HPTC-530
Tire Changer
Owner's Manual

WARNING

This instruction manual is an important part of the product. Please read it carefully and keep it properly in order to use it when maintaining and examining the machine.

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 improper operation and out of specification range.

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

Please note the safety label applied on the machine.

Operators should wear safety protective facilities such as working suits, protective glasses, earplugs, and safety shoes. Keep your hands and body from the movable parts as possible as you can. Necklaces, bracelets and loosen clothing may cause danger to the operators.

Tire changer should be installed and fixed on the flat and solid floor. The distance of 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, and 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.

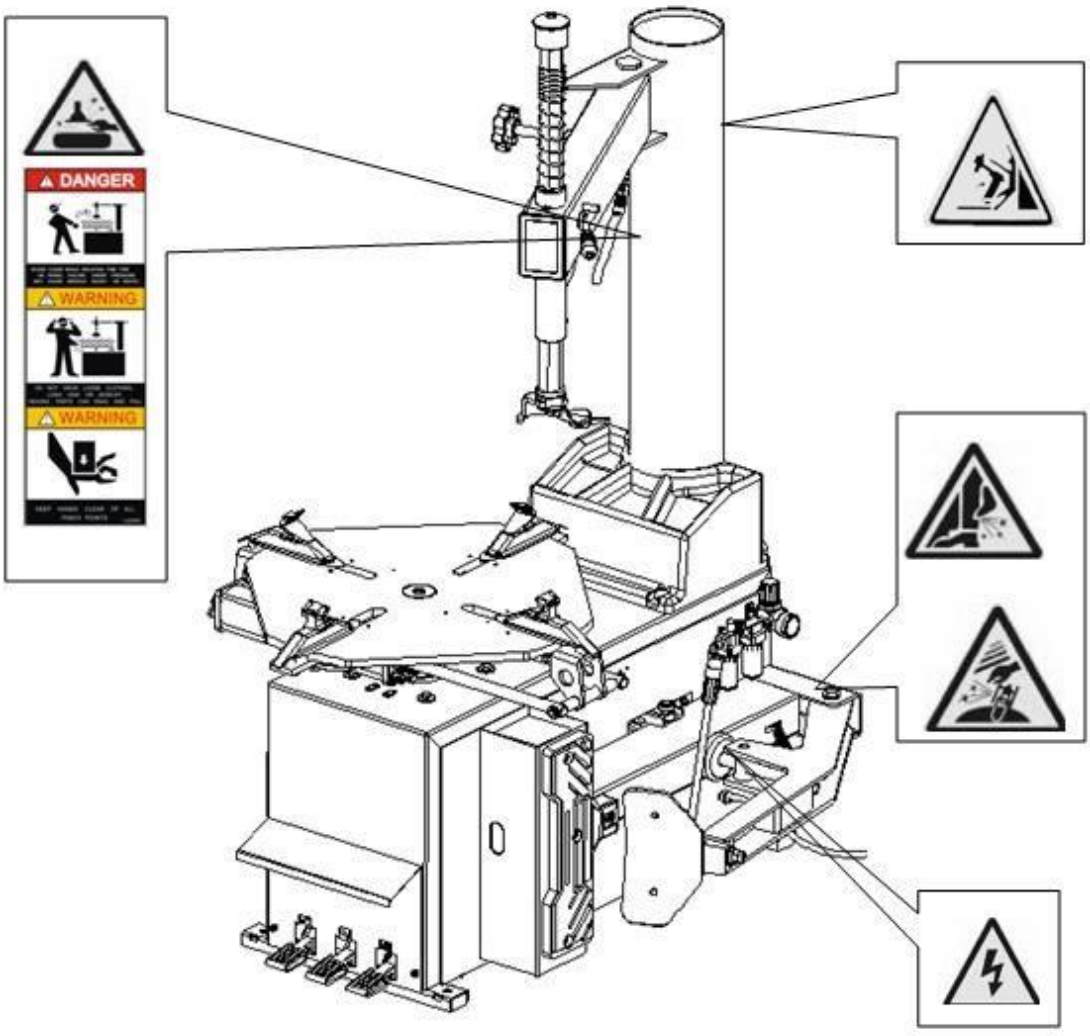
If you want to move the tire changer, you should under the guidance of professional service personnel.

SAFETY LABEL INSTRUCTIONS

SAFETY LABEL POSITION DIAGRAM

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

Operators should always note the safety labels to clearly understand the meaning of each label.



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CHAPTER 1 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 motorcycle tire with tube & tubeless. The operation is easy, convenient, safe, and reliable. It is the necessary equipment for the auto service shop and tire shop.

1.2 TECHNICAL PARAMETER

- Operation Pressure: 8-10 bar (115 - 145 PSI)
- Motor: 110VAC-1PH, 60Hz
- Turntable Speed: 6 RPM
- Noise Level: ＜70dB（A）

1.3 APPLICATION SCOPE

Model #	Max. Wheel Diameter	Max. Wheel Width	Rim Diameter (Outer Clamping)	Rim Diameter (Inner Clamp)
HPTC-530	965mm (38″)	305mm (12″)	10” - 20”	12” - 23”

1.4 ENVIRONMENT REQUIREMENT

- Ambient temperature 0℃～45℃ (32F - 113F)
- Relative humidity 30～95%
  Without dust and flammable / explosive gases
- The operation space around the machine will not smaller than the indicated in Fig.1

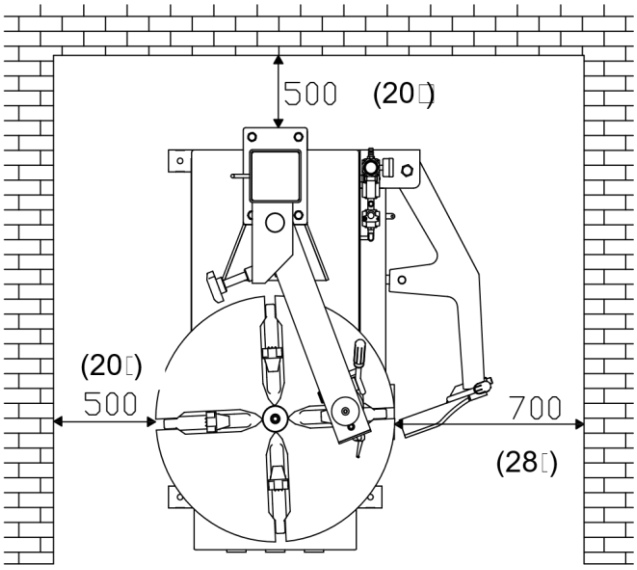

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Fig. 1

If the tire changer is installed outdoors, you must have a protective type shed or cover to protect from rain and sun. It is prohibited to use near flammable gases!

CHAPTER 2 CONFIGURATION AND OPERATION

1. Vertical Shaft Spring
2. Rocker Arm
3. Hexagon Shaft
4. Demount Head
5. Claw
6. Turntable
7. Operation Label
8. Turntable Rotation Pedal
9. Clamping Pedal
10. Bead Breaker Pedal
11. Limit Handle
12. Lock Handle
13. Column / Air Tank
14. Inflation Nozzle
15. Clamp Cylinder
16. Blade Handle
17. Air Filter, Regulator & Lubrication Unit
18. Bead Breaking Cylinder
19. Bead Breaker Arm
20. Bead Breaking Blade
21. Crowbar / Tire Tool
22. Bead Breaker Rubber Pad

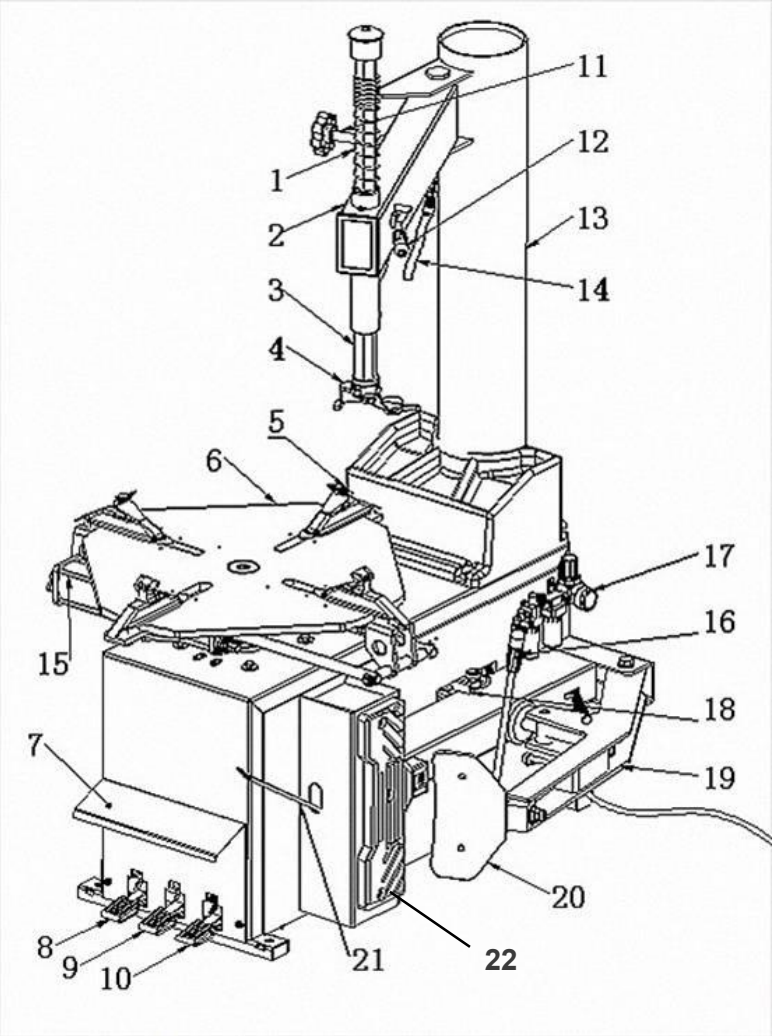

Fig. 2

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CHAPTER 3 INSTALLATION AND CALIBRATION

Before installation, carefully read the manual. Any unauthorized modifications and/or changes to any parts and/or components of the tire machine may cause damage to the machine.

Installation and assembly personnel should have specific electrical knowledge.

Operators must be trained and authorized to operate the machine.

Before installation, carefully read the equipment list. If there are any questions, please contact the dealer or representative.

To ensure the success of the installation, please have the following common tools:
Adjustable Wrenches, Socket Wrenches, Hex Keys, Pliers, Screw Driver & Hammer & multi-purpose Meter.

3.1 UNPACKING

3.1.1 According to the de-package instructions on the package box, detach the box and remove the package material to check for machine damage and if all spare parts are included.

3.1.2 Keep the package material far away from the working site and dispose of 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). Ensure to position the machine according to the information noted in Chapter 1.4.ENVIRONMENT REQUIREMENT. Remove mounting bolts, lock washers & flat washers from Column Base (Fig. 4-4) in preparation to install Column to Base (Fig. 5).

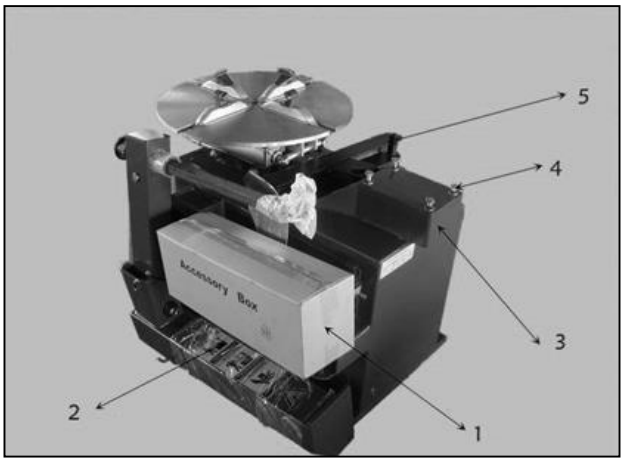


Fig. 4

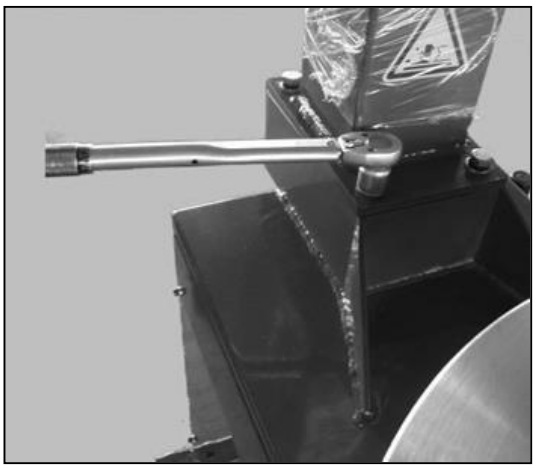


Fig. 5

3.2.2 Place the Column on Base with the direction of the warning label facing forward. Align the Column holes to the Base holes and mount with bolts, lock washers & flat washers, noted in the previous Chapter.

3.2.1 Using a Torque Wrench, tighten bolts to 52 ft.-lbs. (Fig. 5.) to secure Column to Base.

3.2.3 Use the wrench to remove the screw (Fig 6-3) Hexangular Shaft (Fig. 6-1) and take off the vertical Shaft Cap (Fig. 6-2).

When removing the screw on the vertical shaft cap, you will need use the lock handle to lock the hexangular shaft to avoid sliding off to damage the machine or cause injury to personnel!

Install the vertical Shaft Spring (Fig. 7-1) on the vertical shaft. Mount the vertical shaft cap, then 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 (Fig. 8-4). Remove the bolt (Fig. 8-3) and hang the spring (Fig. 8-2).

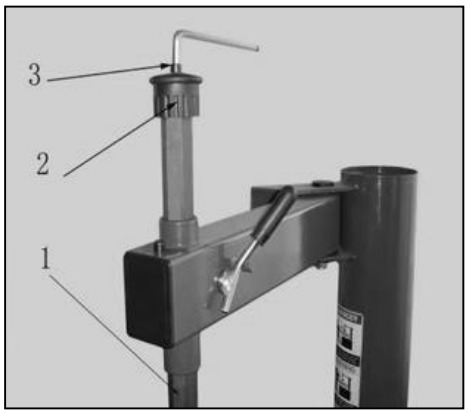


Fig. 6

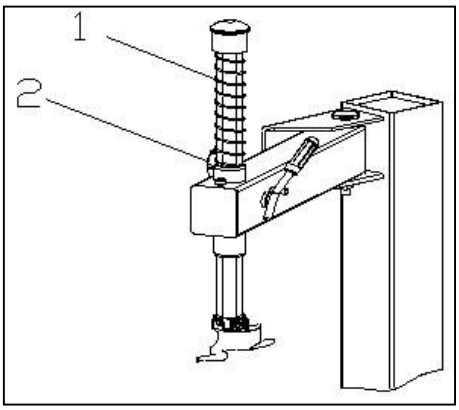


Fig. 7

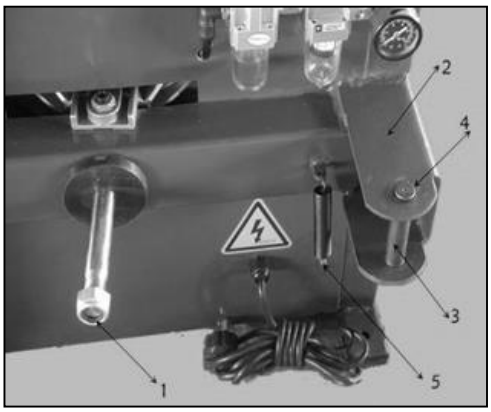


Fig. 8

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 (Fig.10-2) through the hole of the bead breaking slide bushing (Fig. 10-1). The surface of the slide bushing should be facing outwards (Fig. 10). Assemble the removed nut (Fig. 8-1) into the front end of the piston rod. The distance from the edge of the bead breaking blade to the bead breaker's rubber pad is 1-3/16" to 1-1/2" (30-40mm) as shown in Fig.11. Install the return spring (Fig. 9-3)

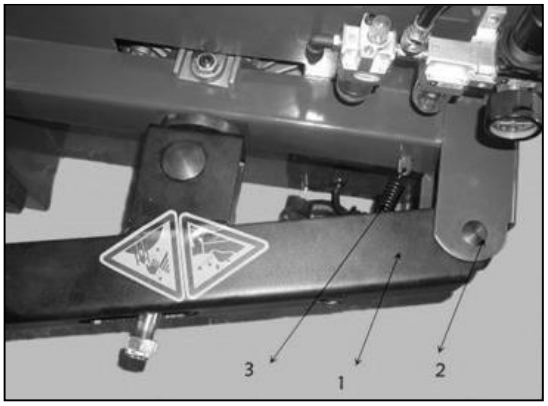


Fig. 9

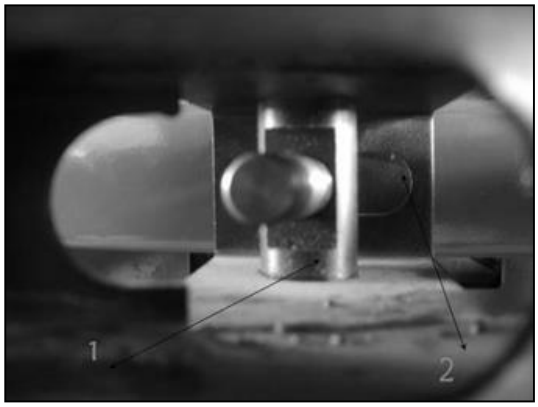


Fig. 10

Note: If the machine is the one with the quick inflation feature; please open the side panel and insert 2 pieces of Ø12 hose to the inlet of the quick inflation valve and to the Ø12 nozzle. Reinstall the side panel.

3.2.6 If equipped with the tool box, you must attach firmly, and the column will be completely installed.

3.3 AFRL - AIR FILTER, REGULATOR & LUBRICATOR INSTALLATION: Note: The AFRL has been detached and placed in the accessory box. The AFRL assembly will be installed at the customer's location during installation. This is done to prevent damage during shipment.

3.3.1 Remove the AFRL and mounting screw from the accessory box. Remove any oil or dust. Use the screw to mount the AFRL to the right side of the body (Fig. 12).

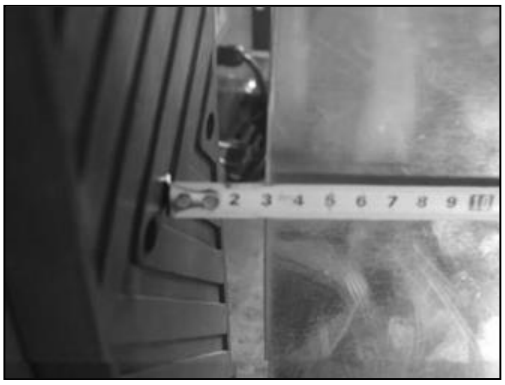


Fig. 11

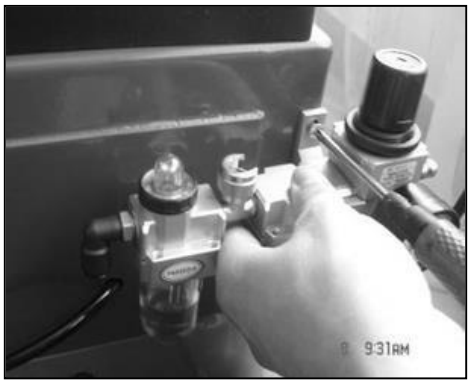


Fig. 12

3.3.2 To connect air hose: Detach the adapter on the ø8 hose on the side wall of the body and insert it into the elbow fitting (Figs.13 &14). The adapter is to keep the hose from sliding into the body.

Fig. 13

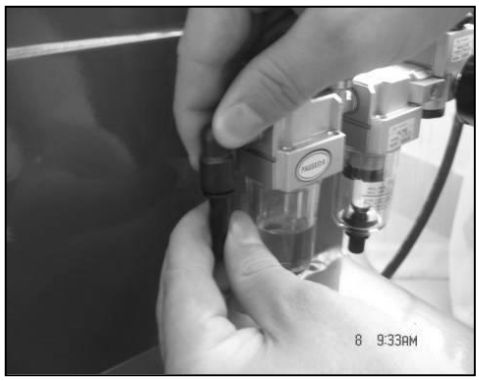


Fig. 14

3.3.3 To connect the inflation gun or inflation gauge box: Inlay the adapter of the inflation gun or inflation gauge box into the groove (Fig. 15) on the open nut of the air regulator fitting. Tighten nut to connect the air regulator.

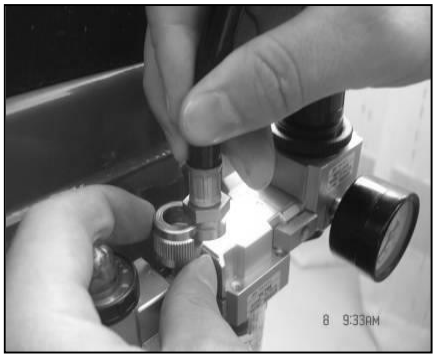
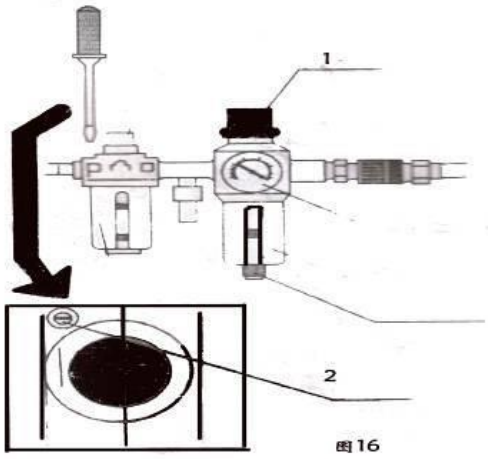
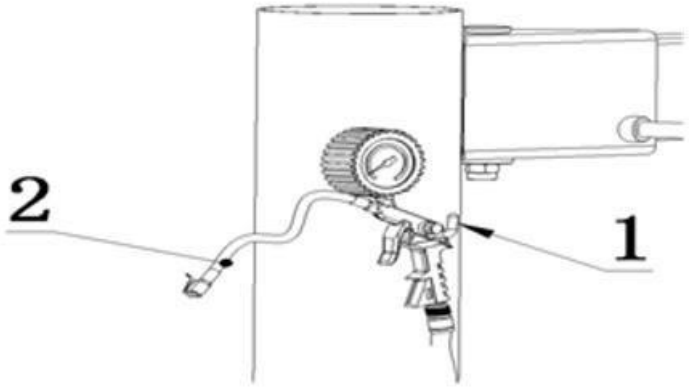


Fig. 15

3.3.4 The AFRL has been pre-adjusted at the factory. If it needs adjusted: **Pressure:** Lift up on the pressure adjustable knob (Fig. 16-1) and turn clockwise to increase air pressure. Meanwhile, if turned counterclockwise, the air pressure will decrease. **Oil Feed:** Use a screw driver to turn the screw to adjust flow rate (Fig. 16-2). If turned clockwise, the oil flow speed will be reduced. If turned counterclockwise, the oil flow will increase.





The location to hang the pressure gauge.

Fig. 16

CHAPTER 4 - DEMOUNT AND MOUNT TIRE

4.1 DEMOUNT TIRE

4.1.1 Deflate the tire completely by pulling out the valve stem and/or core. Use a special tool (Wheel Balancer Hammer) to remove balance weights from the rim (Fig. 17).

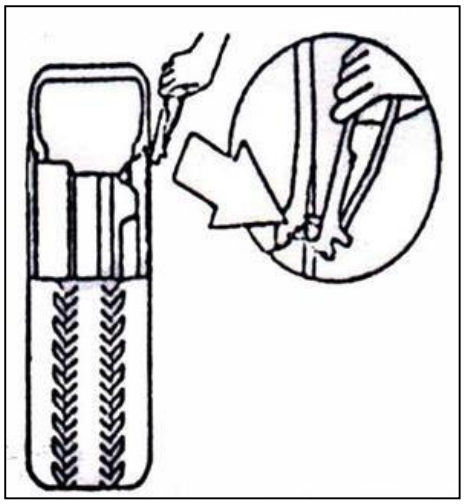


Fig. 17

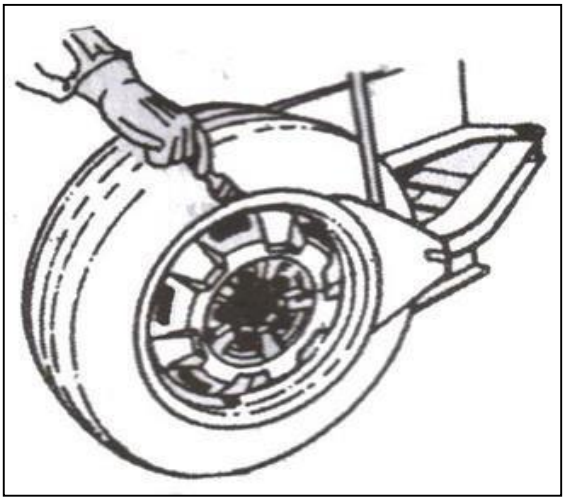


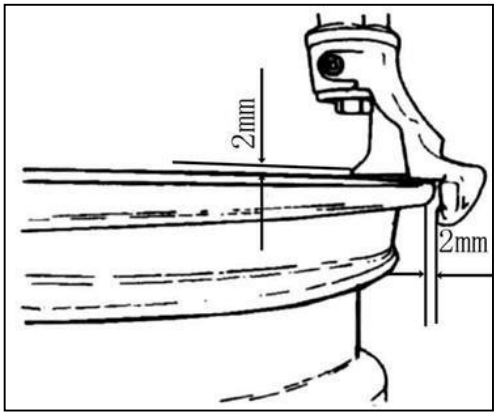
Fig. 18

4.1.2 Place the tire between the bead breaking blade and rubber contact pad (Fig. 18). Then step down on the Bead Breaker Pedal (Figs. 2-10 or 3-10) to detach the rim from the tire. Repeat the same operation on the other sections of the tire to fully detach from the rim. Place the wheel with the tire detached from the rim on the turntable and step on the Clamp Pedal (Figs. 2-9 or 3-9) to clamp the rim.
Note: You can select either the outer clamping or inner clamping to properly clamp the wheel according to different rim types.

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

4.1.3 Position the Hexangular Shaft (Fig 2-3) to the working position to situate the demount tool to be close to the rim of the wheel, along with using the Limit Handle knob (Fig. 3-11) to position and secure Hex Shaft to rim. Once properly positioned, secure using the Lock Handle (Fig. 2-12).
Note: The demount tool will automatically provide a small 2mm gap to the rim (Fig. 19).

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



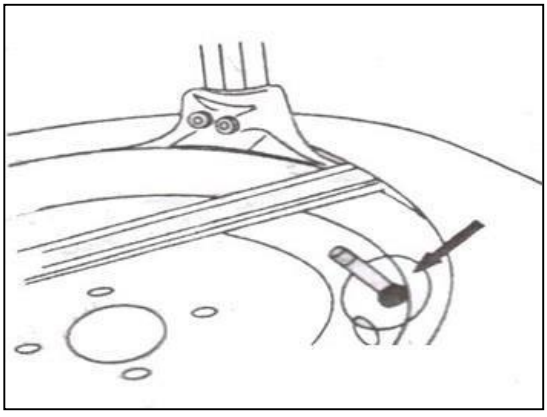


Fig. 19 **Fig. 20**

4.1.4 Use the included Crowbar Tire Tool to detach tire from rim as shown in Fig 20, using the Hex Shaft as a pivot point. Once the Crowbar is positioned, then step on the Turntable Pedal (Fig. 2-8) to rotate the turntable clockwise until the entire tire lip is completely detached from rim.

Note: If handling a tubed tire, try to avoid the damage to the tube, as the operator should keep the valve stem 4” (10cm) from the right side of the demount tool when demounting tires.

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

4.1.5 When handling the tubed 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. Any necklaces, bracelets and/or loose clothing can cause injury to personnel!

4.2 MOUNT TIRE:

Before mounting a tire, ensure to check if the tire and rim are of the same dimension!

4.2.1 Clean the dirt and rust from the rim and position on the turntable. Secure rim to turntable using the clamps.

4.2.2 Spread the lubrication liquid or soap liquid around the lip of tire. Tilt the tire against the rim, keeping the front end upwards. Press down on the hexangular shaft to move the demount tool 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). Then rotate the turntable clockwise to guide the bottom lip into the tire detaching slot.

Fig. 21

4.2.3 If there is tube, place it in the tire and plug the core and assemble the lip according to the above mentioned step (Fig. 22).

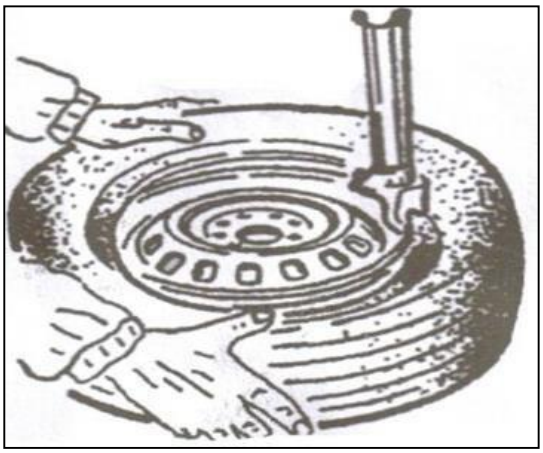


Fig. 22

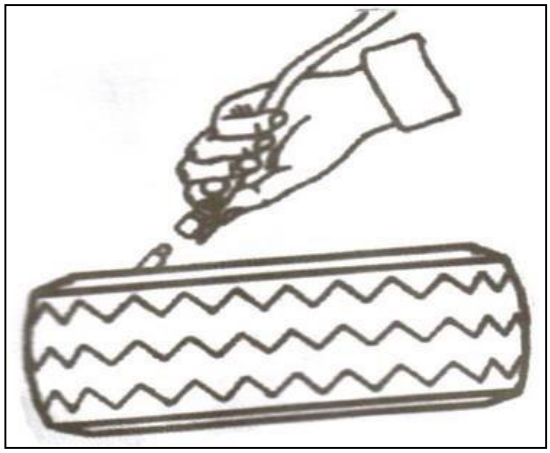


Fig. 23

4.3 INFLATION:

When inflating the tire, please be careful and follow the operational process. Ensure to check the air routing to see if the air connection is ok. Note: the tire changer is equipped with an inflation pressure gauge to monitor the inflation of the tire and the tire's pressure (Fig. 23).

1. Loosen the tire from the turntable.

2. Connect the inflation hose with the tire's preinstalled valve stem (Fig. 23)

3. In the process of inflation, you should stop the inflation periodically to confirm the pressure indicated on the pressure gauge so not to exceed the tire's pressure as specified by the manufacturer. The pressure decrease valve equipped in the machine will make the air pressure to not exceed 3.5bar or 51psi. The customer can obtain different inflation pressures by adjusting the regulator's pressure according to the requirement.

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

4.4 Rapid Inflation

If the tubeless tire does not fit securely to the rim, you can first apply 'rapid inflation' by using the bead seating Inflation Jets integrated into the clamps and then use common inflation method:

Fig. 24

1. Clamp the wheel and connect the inflation hose.

2. Step down the Inflation Pedal to the lowest position (2) and quickly release the pedal when the tire is full to the upper position (1) as shown above in Fig 24.

3. Repeat stepping on the Inflation Pedal multiple times to confirm the pressure indicated on the pressure gauge does not exceed the pressure specified by the manufacturer.

During this process, you should always ensure the wheel has been tightly clamped!

Explosive Warning!

When inflating, please follow the following instructions:

- Carefully check that the tire and the rim are of the same dimension.
- Check the wear condition of the tire to confirm the tire is not damaged before inflation!

When inflating the tire, please be careful. Keep your hands and body away from the tire.

CHAPTER 5 - MAINTANENCE & REPAIR

Only a qualified technician can execute the maintenance on the tire changer. Before any maintenance is performed, shut off power. Meanwhile, shut 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 provide maintenance and repairs according to the instruction manual. If maintenance and/or repairs are not done, there is a possibility the operation and reliability of the machine may be affected, along with possible injury to operator.

Monthly Maintenance:

- Keep tire changer and working area clean.
- Clean hexangular shaft (Fig. 25). Use machine oil to lubricate the shaft.
- Clean turntable, clamps and demount head. Use lithium based oil to lubricate (Fig 26).
- Check the oil level on the AFRL. If the oil level is low, add SAE-30 lubrication oil to fill line as required (Fig 27).
- Check the oil water separator trap and drain water, as required.

- Periodically check and adjust the tension of the drive belt. Properly adjust by adjusting the nut in A and B to proper tension (Fig. 28).
- Check all connection parts and tighten as required.

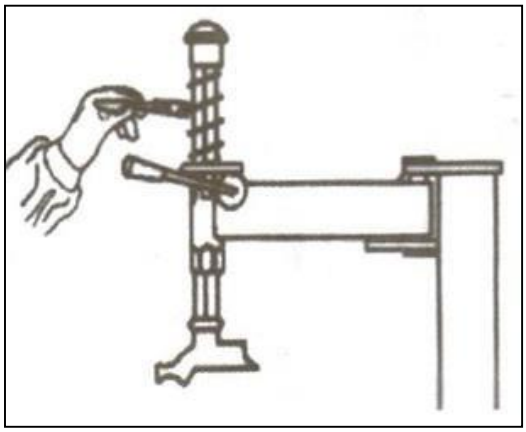


Fig. 25

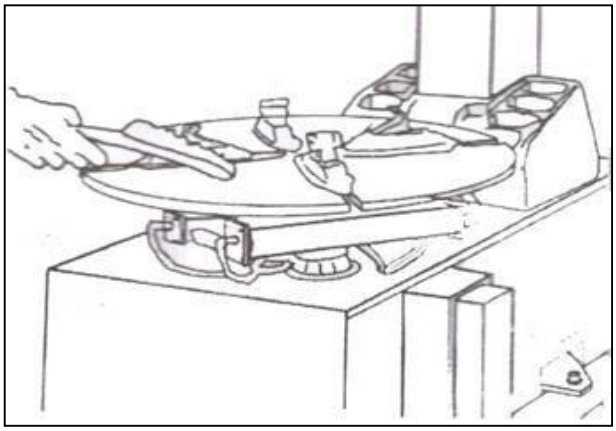


Fig. 26

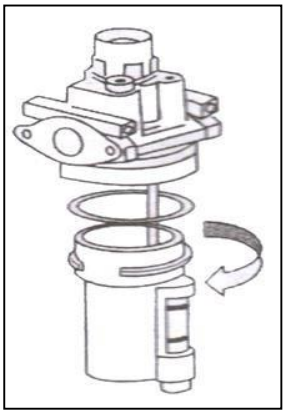


Fig. 27

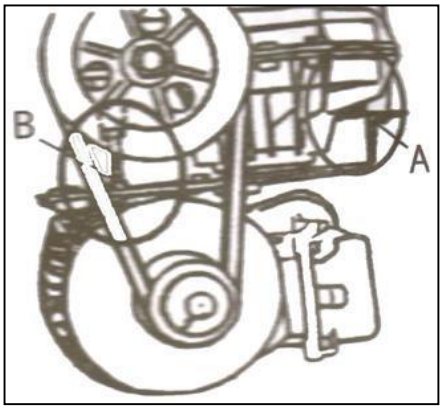


Fig. 28

Hexangular Shaft & Lock Plate Gap Adjustment:

When pressing downward on the lock handle, the hexangular shaft will easily slide up & down vertically due to the weight of the hexangular shaft and the return spring. When the lock handle is rotated clockwise about 100 degrees, the cam connected to the handle will push up on the lock plate to lock the hexangular shaft into position. The gap distance can be increased or decreased by adjusting the adjustment nut (Fig. 29).

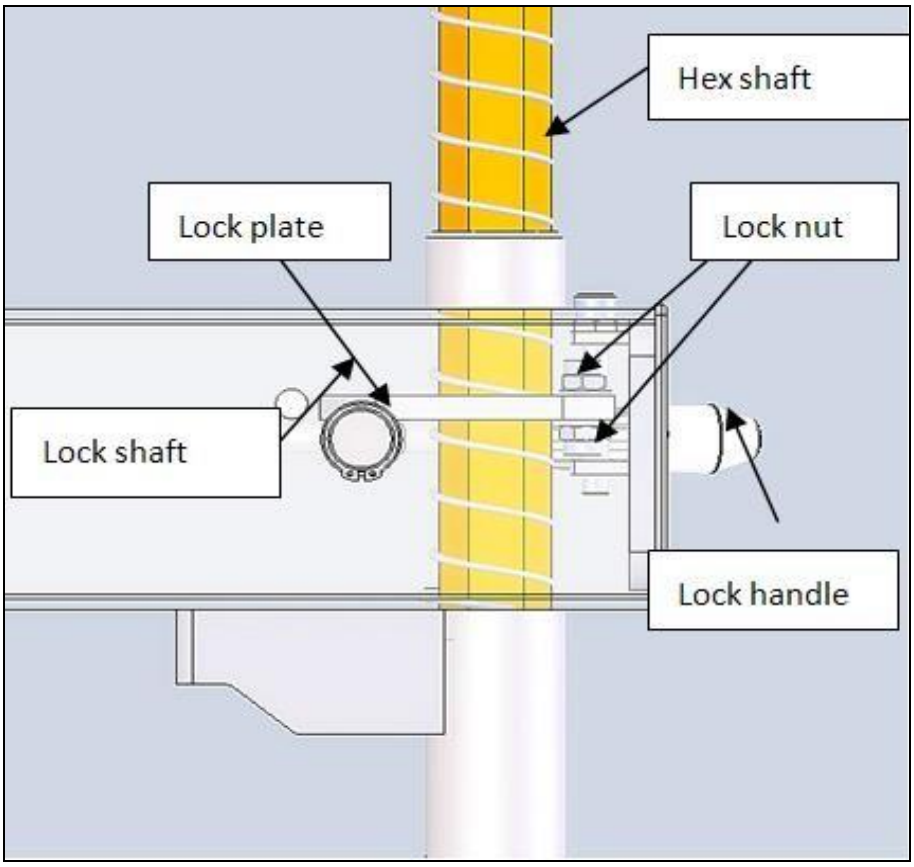
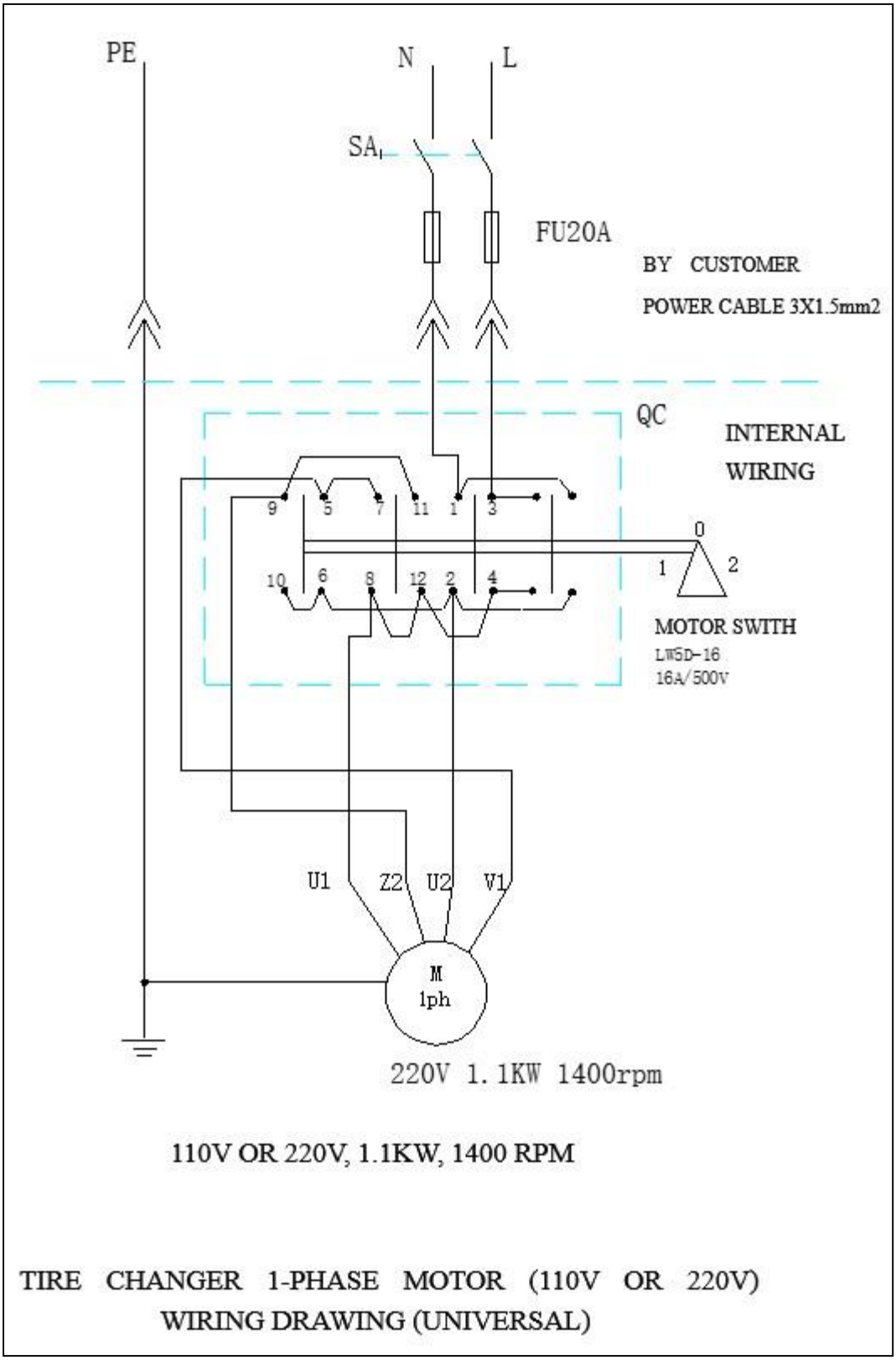
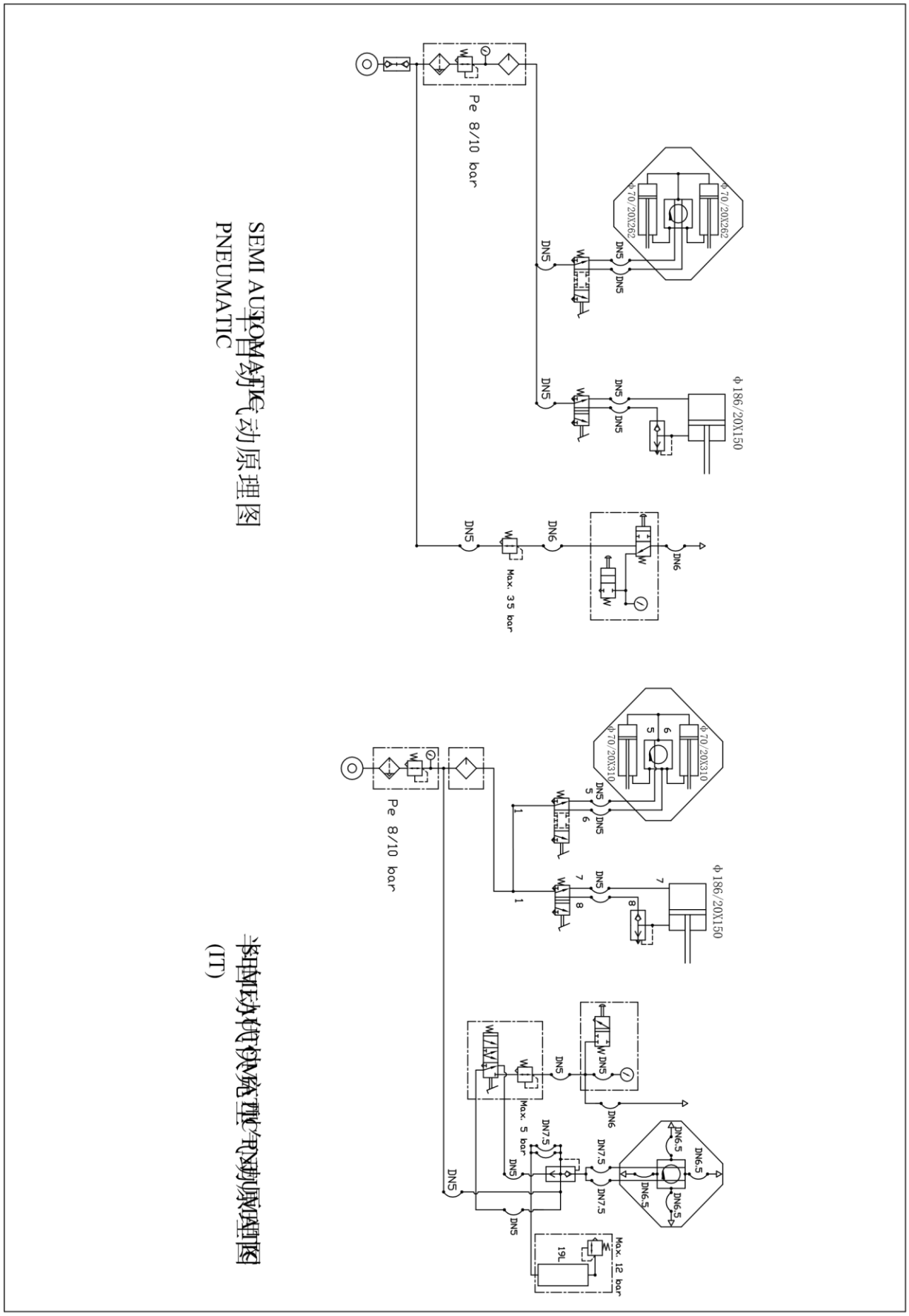


Fig. 29

CHAPTER 8 - ELECTRICAL AND PNEUMATIC DRAWING

110V OR 220V SINGLE PHASE ELECTRICAL DRAWING

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半自动气动原理图
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(IT)
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Max. 35 bar
Max. 5 bar
Max. 12 bar
Φ70/20X362
Φ186/20X150
Φ70/20X310
DN5
DN6
DN6.5
DN7.5
19L

CHAPTER 9 - GENERAL TROUBLESHOOTING

CHAPTER	REASON	TROUBLESHOOTING
Turntable rotates in one direction.	Universal switch defective.	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 cord. Change motor if motor burned Change Universal switch
Turntable cannot clamp the rim normally.	Clamp claw worn Clamp cylinder air leakage	Change claws Change and/or seal parts that leak air.
Hexangular shaft will not lock	Lock plate not in position	Refer to Chapter 5
Operation pedals will not return to normal position.	Pedal return spring damage	Change torsion spring
Motor will not rotate or the output torque not sufficient.	Drive system jam Capacitor failure Voltage not sufficient Short-circuit internal defect	Remove the jam Change capacitor Wait for the restore of the voltage Remove & replace
Cylinder output force not enough.	Air leakage Air pressure too low	Change sealing parts Adjust the air pressure to meet the requirement
Air Leakage.	Air hose broken Pipe fitting broken Defective pneumatic component Lack of sealant	Change broken parts. Apply sealant as required.

ADDITIONAL INFORMATION: MACHINE OIL SAFETY DATA SHEET

MACHINE OIL SAFETY DATA SHEET

MOBIL XHP 222

ITEM	QUALITY STANDARD
Penetration rate 25℃ mm/10	280
Dropping point ℃	280
Anti-corrosion	passed
Basic oil viscosity	220
Oxidize stability 100h pressure-drop Kpa	35
Water lose percentage 79%	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℃ 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

LIMITED WARRANTY

Limited One-Year Warranty:

Shop Tools Outlet offers a limited one-year warranty to the original purchaser of Hy-Pro Wheel Service equipment in the United States. Shop Tools Outlet will replace, without charge, any part found defective in materials or workmanship under normal use, for a period of one year after purchase. The purchaser is responsible for all shipping charges. This warranty does not apply to equipment that has been improperly installed or altered or that has not been operated or maintained according to specifications.

Other Limitations:

This warranty does not cover:

1. Parts needed for normal maintenance
2. Wear parts, including but not limited to cables, slider blocks, chains, rubber pads and pulleys
3. Replacement of tire changer cylinders after the first 30 days. A seal kit and installation instructions will be sent for repairs thereafter.
4. On-site labor

Upon receipt, the customer must visually inspect the equipment for any potential freight damage before signing clear on the shipping receipt. Freight damage is not considered a warranty issue and therefore must be noted for any potential recovery with the shipping company.

The customer is required to notify Shop Tools Outlet of any missing parts within 72 hours. Timely notification must be received to be covered under warranty.

Shop Tools Outlet will replace any defective part under warranty at no charge as soon as such parts become available from the manufacturer. No guarantee is given as to the immediate availability of replacement parts.

Shop Tools Outlet reserves the right to make improvements and/or design changes to our products without any obligation to previously sold, assembled or fabricated equipment.

There is no other express warranty on Shop Tools Outlet products and this warranty is exclusive of and in lieu of all other warranties, expressed or implied, including all warranties of merchantability and fitness for a particular purpose.

To the fullest extent allowed by law, Shop Tools Outlet shall not be liable for loss of use, cost of cover, lost profits, inconvenience, lost time, commercial loss or other incidental or consequential damages.

This Limited Warranty is granted to the original purchaser only and is not transferable or assignable.

Some states do not allow exclusion or limitation of consequential damages or how long an implied warranty lasts, so the above limitations and exclusions may not apply. This warranty gives you specific legal rights and you may have other rights, which may vary from state to state.

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