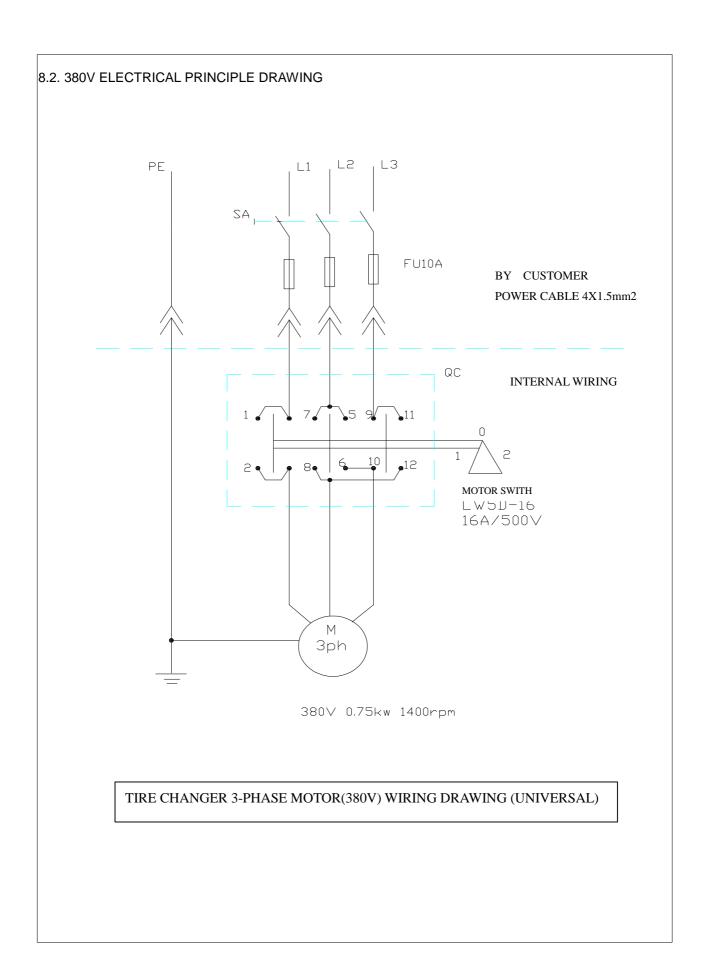
**FIG 47** 

#### CHAPTER ELECTCTRICAL AND PENUMATIC DRAWING

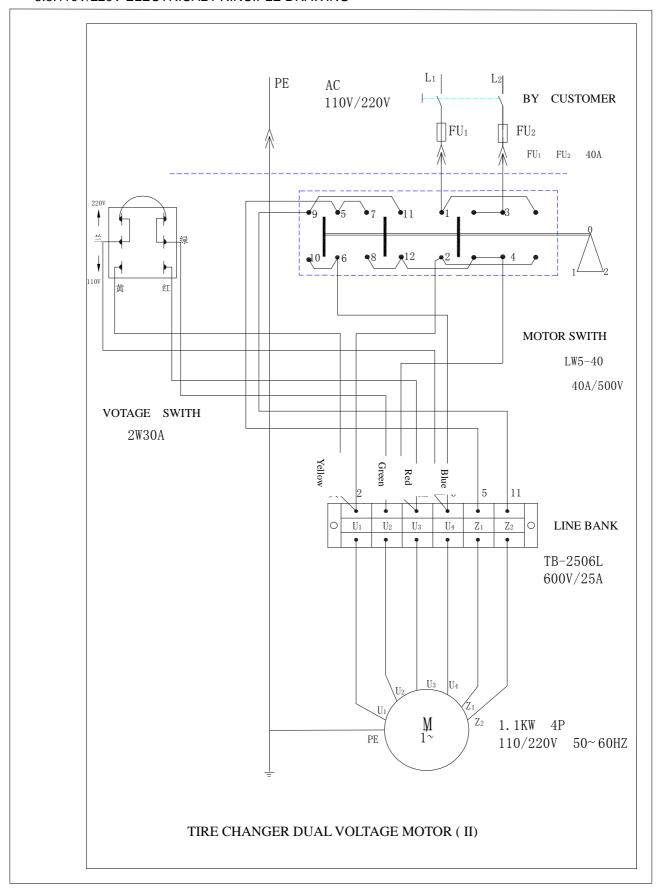
- 8.1.220V ELECTRICAL PRINCIPLE DRAWING
- 8.2.380V ELECTRICAL PRINCIPLE DRAWING
- 8.3.110V/220V ELECTRICAL PRINCIPLE DRAWING
- 8.4. PNEUMATIC PRINCIPLE DRAWING

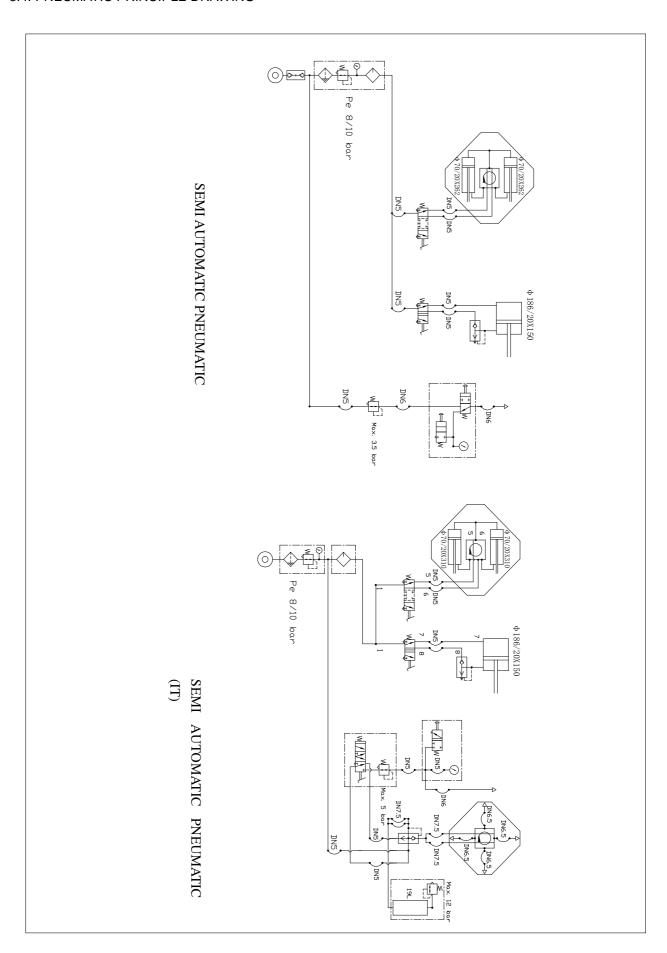
#### 8.1. 220V ELECTRICAL PRINCIPLE DRAWING

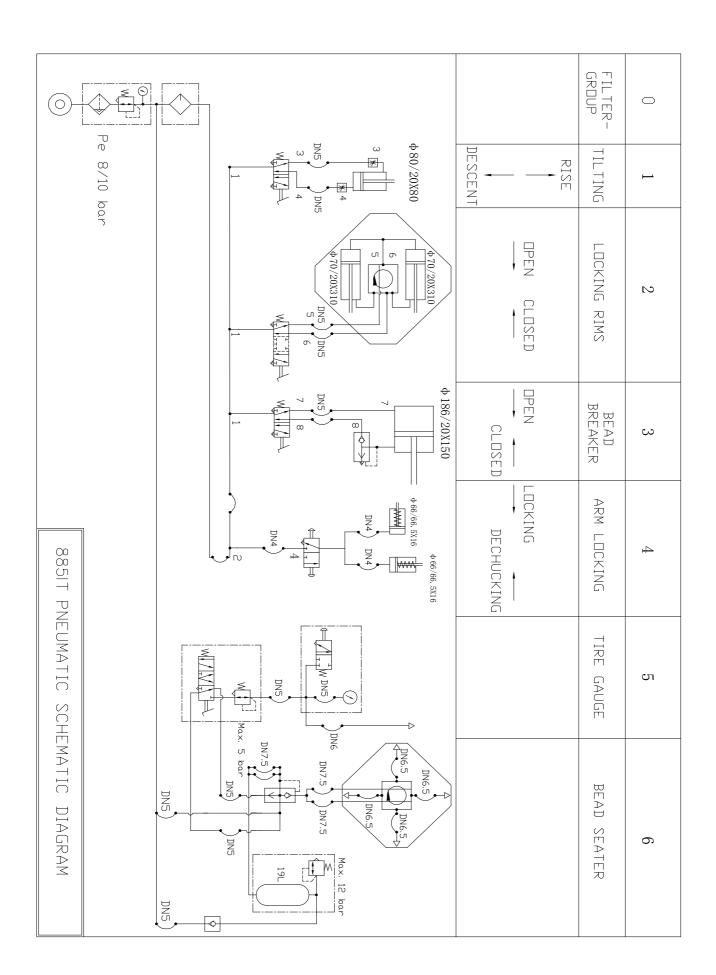




#### 8.3.110V/220V ELECTRICAL PRINCIPLE DRAWING







#### **CHAPTER** □ **TROUBLESHOOTING ANALYZE AND SOLUTION**

CHAPTER	REASON	TROUBLESHOOTING	
Turntable rotate in one direction.	Universal switch contact burned	Change Universal switch	
Turntable does not rotate.	Belt damage	Change belt	
	Belt too loose	Adjust the tension of the belt	
	Motor or power source have problems	Check motor, power source and	
		power source cable	
	Universal switch contact damage	Change motor if motor burned	
		Change Universal switch	
Turntable can not clamp the rim as	Claw worn	Change claws	
normal	Clamp cylinder air leakage	Change the air leakage sealing parts	
Quadric and hexangular shaft	Lock plate not in position	Refer to the chapter V	
cannot lock			
Chassis pedal not return.	Pedal return spring damage	Chang torsion spring	
Motor not rotate or the output	Drive system jam	Remove the jam	
torque not enough	Capacitor broken down	Change capacitor	
	Voltage not enough	Wait for the restore of the voltage	
	Short-circuit	Remove	
Cylinder output force not enough	Air leakage	Change sealing parts	
	Mechanic fault	Remove the fault	
	Air pressure not enough	Adjust the air pressure to meet the	
		requirement	
Air Leakage	air hose broken	Change broken parts	
	pipe fitting broken		
	sealing head broken		
	loss of the sealing glue	Refill the sealing glue	

#### LC SERIES MACHINE OIL SAFETY DATA SHEET

#### MOBIL XHP 222

ITEM	QUALITY STANDARD
Penetration rate25□ mm/10	280
dropping point	280
anticorrosion	passed
Basic oil viscosity	220
oxidize stability 100h pressure-drop kpa	35
water lose percentage79%	5
copper corrosion	1A

#### SAE30# LUBRICATION OIL

ITEM	QUALITY STANDARD
density 15□	0.893
Flash point	224
Pour point	-18
viscosity 40□	100
viscosity 100□	11.2
Viscosity index	97

#### 2# LITHIUM BASE GREASE

ITEM	QUALITY STANDARD
Penetration rate mm/10	278
dropping point	187
copper corrosion 100□ 24 h	No change
oxidize stability (99 \( \text{100 h} \)	0.2
anticorrosion (52 48 h)	1 level
similarity viscosity (-15  10S^-1) / (Pa·S)	800
water lose(35□ 1h) %	8

#### CKC460 INDUSTRIAL GEAR OIL

ITEM	QUALITY STANDARD
Viscosity 40□	461
Viscosity index	92
Flash point	212
Freezing point	-26
copper corrosion100□ 3 h	1A
mechanical impurity	0.007
Pour point	-10

#### WEARABLE (OPTIONAL) PARTS LIST FOR 890IT SERIES

Item No	Description Description	Specification	Quantity	Parts Codes
1	Seal-Y Ring			5010202
2	O-Ring			5010097
3	Valve-A			6000227
4	Valve-B			6000222
5	Switch			5010055
6	Cam			6000211
7	Fork spring plate			6000204
8	Valve connecting rod			6000210
9	torsion spring			6000220
10	Hinge Tee			6000010
11	Hinge elbow			6000009
12	Front cover			6000004
13	Rear cover			6000003
14	Circlip			5010024
15	Rigid PU hose	Ф6		5509032
16	PU hose	Φ8		5509033
17	Crowbar Protector	QT-20		5309016
18	Demounting Head Protector	BT-4		5509015
19	Demounting Tail Protection Washer	BT-4		5509014
20	Bead Breaker Blade Protector	CT-A		5509018
21	Clamp Protection Cover	KT-4		5509019