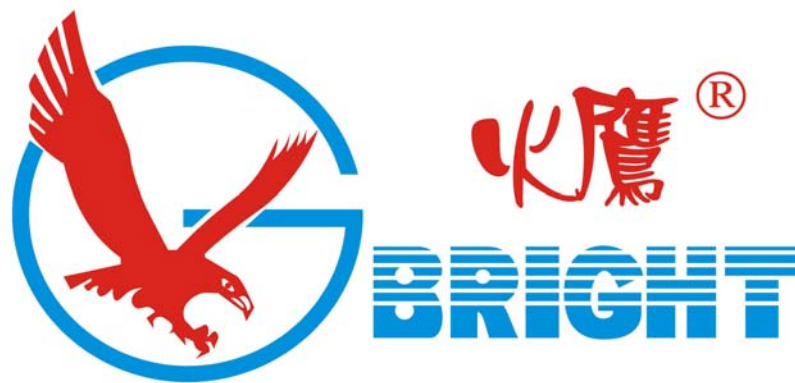


Series tire changer

887ITA/LC887A

(horizontal arm)

Instruction manual



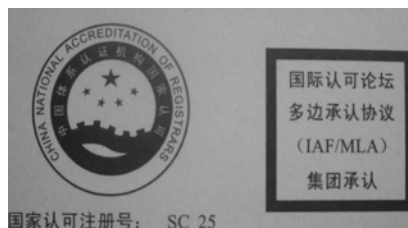
Honor to customer
Quality innovation

Bright Technology Co., ltd

Dear customers,

Very pleased that you will purchase and use the tire changer produced by our company

We are the company with reputation of quality. We sincerely wish to produce quality goods under the ISO9001 Quality system and get the EU CE certificate to help you promote your business.



model: _____

rated voltage: phase voltage hertz

factory code: _____

Technical standard code: Q/YGM001--2006

This product has been tested to be OK and permitted to be ex-work.

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 arising from the improper operation.

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, eye plug 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 floor. 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.

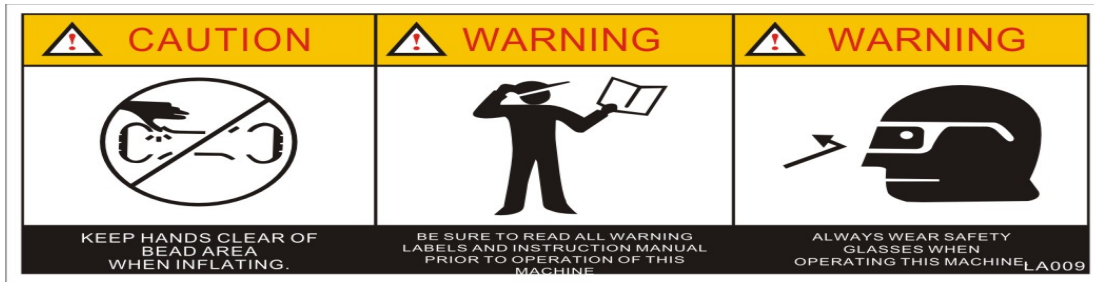
Do not place the machine in the site of high temperature, high humidity, dust and with flammable and corrosion gas.

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

Pay special 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.

Safety Label Instruction



Keep your hands far from tire when operation

Carefully read operation manual before operation

When operation, wear the protective facilities



electrical shock !



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 press the tire, the opened clamp cylinder may injury 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 the column from injuring the persons when swing.



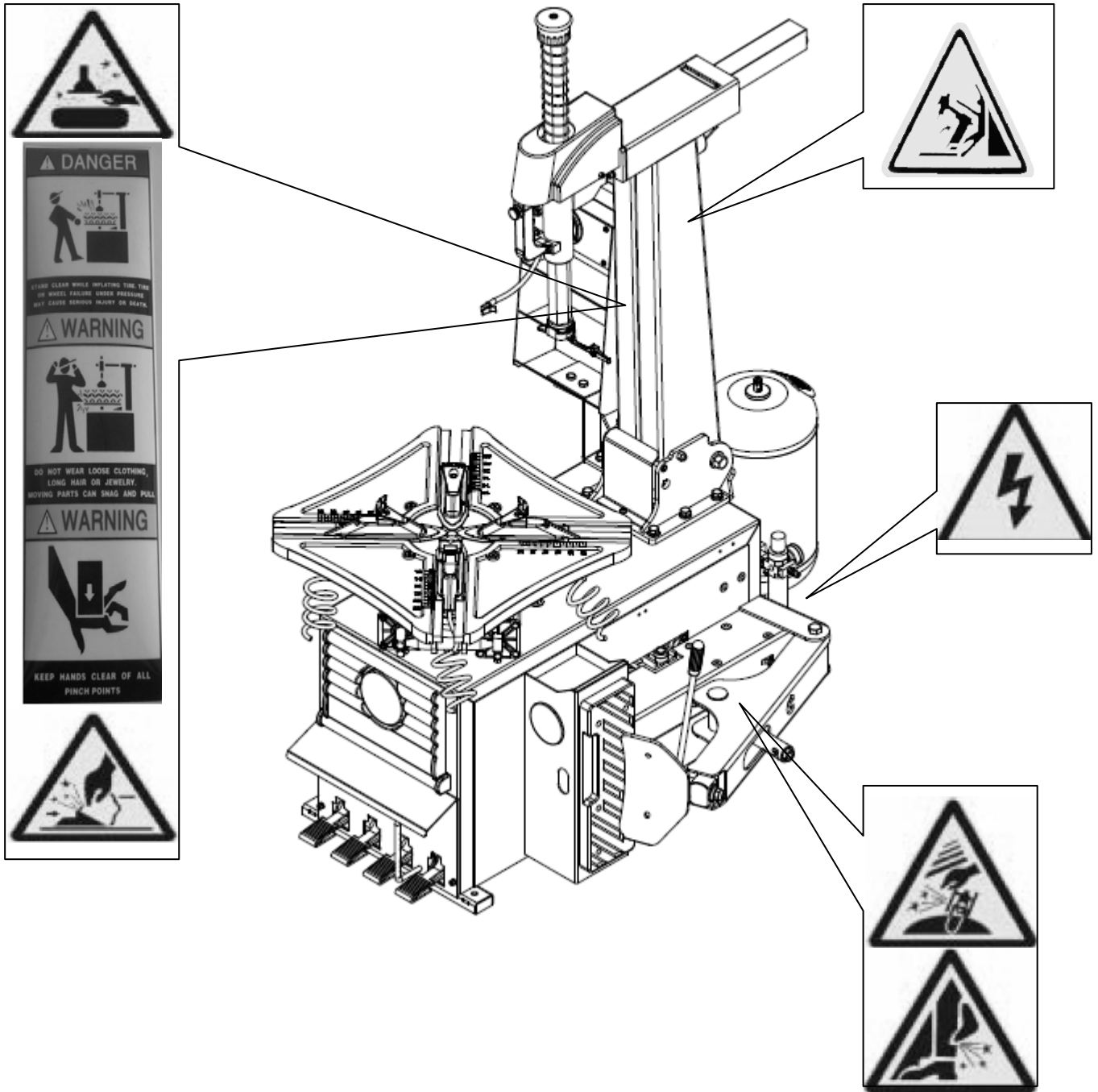
When rapid inflation, ensure the wheel clamped.

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

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

▪ Safety Label Position Diagram

- Pay attention to keep the safety labels complete. When it is not clear or missing, 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 Brief Introduction

1.1 brief introduction

887 series tire changer is the tire changer featured with tilt and horizontal arm, suitable to mount, demount and inflate all types of car tire with tube and tubeless. The operation is easy, convenient and safety. It is the necessary equipment for the auto service shop and tire shop.

It includes two models: LC887A - common model 887ITA - with quick inflation

This model can be optional equipped with left assistant PL330B or right assistant AL335 or LC320B to mount and demount the low profile and stiff tire.

1.2 Overall dimension (exclude the accessories such as helper)

Model	H (mm)	L (mm)	B (mm)	NT(kg)
887ITA	1850	1265	890	As per packing list
LC887A	1850	1040	890	As per packing list

1.3 Technical parameter

work pressure : 8-10bar

motor : 50Hz 0.8-1.1KW/220-380V

turntable speed : 6.5rpm

noise : < 70dB

1.4 Application range

Model	Max. wheel diameter	Max. wheel width	Rim diameter (inward clamp)	Rim diameter (outward clamp)
887ITA	1030mm(40")	380mm(15")	10" ~24"	13" ~26"
LC887A	1030mm(40")	380mm(15")	10" ~24"	13" ~26"

1.5 work environment

temperature 0°C ~ 45°C

RH 30 ~ 95%

Sea level max.1000M

Without dust and without gas easy to explosive and rusty

The space around machine is not less than indicated in Fig1

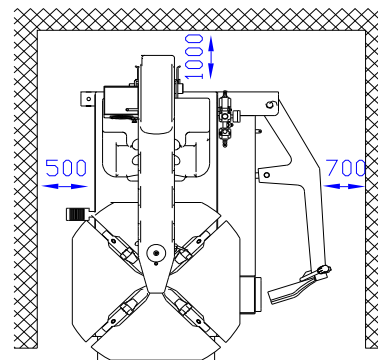


Fig1



Forbidden to be used in the place containing the gas flammable !

Chapter 2 Basic construction and operational part

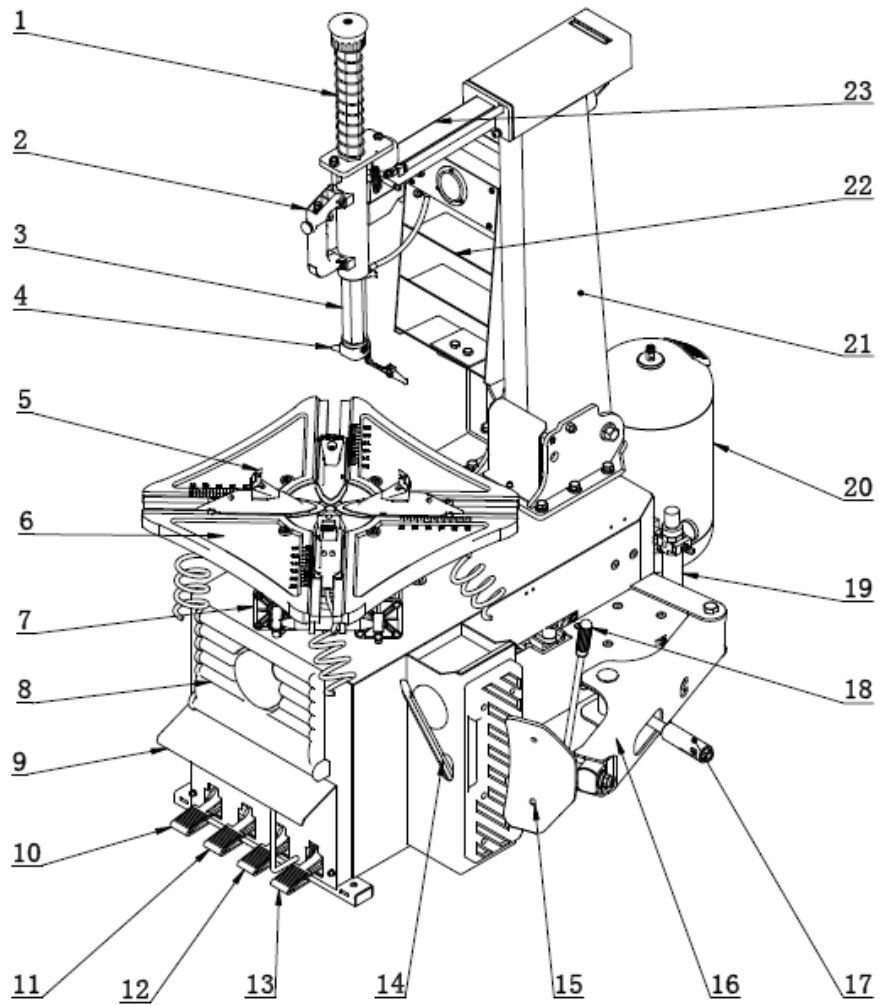


Fig2

- | | |
|-------------------------|--------------|
| 1 vertical shaft spring | 2 hand valve |
| 3 hexangular shaft | 4 tool head |
| 5 clamping jaw | 6 turntable |
| 7 clamping cylinder | 8 front face |

9 pedal indication cover	10 column tilt pedal
11 clamp pedal	12 bead breaker pedal
13 turntable turning pedal	14 crowbar
15 breaker blade	16 bead breaker arm
17 bead breaker cylinder	18 bead breaker handle
19 oil-water separator	20 air tank
21 column	23 horizontal arm

Chapter 3 Installation and commission

Carefully read the manual before installation and the change on the parts of the machine without the permission of the manufacturer can cause the damage to the machine;

Installation and commission person must have some knowledge relating to electrical;

Operator must under the special training and pass the examination;

You must carefully check the equipment list and contact the dealers or our company if you are in doubt;

To ensure the installation and commission complete successfully, please prepare the following common tools:

2pcs open spanners (10") , 1 pc socket key, 1pc hexangular spanner, 1pc pliers, 1pc screw, 1pc hammer and

1pc universal electric meter

3.1 Open the box

3.1.1 In accordance with the instruction on the package box, open the package box and remove the package material and check if the machine is sounded and the accessories if completed.

3.1.2 Keep the package material far away from the working site and treat it well.

3.2 Install the parts detached.

3.2.1 : Installation of the air tank

3.2.1.1 Use 2 pcs M8 bolts(1—1) to connect the air tank at the rear of the body as indicated in Fig1.

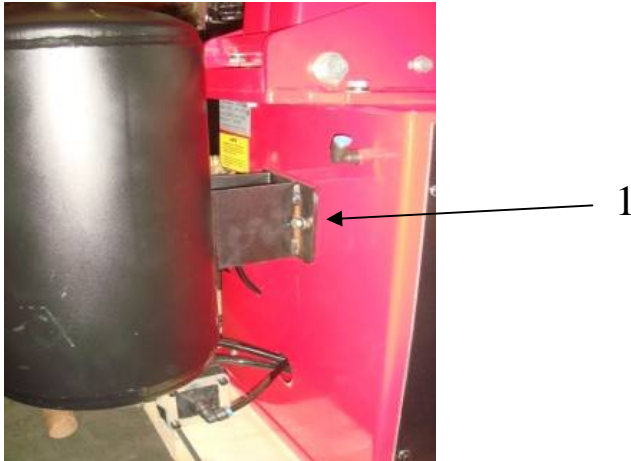


Fig 1

3.2.1.2 Under the air tank, there are 4pcs air hoses needed to connect, among them , 2pcs $\phi 12$ (2—1) air hose no need to be inserted into the installation position and the other 2 pcs $\phi 8$ hoses (2—2), (3—1) , the fittings with the same color, need to be installed as per the color . The installation should be in reference to Fig2 and Fig3.

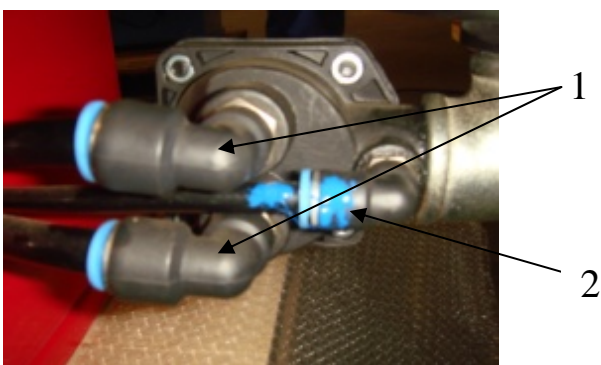


Fig 2

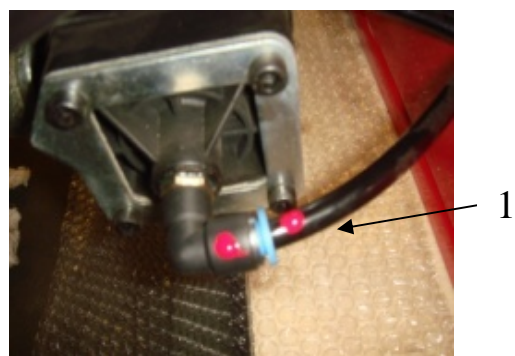


Fig 3

3.2.2 : Installation of the air source

Its installation position is to the left of the air tank. Detach the joint (5-1) preventing the air hose sliding into the body on the $\phi 8$ PU hose on the back of the body. In reference to Fig4, plug the air hose into the corresponding position of the air source.



Fig4

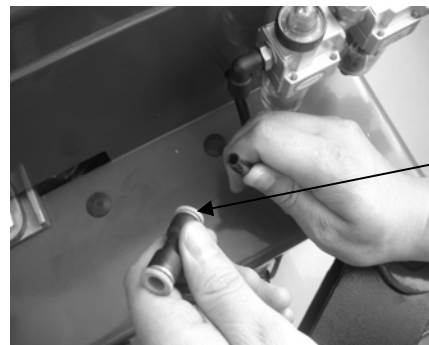


Fig5

3.2.3 : Installation of bead breaking arm

3.2.3.1 As shown in Fig 7 ,align the installation hole of bead breaking arm(7—3)to the installation hole of bead breaking arm bracket(7—2) ,plug in the pin shaft screw (7—1) and then tighten the lock nut(rotation moment is 30 ~ 40 N·m) .

3.2.3.2 As shown in Fig 6 , plug cylinder rod (6—1)into the hole of bead breaking arm slide bush(6—3) ,then tight the bushing and fix shaft assembly (6—2) together at the end of the cylinder rod.

3.2.3.3 Hang the bead breaking arm spring (7—4)

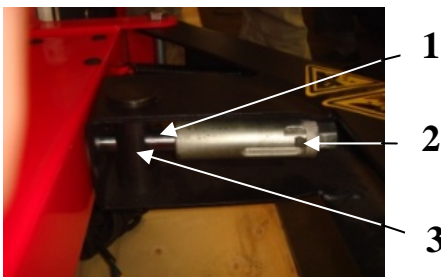


Fig 6

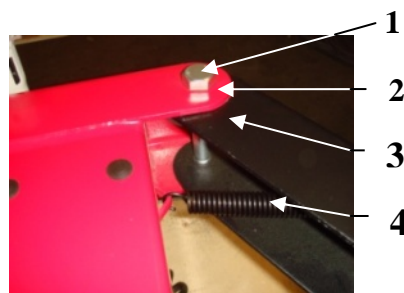


Fig 7



Fig 8

3.2.4 : Installation of the column assembly

3.2.4.1 Position the column(9—2)at the upper block of the body(9—3) ,The surface f the column that label is stuck on should be forward. Align the installation hole and plug in the column rotation shaft (9—1) , and use the bolt to lock two sides.

3.2.4.2 Connect of column with the tilt back cylinder : On the left of the upper block of the column, there is an

auxiliary hole (10—1) for mounting and demounting the bolt. Align the hole at the end of the cylinder rod and the installation hole at the bottom of the column and insert the bolt and lock the nut.

3.2.4.3 Connect of the column are source hose : Insert the $\phi 6$ hose into the body and connect with Tee (11—1) in the body .

3.2.4.4 Installation of the column protective cover : Position the protective cover (12—1) at the upper block of column. Align the hole and install as shown in Fig 12.

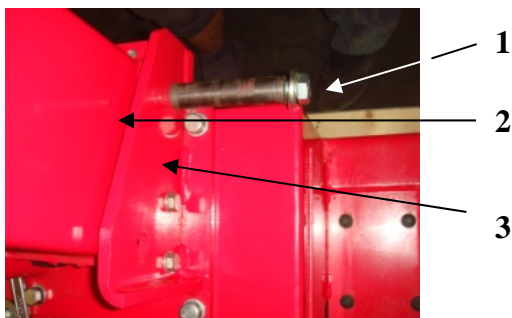


Fig 9

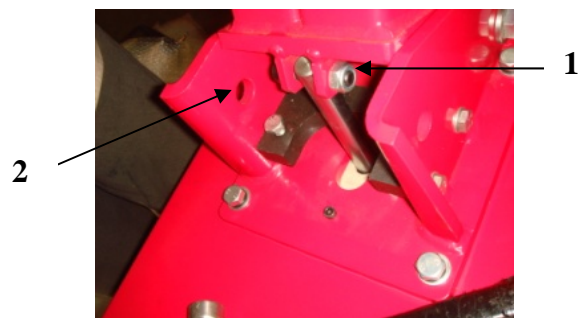


Fig 10

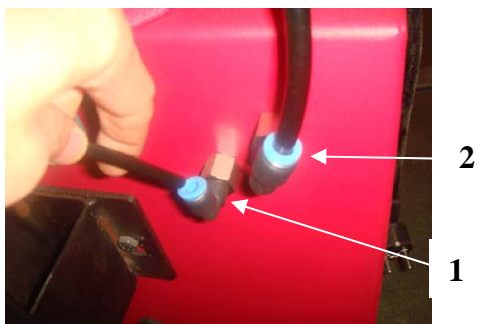


Fig 11

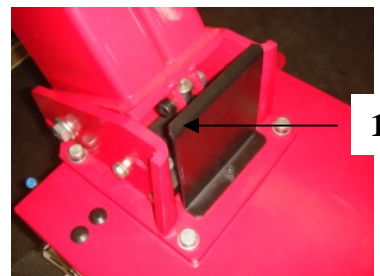


Fig 12

3.2.5: Installation of the vertical shaft spring and horizontal arm cover



When you detach the vertical shaft cap, you should support the hexangular shaft properly to avoid the fall of the hexangular shaft causing the damage to the machine or the human body.

3.2.5.1 Detach the vertical shaft cap (13—1) and the fix screw (13—2) and mount the vertical shaft spring (14—1) and then fix the vertical shaft cap.

3.2.5.2 Install the horizontal arm cover (14—2) from the top of the hexangular shaft. Use the fix screw (14—3) to fix.

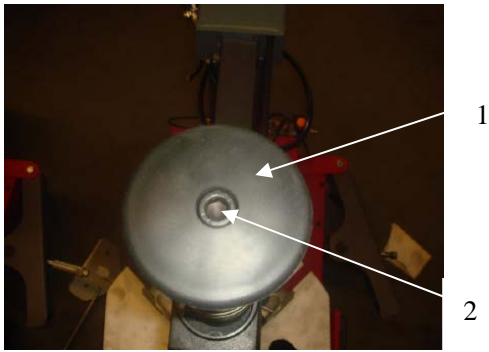


Fig13

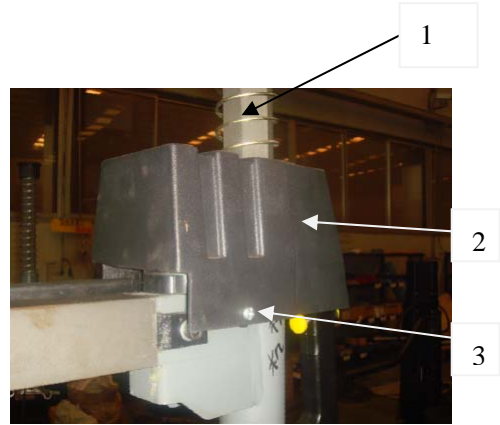


Fig14

3.2.5.3 Adjust the set screw by the two sides of column and release the nuts by the two sides. Adjust the clearance between the heads of the screws and the side panel of the column to be 0.03mm(Fig 14A) to lock the nuts.

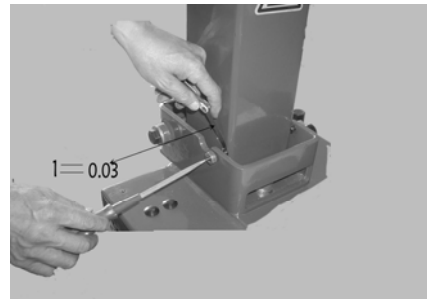


Fig 14A

3.3Air test :

3.3.1 column tilt back

Connect the air and press down the lock valve button(Fig 2-2)to lock the horizontal arm. Step down column tilt pedal(Fig 2-9)and the column tilt back by 25°. The tilt speed has been setup before ex-work at about 2seconds. After longtime of use, the speed will be fast or slow and on this condition, you can use the speed valve at the heads of the push-out cylinder to adjust. Loose the nut and turn adjust screw clockwise, the speed will be slow and it will be slow if counterclockwise, tight the nut after adjust.

3.3.2 When the machine out of the factory, the air source fitting has been adjusted well and if you need change, you can readjust.

Pressure adjust: Lift up the pressure adjustable button(FIG15-1) 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 (FIG15-2) . If clockwise, the oil dropping speed will slow. If counterclockwise, it will become fast.

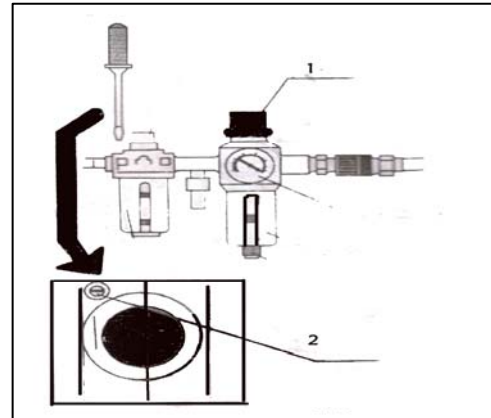


Fig15

CHAPTER 4 DEMOUNT AND MOUNT TIRE

4.1 DEMOUNT TIRE

4.1.1 Deflate the air in the tire completely and pull out the core. Use the special tool to detach the weight on the rim. (FIG16).

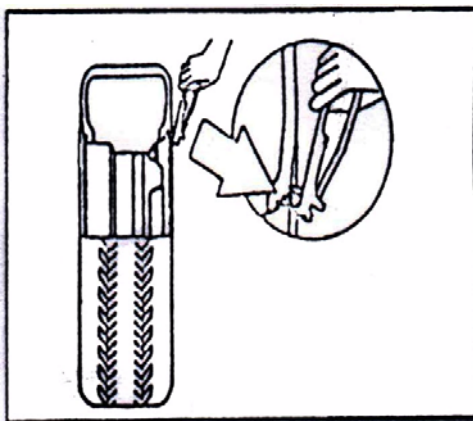


Fig 16

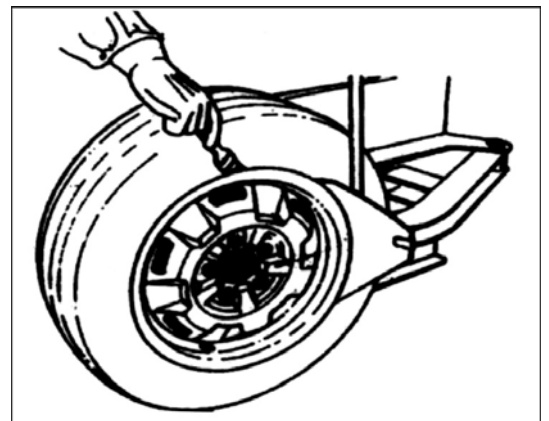


Fig 17

4.1.2 Place the tire between then bead breaking blade and tire pressing runner clog. Position the bead breaking blade beside the lateral side of the tire (FIG17).Then step down the pedal to detach the rim from the tire(fig2-12). Repeat the same operation on the other parts of the tire to make the tire completely detached from the rim. To detach the lip smoothly, you can use the brush to spread the lubricant or thick soap liquid between the lip and rim.

Place the wheel with the tire detached from the rim on the turntable and step the clamp pedal(fig2-11) to clamp

the rim. You can select the outer clamp (fig18) and inner clamp (fig19) to clamp the wheel according to the different rim.

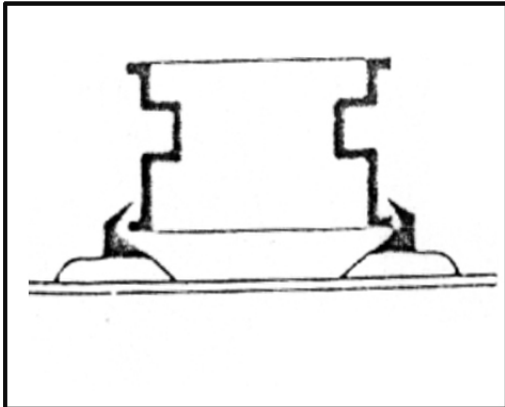


Fig 18

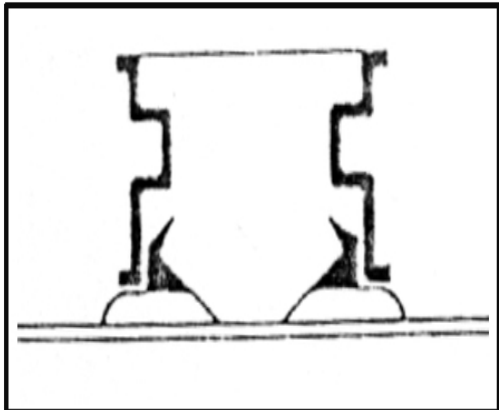


Fig19

4.1.3 Move the hexangular shaft to the working position to make the demount tool close to the rim of the wheel. The cylindrical roller in the demount tool will contact with the external rim of the rim and the bottom of the demount tool will contact with the surface of the rim. Press the lock handle press button (fig2-2) to lock horizontal arm and hexangular shaft and the hexangular shaft will automatically move upwards. The quadric shaft will automatically backward a little to make the demount tool detached from the rim of the rim to avoid the damage on the rim. (fig20) .

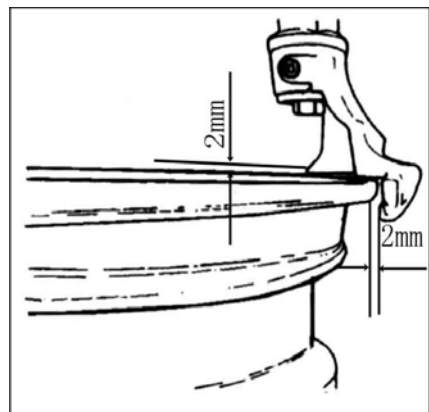


Fig 20



The angle of the demount tool has been calibrated according to the standard rim(13"). If handling the extra-big or extra-small rim, you can reposition.

4.1.4 Use the crowbar to detach until the lip to the hump of the demount tool (fig21). Step the turntable rotation pedal (fig2-13)to rotate the turntable clockwise until the rim of the wheel fall off. 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 demount tool See fig22.



If the demount of the tire is jammed, please stop the machine immediately and then lift up the pedal to let the turntable rotate counterclockwise to remove the resistance !

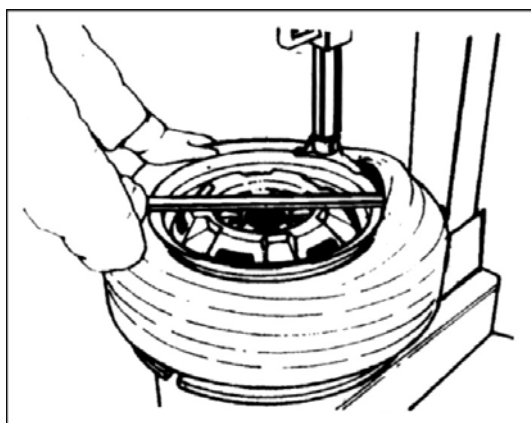


Fig 21

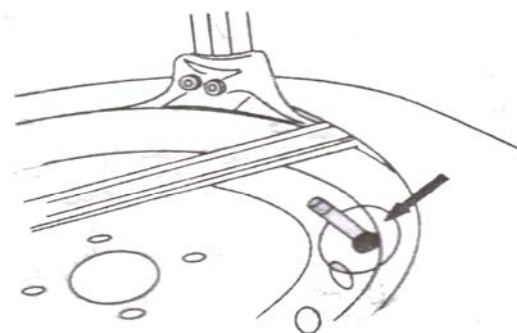


Fig 22

4.1.5 Take out the tube and then move up the lower lip to contact with the upper edge of the rim and repeat the step of 4.1.4. Detach another lip (fig23). Step the column tilt pedal(fig2-10) and the column tilt backwards and at this moment, you can take off the tire.



Necklace, bracelet and loosen clothing is easy to hook and injury the person

4.2 Mount tire:



Before mounting the tire, check if the rim and tire featured with the same dimension !

4. 2. 1 Clean up the oil and rust on the rim and lock the rim on the turntable. You can select the inner and outer clamp. But the tire detach groove must be in the relative higher position

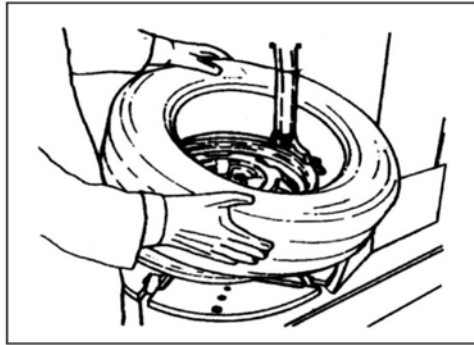


Fig 23

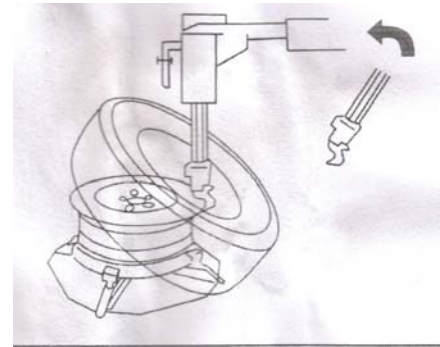


Fig 24

4.2.2 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 column tilt pedal (fig2-10) to make the column return to the original position. Move the demount head to firmly contacted rim(fig20). Position the left of the lip above the tail of the demount tool and the right under the hump of the demount tool. See FIG 24.

4.2.3 Press down the right side of the tire as hard as you can and step turntable pedal (FIG2-13) to rotate the turntable clockwise to guide the lip into the tire detach slot completely.

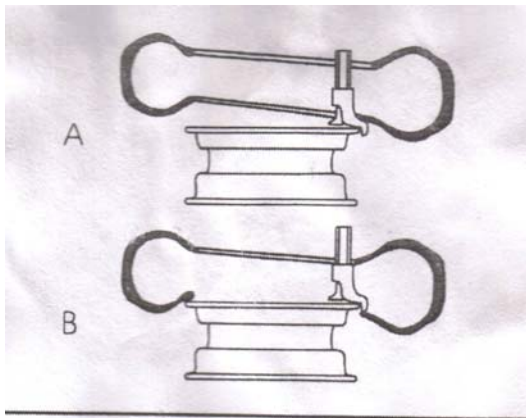


Fig 24A/B

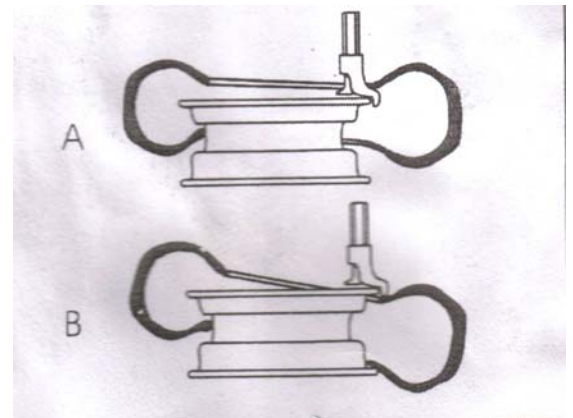


Fig 25

4.2.4 If there is tube, raise up the demount tool and put in the tube and position the core.

4.2.5 Mount the demount tool again. Adjust the position of the upper lip. Use the assistant press roller and press to press the side of the tire to make partial of the lip into the tire detaching slot. Step the turntable rotation pedal to rotate the tire. At this moment, continue pressing the lip just mounted on the rim. When 10 ~ 15cm of the tire not into the rim, change to the step mode. And observe the condition of the tire to avoid the tear of the tire. Once you feel there is any tear on the tire, release the pedal at once. Then lift up the pedal by instep to make the motor rotate reverse. Make the tire restore to the original condition to mount again.

4.3 Common Inflation :

When inflating the tire, please be carefully and series 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. (fig 2-22)

1. Loose the tire from the turntable.
2. Connect the inflation hose with the tire air core. See FIG26.
3. In the process of inflation, you should repeat stepping the inflation pedal. Confirm the pressure indicated on the pressure gauge not exceed the scope specified by the manufacturer. In this machine, there is a pressure decrease valve to keep the inflation pressure not exceed 3.5bar. Customers can get different inflation pressure by adjusting the pressure decrease valve according to their own requirement.
4. If the inflation pressure too high, you can press down the deflation press button on the inflation device to reach the required air pressure.

4.4 Rapid Inflation(only for the machines with IT)

If the tubeless tire fit to the tire not tight, you can apply the rapid inflation first and then common inflation:

1. Clamp the wheel and connect the inflation hose.
2. Step down the inflation pedal to the bottom position (second gear) and quickly release the pedal when the tire is full to the position of the first gear
3. Repeat stepping the pedal for many times to confirm the pressure indicated on the pressure gauge not exceeds the pressure specified by the manufacturer.

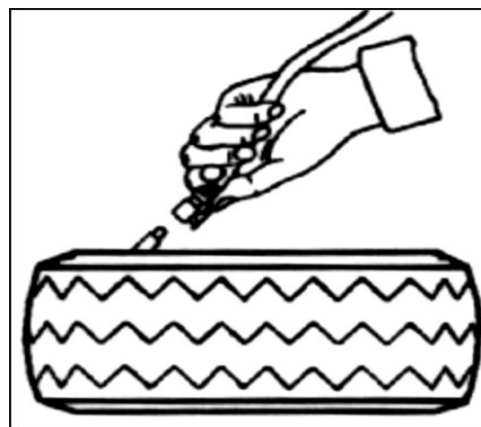


Fig 26



Note : This operation must be on the condition that the wheel is firmly clamped by the jaw , or there will be danger to the life.



Warning ! explosive !

When inflation, you must follow the above safety operation and abide by the following instruction:

- * Carefully check is the size of the rim same to the size of the tire and also check the wear condition of the tire to secure there is no damage before inflation.
- * When the inflation pressure is relatively high, you should remove the tire from the machine and inflate in the protective cover.
- * When inflate the tire, be carefully, keep your hands and body far away from the tire.

Chapter 5 Repair and maintenance



Note :

Only the professional personnel can repair. Before any operations of repair and maintenance, you should power off and the power plug should be monitored by the repair personnel , meanwhile switch the pneumatic source and deflate the residual gas.

To correct use the tire changer and prolong its life , repair and maintenance in accordance with the operation manual is necessary. Or the running and reliability of the machine will be effected and the operator or the personnel around the machine will be injured.

5.1 The following parts will be maintained monthly :

- Keep the clean of machine and working site.
- Use the diesel oil to wash the hexangular shaft and quadric horizontal arm (Fig27).
- Use the motor oil to lubricate.
- Use the diesel oil to clean the turntable jaw and guide rail and use the Lithium grease to lubricate(Fig 28)
- Periodically check the height of the in the oil fogger. If it is lower than the oil scale, please fill in the SAE30 grease(Fig29)
- Periodically drill out the water and impurity in the oil-water separator.
- Periodically check and adjust the tension force of the transmission belt and properly adjust the adjustable nuts at the A and B position to adjust the tension of the belt (Fig 30) .

·Check all the connecting part and tight the loose bolts.

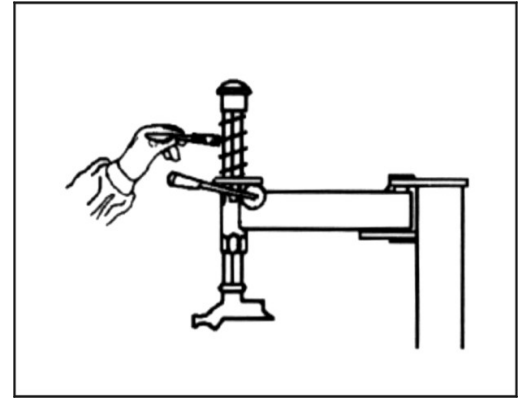


Fig 27

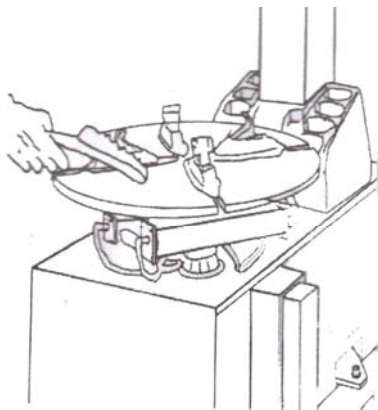


Fig 28

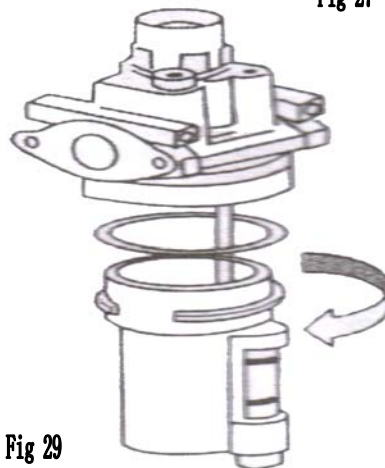


Fig 29

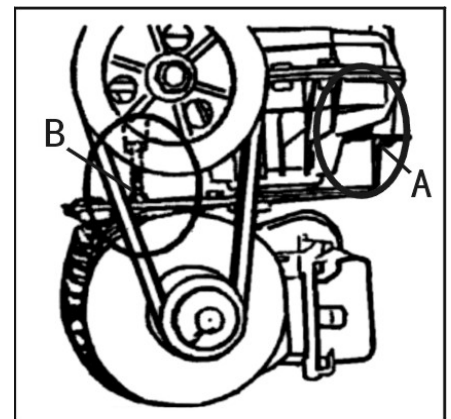


Fig 30

5.2 The adjustment on the clearance between the tool head and rim.

5.2.1 Vertical clearance: Adjust the hexangular lock plate :

- Switch off the pneumatic source and detach the protective cover on the hexangular shaft.
- If the clearance is too much, we can adjust the nuts on the vertical hexangular shaft downward;
- If the clearance is too small we can adjust the nuts on the vertical hexangular shaft upward (Fig 31-1, 31-2);
- Connect the air source and observe the displacement after lock.

5.2.2 Horizontal clearance: Adjust the quadric lock plate:

- Switch off the air source and detach the protective cover at the upper end of the horizontal arm.
- Use spanner to loose the lock nut on the M6 screw at the two end.
- Adjust the M6 screw(Fig 31-3), meanwhile use your hand to push the quadric shaft until it runs smooth and then lock the nut.

·Use the spanner to adjust the screw (Fig 31-4) in the middle and meanwhile lock the horizontal arm and observe the displacement. When the displacement is 2mm,lock the nut.

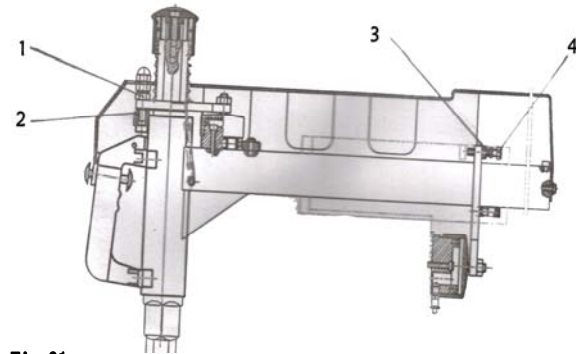


Fig 31

CHAPTER 6 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 (FIG32) and the stacked layer will not exceed 3layers.

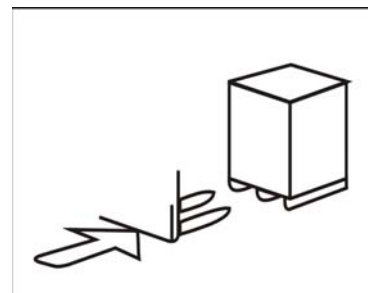
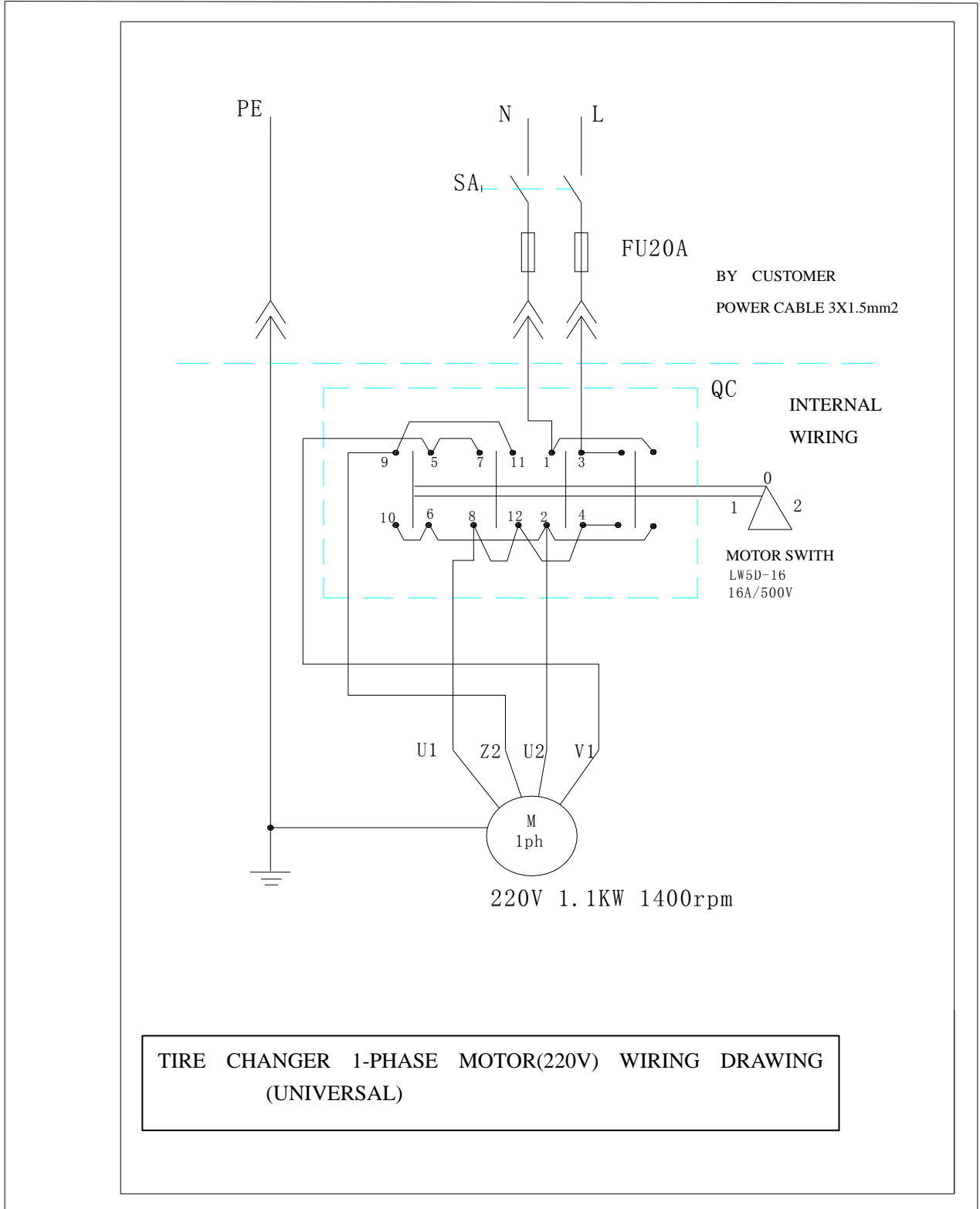


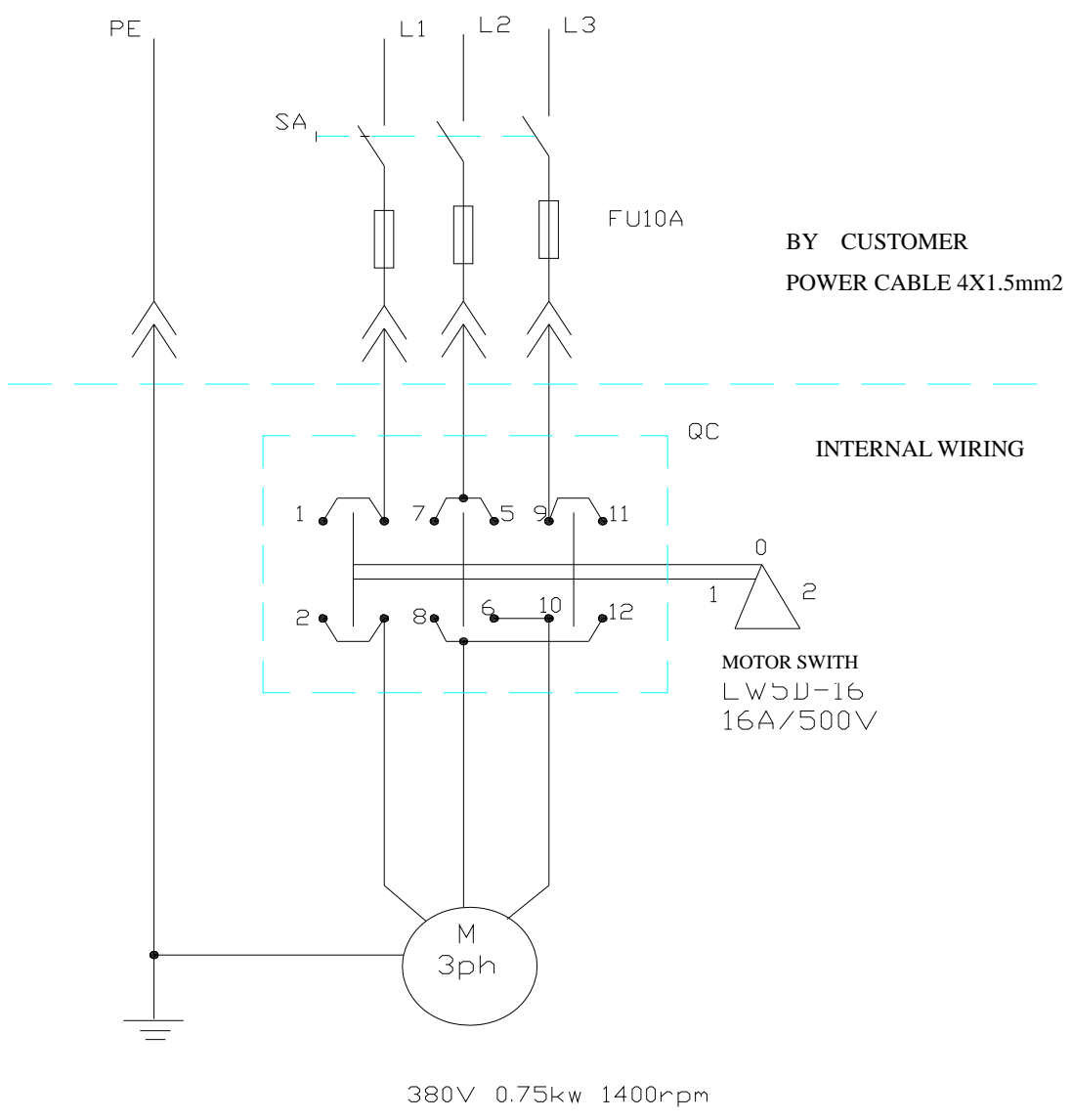
Fig 32

CHAPTER 7 ELECTRICAL AND PNEUMATIC DRAWING

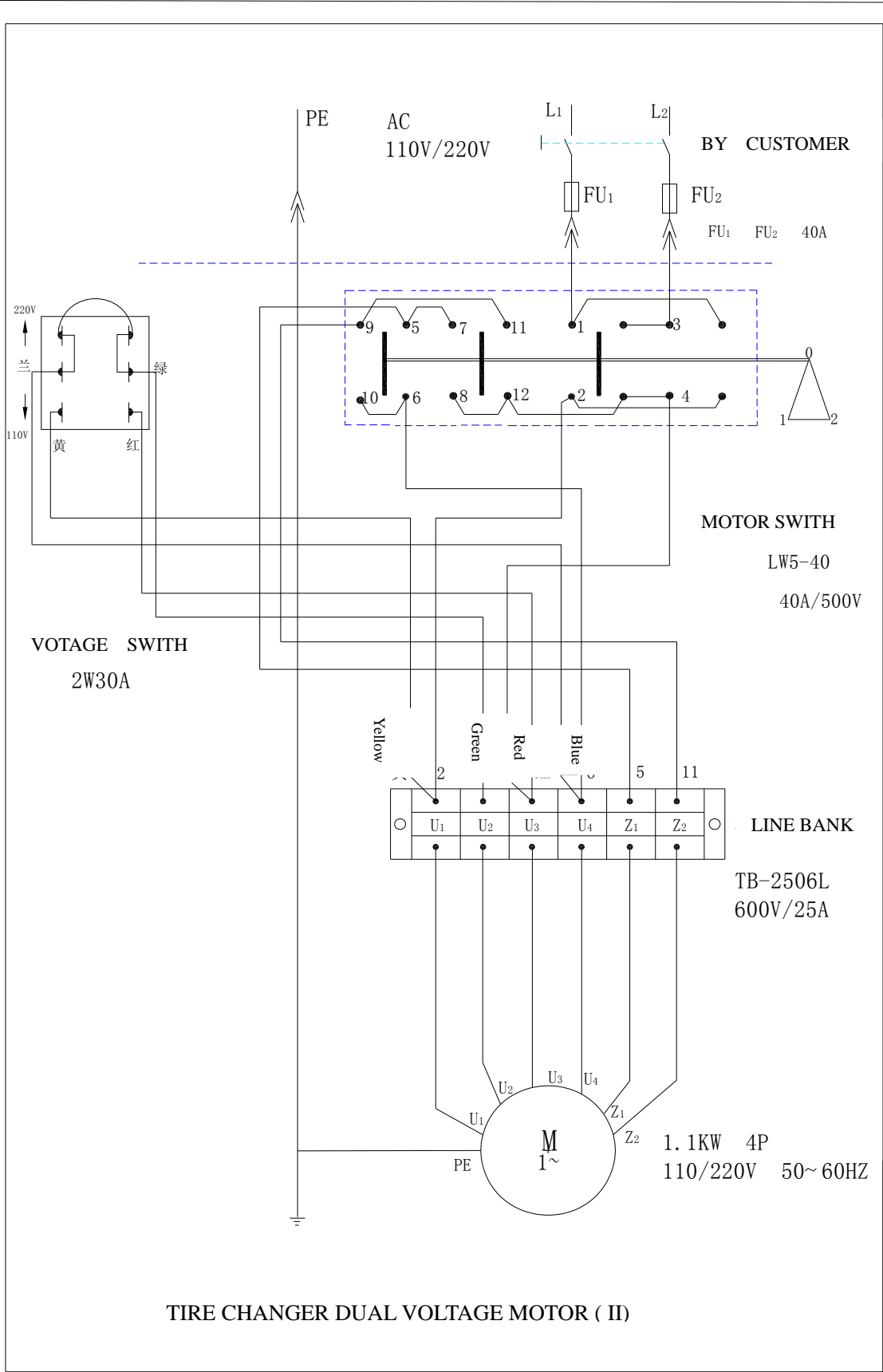
220V ELECTRICAL PRINCIPLE DRAWING

380V ELECTRICAL PRINCIPLE DRAWING

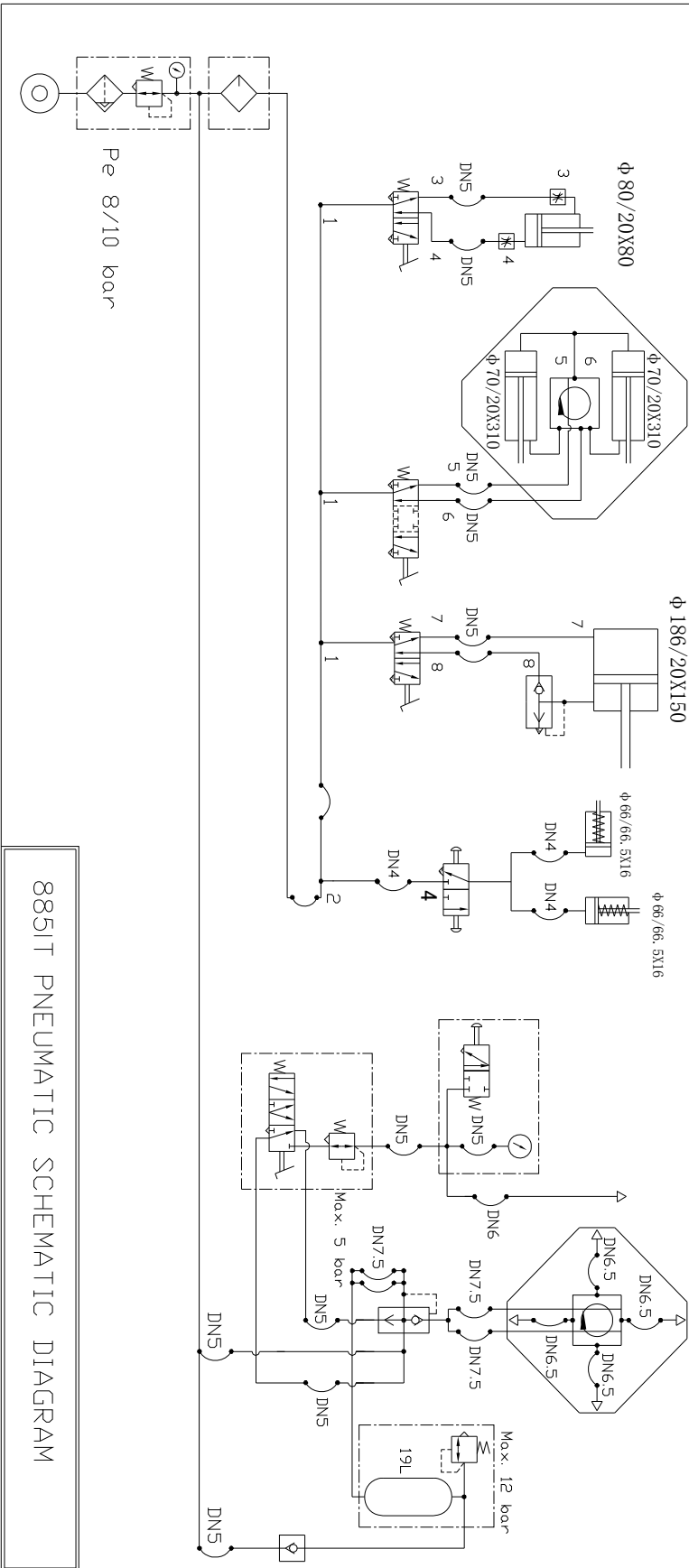




TIRE CHANGER 3-PHASE MOTOR(380V) WIRING DRAWING (UNIVERSAL)



0	1	2	3	4	5	6
FILTER- GROUP	TILTING	LOCKING RIMS	BEAD BREAKER	ARM LOCKING	TIRE GAUGE	BEAD SEATER
	RISE ↓ DESCENT ↑	OPEN ← → CLOSED	OPEN ← → CLOSED	LOCKING ← → DECHUCKING		



8851T PNEUMATIC SCHEMATIC DIAGRAM

CHAPTER 8 TROUBLESHOOTING ANALYZE AND SOLUTION

TROUBLESHOOTING	REASON	SOLUTION
Turntable rotate 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 if motor burned Change Universal switch
Turntable can not clamp the rim as normal	Claw worn Clamp cylinder air leakage	Change claws Change the air leakage sealing parts
Quadric and hexangular shaft cannot lock	Lock plate not in position Lock cylinder air leakage	Adjust the adjust screw of the lock plate Change the cylinder sealing washer
The horizontal arm fault The vertical movement of the hexangular jamming	The lock position of the quadric lock position not correct The lock position of the hexangular lock position not correct	See Chapter V Adjust the quadric/hexangular lock plate
Column tilt backwards or the return too fast or slow	The deflate of the column cylinder too fast/slow and the air source pressure too slow	Open the side panel and adjust the throttle (3.2.1)
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 Mechanic fault Air pressure not enough	Change sealing parts Remove the fault Adjust the air pressure to meet the requirement

-Appendix-

LC SERIES MACHINE OIL SAFETY DATA SHEET

MOBIL XHP 222

SA
E30#

ITEM	QUALITY STANDARD
Penetration rate ^{25°C} mm/10	280
dropping point °C	280
anticorrosion	passed
Basic oil viscosity	220
oxidize stability 100h pressure-drop kpa	35
water lose percentage ^{79%}	5
copper corrosion	1A

LUBRICATION OIL

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

2# LITHIUM BASE GREASE

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

CKC460 INDUSTRIAL GEAR OIL

ITEM	QUALITY STANDARD
Viscosity 40°C	461
Viscosity index	92
Flash point °C	212
Freezing point °C	-26
copper corrosion 100°C 3 h	1A
mechanical impurity	0.007
Pour point	-10