Model：ATC-T5

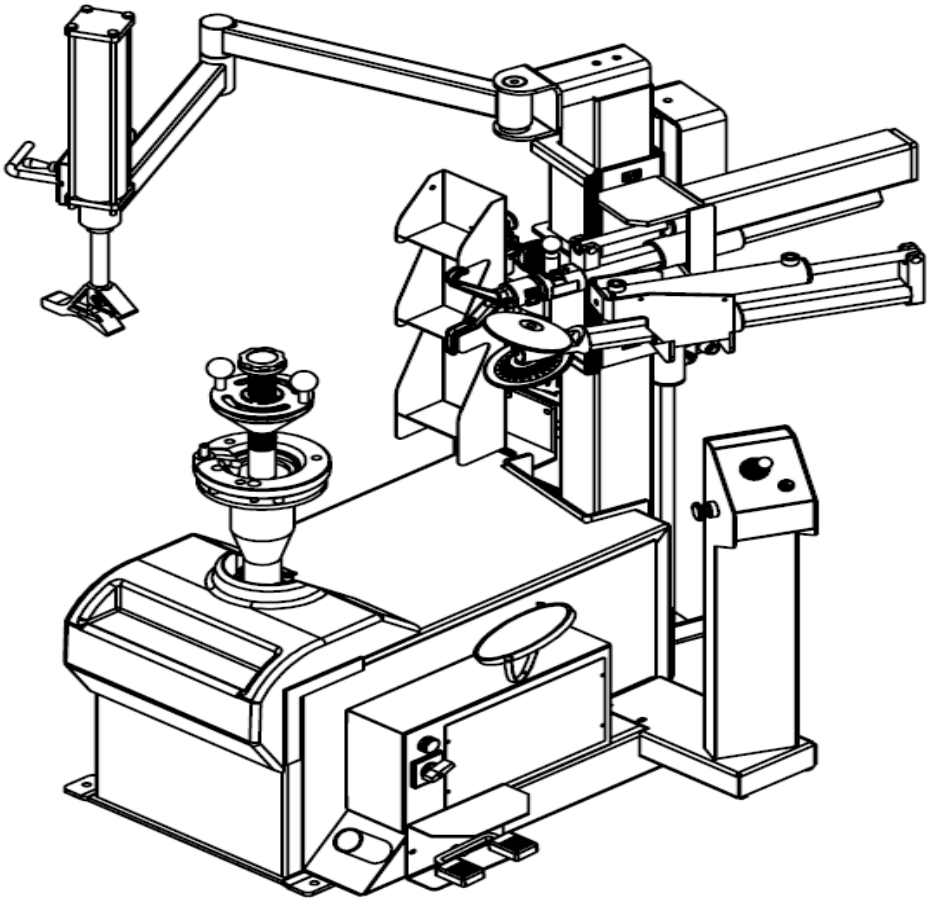
Success begins from here

Semi-automatic Integration Tyre Changer ，

National Invention Patent ZL 2016 1 0802417.9

Specification：Rim10”-28”，Width 425mm，Diameter1190mm

Product installation, operation and maintenance manual



●Please confirm the integrity of the product before installing and debugging, to ensure that the product has not been changed.

●The manual is an important part of product. Please put it in the place where you can find it at any time.

●In the installation process, if the warning signs are damaged, please contact the manufacturer in time to replace the defect.

Content

Thank you for choosing this machine. Please read this manual carefully before operation and keep it with you, so it can be read whenever it is needed.

"Quality Warranty Enterprise" awarded By Quality Supervision Bureau

Model: _____

Serial number:_____

With authority of improvement for the manufacture, when this model gets improvements, improvement notification will not be given.

Model:

Serial number:

TO which this declaration relates in conformity with the followuing

Standards and other normative documents

Q/YLL001-2003

Overview

1.1Important Note

◇ Thank you for your purchase and usage of this product. Please read the instructions carefully before installing and operating, in order not to cause unnecessary damage. It is forbidden for the non-professional workers to install or operate this machine. The manufacturer will not be responsible for any accidents or damages because false installment or wrong operation.

◇ Without the approval of manufacture, any user shall not change the parts and structure of the machine without permission. If there is any damage causes because of that, the manufacturer will not be responsible.

1.2Qualified users

1. 2. 1 Only professional training of personnel can operate and use the product.
1. 2. 2Electrical appliances must be operated by professional electrician.
1. 2. 3Neither non-professional nor non-trained personnel can come close to the product working area.

1.3Notes

1. 3. 1Before operating this product, please carefully read every part of its manual, especially Safety Operation Part and Mechanical Maintenance Part.
1.3.2 This Tire Changer must be operated by professional well-training personnel.

1.3.3 Tyre Demount/Mount is forbidden to operate in explosive gas.

1.3.4 Before the machines is connected to electric power and air supply, the users must check and ensure that the electric power and air supply fulfil the machine's mechanical requirements. The circuit system must be operated by professional staff.

1.3.5 During operation, do not face close to the Clamp Wheel, in order to avoid dust or other

debris hit the operator's eyes. During mechanical operation, do not touch the inflatable pedal, in order to avoid accidents.

1.3.6 To inflate tires must be very careful, strictly following instructions for inflation. If tires suddenly burst, tire assembly machine design and structure is not to protect the operator's personal safety (or any mechanical in the vicinity of the kind).

1.3.7 During machine operation, necklace, loose clothing, etc., may bring the operators personal injury.

1.3.8 During tires demount/mount operation, the Clamp Wheel should always rotate clockwise; Counter clockwise rotation indicates that machine fault or operator error. It is operation error please do it in right way. If there is machine fault, please stop the electric power and send the machine to repair.

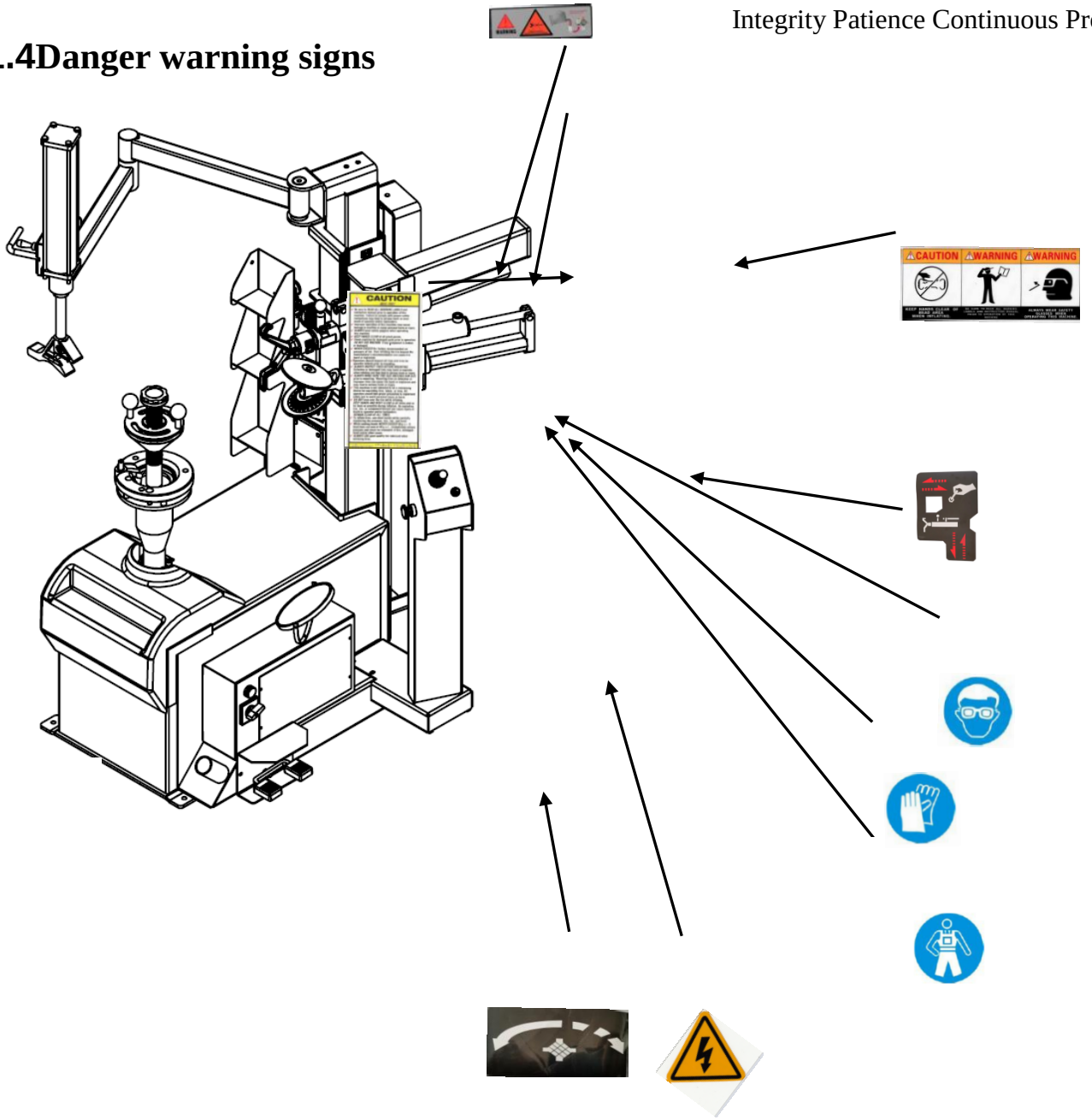
1.3.9 The manufacturers will not be responsible for the damage or injury if users use parts from other factories.

1.3.10 Regularly inspect the level of oil in Oil Drier. If the oil level is low, it needs unscrew the cover and add oil. Professional oil for Oil Drier ISO Hg with viscosity of ISO vg32 is recommended. (such as: Esso Fedis k32, 1405, Mobil Vacouline, KLUBER32)

1.3.12 If the product is not used for a long time, please disconnect all power supply and lubricate the Clamp Wheel and Center Spindle to prevent oxidation.

1.3.13 When deciding to scrap equipment, please do ensure all power supply has been cut off. Follow native and national laws and regulations about all non-ferrous metals and non-ferrous metal scrap.

1.4Danger warning signs



Picture 1

1.5Noise Standard

The noise of the tire changer should be less than 70dB. It is recommended to place a noise measure machine in operating area. The machine can be fixed in the ground by screws to reduce noise.

1.6Training

Only professional workers with good-training can operate this machine. The manufacturer can provide training if the users need it.

Equipment Description

2.1 Product Introduction

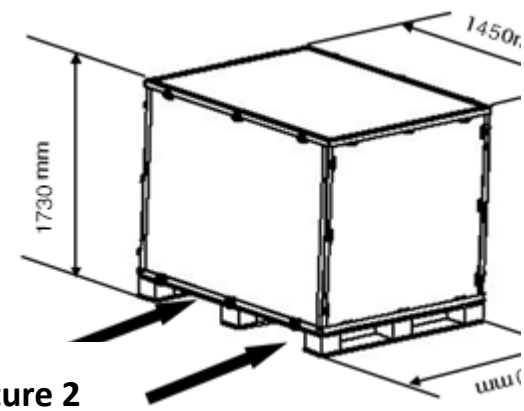
LN-T5, automatic Tire Changer, integrates its demount head(hook) and tire-pressing roller moving together，high working rate and tough strength, It can demount and mount tires with wheel size of 10” to 28”, tire width of 110-425mm and tire diameter of 1190mm. This machines gains National Invention Patent. When demount/mount tires, it can freely control the distance between rims and hood head, so it will never hurt wheels as demount/mount tires. It works especially well for Run-flat and low profile tires. It is the protector for high-standard tires.

2.2 Technical Specifications

Features	Working Specifications
Rim of tires	10＂－28＂
Max. Tire Diameter	1190mm
Max. Tire Width	425mm
Hydraulic Wheel Pressure	3000kg
Working Pressure	8bar－10bar（116－145psi）
Max. Inflation pressure	3.5bar（50psi）
Working Voltage	220V 1ph / 380V 3ph/110V1ph
Motor Power	1.1kw / 0.75kw/1.5kw .....
Outline dimension	1380*900*1500
Net weight	288kg
Working state noise	＜70dB（A）

2.3 Transportation

◇ The machine must be packed in the original factory, and placed in the position specified in the packing box. It must be carried out by a forklift truck or other tool with the corresponding lifting capacity to move the packing machine.



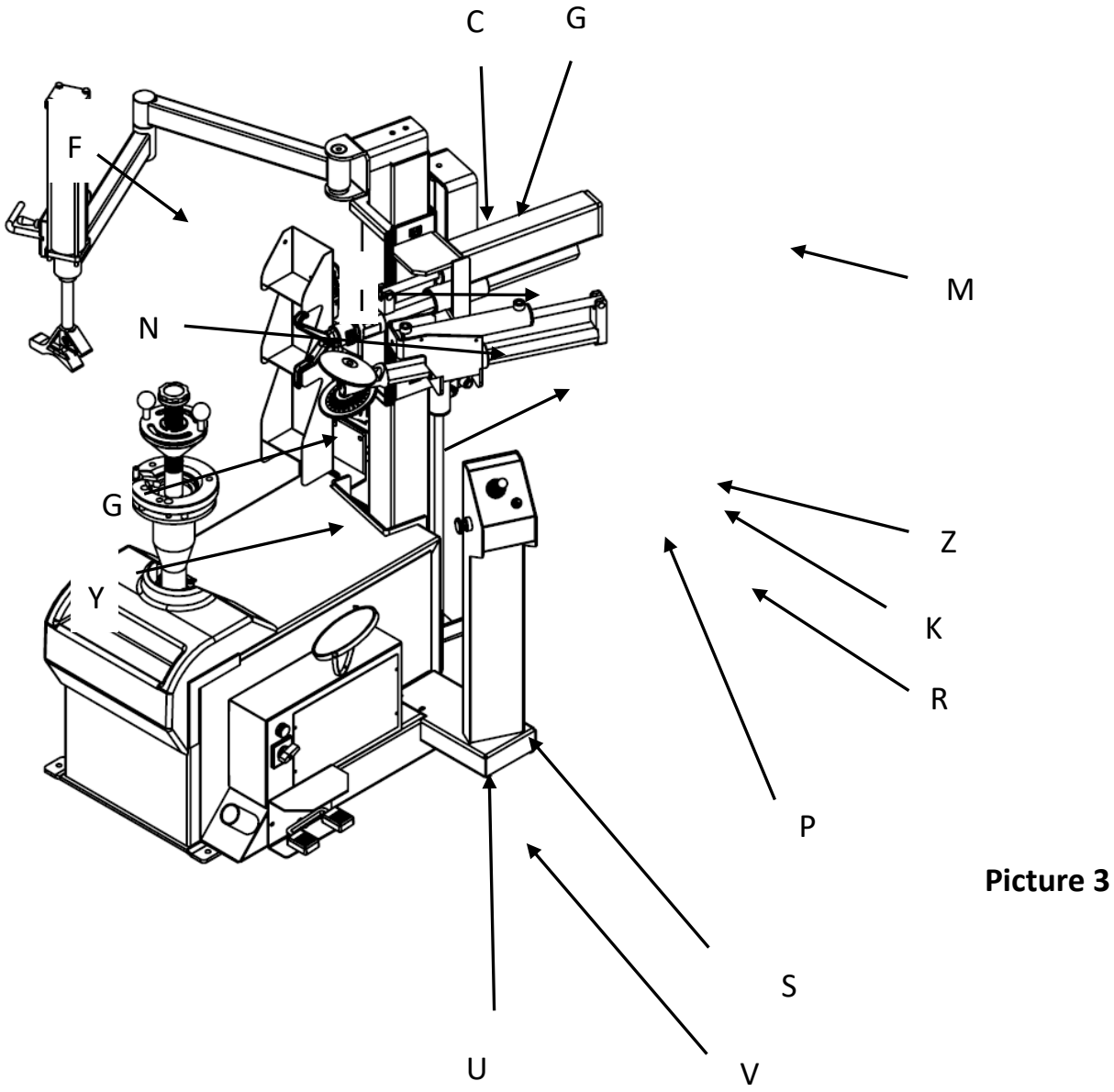
Picture 2

2.4 Figure and part names

G：Clamp Wheel P：Column U：Switch I：Working Head

R：Hydraulic pump and Solenoid Valve Z：Hook Control Valve K：Wheel Control

M：Hook Back & forward Valve S：Electric Cabinet P:Scram Button V:Pedal Switch G:Oil Drier Y：Turntable N：Hook C：Inflation Gun E：Automatic Hydraulic Wheel F：Hook up &down Valve



Picture 3

Installation and Commissioning Instructions

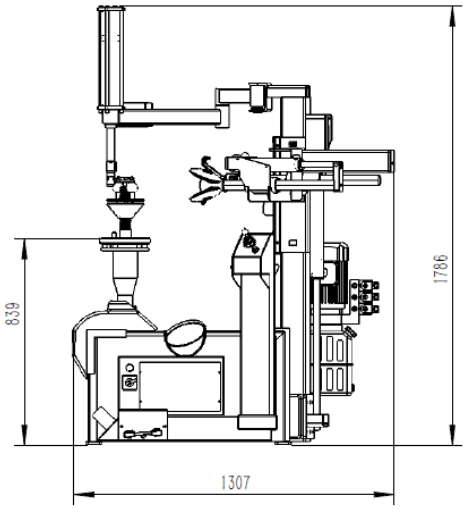
3.1 Preparation for installation

3. 1. 1nstallation Location

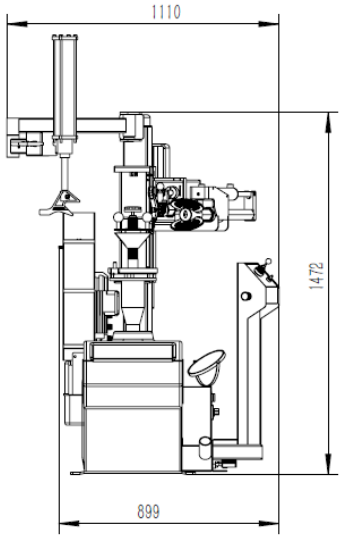
◇ The installation location of the machine must be in line with the standard of the installation work.

◇ The tire changer need to be installed in place with the main power supply and compressed air system.

◇ Equipment installation location should be at least up to the standard shown in Picture 4 and 4-A, which can ensure the normal operation and the machine parts are not subject to any restrictions.The tire changer is forbidden to use in explosive gas.



Picture 4



Picture 4-A

3. 1. 2 Installation Equipment and Tools

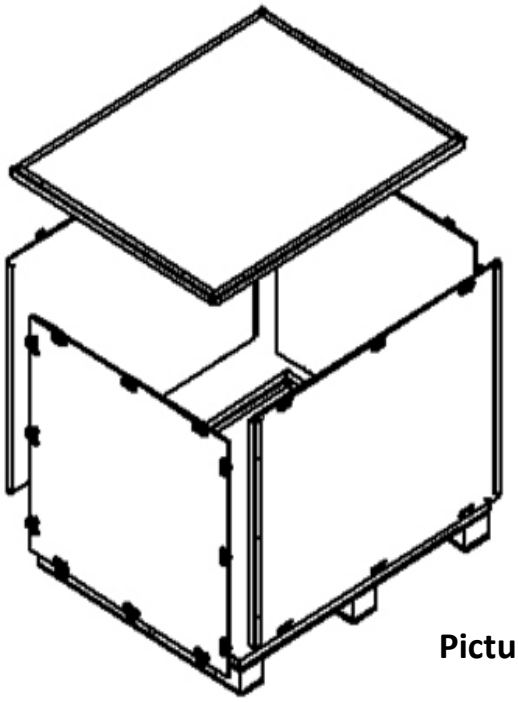
1. One cir-clip pliers 2. One open end metric wrenches and/or socket set 3.Hammer

3. 1. 3 Inspection Products

◇ After receiving the product, please inspect the machine package, transportation and wet damage phenomenon. If there is shipping damage or soaked by rain, please don't open

the package, but contact the seller. Such damage has been found in package but still unpacked, missing pieces or some parts can not be used and accidental injury etc., the manufacturer will not bear any responsibility.

3. 1. 4 **Unpacking**



Picture 5

◇ Inspect package damages and rain damages and other damages, using the tool unpack the package as shown in Picture 5, please dispose of package box, lest the environmental pollution.

◇ Inspect the condition of the machine. Following the Packing List to check if there is any damage or lost. Once found such phenomenon please contact the seller or manufacture immediately. If the users find that the leakage but still installed, the manufacturer will not assume any responsibility. If there is any questions, please do not use the machine but contact the supplier.

3.2 Precautions during installation

◇ All bolts must be tightened.

◇ Power cord, no broken skin, no broken pipe, and other damage.

3.3 Main installation procedure

3. 3. 1**Standard configuration installation**

Step One：unscrew wooden pallet fixing screws and place the Tire Changer at the installation site. (installation site must meet its requirements.)

Step Two：as shown in Picture 6-A, take down the two circlips and keep them for later installation.

Picture 6-A

3.4 Inspect the project table after installation

No.	Inspection item	Yes	No	Remarks
1	Whether the working voltage is consistent with the requirements of the equipment			
2	Whether the components are installed correctly			
3	Whether the bolts, screws, nuts are tightened			

Note: Please fill in the inspection item list after the installation is finished.

3.5 Commissioning and debugging

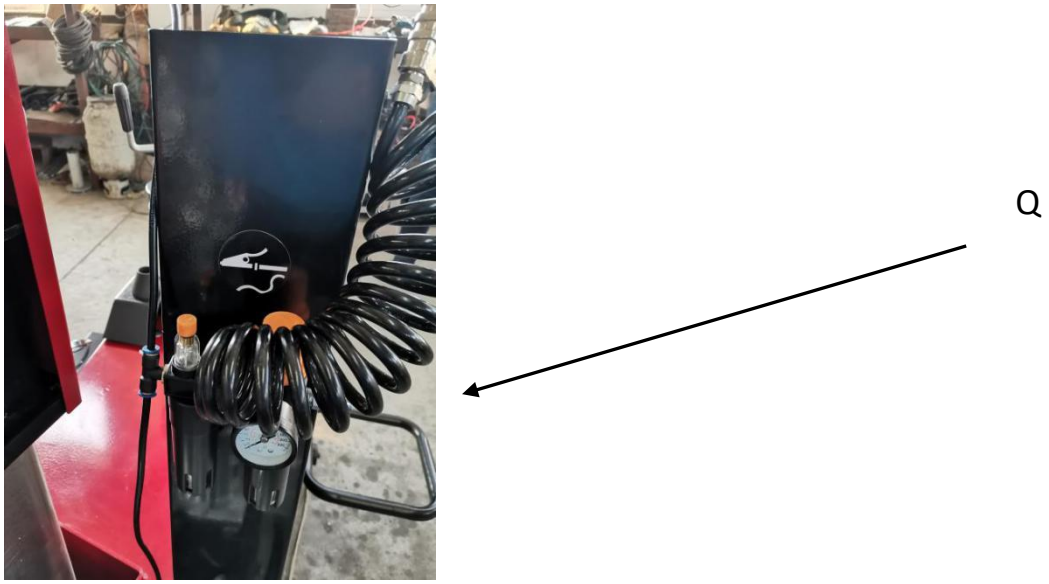
3. 5. 1**Commissioning**

◇ After the machine installation and before the connection with the power supply, please do make sure the user's power supply and air supply meet the requirements of the machine.

◇ The machine is connected to the circuit. The circuit must be standard equipped with a fuse, ground wire and the automatic circuit breaker of 25A according the operation

rule(**Note:** Only the professional personnel can do the circuit work). The power plug of the tire changer should be provided by the customer. (**Note:** The standard circuit of the plug is 16A, but it must meet its Working Voltage).

◇ As shown in Figure 7, the air supply is connected to machine by a pipe connector (Q) on the side of Oil Drier.



Picture 7

3. 5. 2 **Debugging**

Step 1: Pour some hydraulic oil into the Hydraulic Pump Box(The Hydraulic Oil should be 80% of the box). Turn on the Switch U, connect the power supply and watch the turning position of the Pump. It will be OK if it is clockwise. If it is anticlockwise, change the wires in the power supply. If the Power supply is 220V, just operate directly. After 10-15 minutes the machine can be operated.

Step 2: Step the Motor Pedal (V) to try clockwise or anticlockwise.

Step 3: Check whether the Inflation gun whether supply air normally. Check whether the Helper Arm (F) work normally as 7-A and 7-B. The pressure in the Oil Drier should be 6-8（bar).

Step 4: Understand the hydraulic equipment movement to make the Hook forward and backward as Picture7-E 7-F, Hook Wheel(Z) as Picture7-C 7-D and Hook Disk(K) as

Picture 7-G 7-H.

3. 5. 3 **Hook head adjustment**

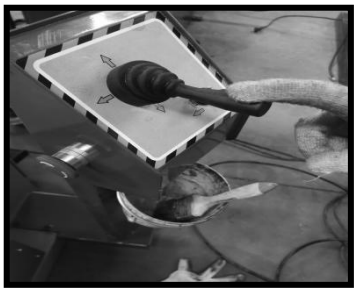
◇ The position and angle of Hook Head has been adjusted standard by the manufacturer in factory. The users should not change it. Upper of the Hook Head there is Hand Wheel(which can be pulled upside). For the first time to use this machine, the users can try changing the straight side and hook side with this Hand Wheel(as shown in Picture 8).

◇ Try locking tires in Center Spindle and unlocking tires from Center Spindle. Turn plum blossom top clockwise and move the lock part into the square slot, as shown in Picture 8-A and Picture 8-B, tires can be fixed in Center Spindle. Turn plum blossom top counter-clockwise and move the lock part out of the square slot, tires will get unlocked. Then pull out the Lock Screw as shown in Picture 8-C.

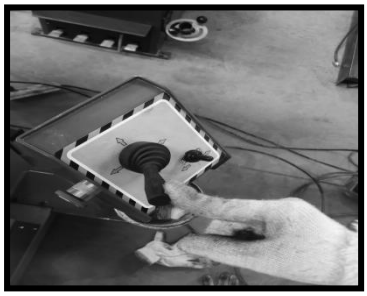
Picture 7-A

Picture 7-B

Picture 7-C



Picture 7-D



Picture 7-E

Picture 7-F

Picture 7-G

Picture 7-G

Picture 8 Picture 8-A Picture 8-B Picture 8-C

Operation Declaration

4.1 Operating notes

◇ Ensure the connection to air supply, ensure there is no air leakage, and ensure the operation space can meet the requirements before operation.

◇ Before any operation, the air in tires must be totally driven out, and the balance block of the tire balancing device must be removed.

4.2 Demount and Mount Tires Operation Procedure

4. 2. 1

◇ Check whether the air inside of tires has been totally driven out. If not, please drive air out completely.

◇ As shown in Picture 9 and Picture 9-A, press tire with the wheel Disk and step the Motor ...ricating c...

Picture 9 Picture 9-A

4. 2. 2 **Demount tires**

◇ After bead breaking, the rim edge should be coated with special lubricant.Fix tires in CenterSpindle(Y) and lock it with Clamp Wheel (**Note：** Make sure tires has locked wn as Picture 8-F, 8-G.

Picture 8-F

Picture 8-G

4. 2. 4 **Tire disassemble**

◇ As shown in Picture 12, adjust the position to press Hook Head to wheels.Turn the twist on the right Hand Control Valve and press the Hook Headinto tires opposite the gaps between bead and rim.

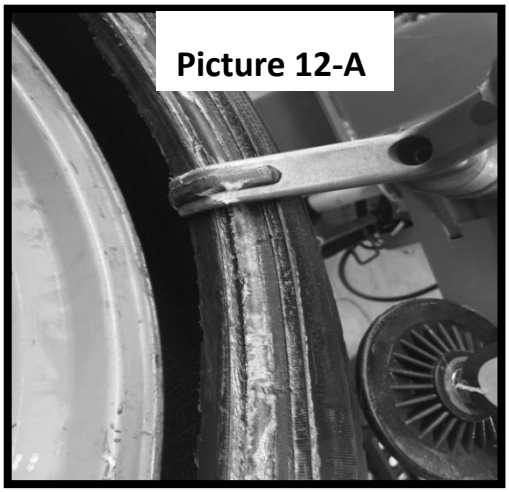
◇ Turn the lower twist down to force a gap between the bead and the rim. Hook head is parallel to the rim and 2mm against the rim.Then make it 2mm higher than rim. Insert the plastic crowbar between rim and the top bead of the tire as shown in Picture 12-B(Protect Rims and Wheels). (Note: To run-flat tires, the control twist(Z) must be

turned backward and drive out the air in cylinder, or the Hood head may rebound to scratch the wheels or even tear the bead. Please be especially careful to avoid the Hook Head from touching the tire pressure monitoring device when demount tires with tire pressure monitoring device.) Generally when CenterSpindle turns a half circle the up bead can leave the wheel. Practice more, it will never scratch or do other damage to wheels, rims or tires.

◇ As shown in Picture 12-D, pull the controller, make the Hook side down。

◇ As shown in Picture 12-D，move the Hook Head（Z）against bottom rim about 3mm-5mm. Turn up the twist(Z) with right hand and hold thelower bead of tire with left hand. The position of Hook Head is as Picture12-E. Step motor pedal(V1), totally separate tires and wheels. (**Notice:** Hook Head should be strictly fixed as the position shown in Picture12-E. Finishing disassembling tires, please turn the Straight Side down and prepare mount tires.)

Notice：When demount or mount tires，Spindle should always turn clockwise；If Spin ns the ma rator mak



Picture 12-A

Picture 12-D

Picture 12-E

Picture 12-F

Picture 12-G

4.3.1 Mont Tires

- After turn Straight Head downside， coat the lubricant up and down of rims as shown in Picture 13-A and coat the lubricant to tires as shown in Picture 13-B.
- Put the tire on the wheel as shown in Picture 13-B. The Straight Head should be about 4-5mm to the rim and its Straight Head touches the tires as shown in Picture 13-B.**Notice:** Pay attention to the distance of the Head. The distance to up rims of Hook Head should be made according to the actual size of different tires. For tires with higher flat ratio, the Hook Head should be a little higher. If it presses too deeply, the bottom bead of tires cannot drop into the wheel. For the tires with lower flat ratio(soft tires) it can press relatively more deeply. If it presses too shallow, the bottom bead of tires cannot drop into the wheel either.
- Press motor pedal and make the bottom bead of tires drop into wheel, finishing the lower tire mount. Pull the Wheel Disk(K) against the rim about 2-4mm as shown in Picture 13-D. Turn down the twist on Hand Control Valve(Z), forcing the Straight Head and Wheel Diskto press the tire into the center of wheel 3-5mm. Press down on the left Hand Control Valve, power the block of Left Helper Arm down to the rims 10-12mm as shown Picture 13-F. (**Notice:**For run-flat tires, please do always according to the actual condition adjust the position of the Work Heading and the movement of hydraulic equipment. If the Working Head is not adjusted in right position which stepping the Pedal, it will tear tires.)Generally when the CenterSpindle turns a circle tire can be





Picture 13-A **Picture** **13-D** **Picture 13-F**

Picture 13-G

4.2.1 Inflation

Note: Inflation operation must be very carefully, strictly following the instructions for inflation. If tires suddenly burst, the design and structure of tire changer is not able to protect the operator's personal safety (or anything in the vicinity of the machine. In the process of charging, as far as possible, make hands and the body be far away from tires). It is strongly recommended to us professional inflatable tools (inflatable cage or other protective device for the tire inflation).

◇ The burst of tires may cause severe damages to the operator or even death.
◇ Before getting inflated, check whether tires are damaged.
◇ Keep tires fixed in Center Spindle while getting inflated. If greater inflation pressure is needed, professional protector cage for tire inflation is recommended for safety. Take the following steps to use fixed inflation box to inflate.

①Connect the inflation nozzle to the tire valve（As shown in Picture 14).

②Confirm tire diameter is consistent with the diameter of its rim.

③ Step the Inflation Pedal and begin inflation. During this procedure control the pressure of in Inflation Box until the tire fits to the rim

④Continue to inflate, and do always pay attention to Inflation Box pressure until the pressure reaches the specified value of the tire. (Note: use the inflated gun to inflate the tire, regularly check the pressure of the inflation gauge)

Picture 14

Maintenance, storage and scrap

5.1 Maintenance

5. 1. 1 Maintenance

◇ Prohibit unauthorized personnel for maintenance operation. To extend the service life of the tire changer, maintenance should be performed according to the requirements of the manual. If the machine is not maintained regularly, the operation and reliability can not be guaranteed, and even cause danger to the operator or the people in the vicinity of the machine. The manufacture will not be responsible for the accidents or results caused by lack of regularly maintenance. Before any maintenance operation, circuit and gas supply device must be disconnected ,turn off the switch. In order to release the pressure of the air from the line, it is necessary to press the pedal 3-4 times.

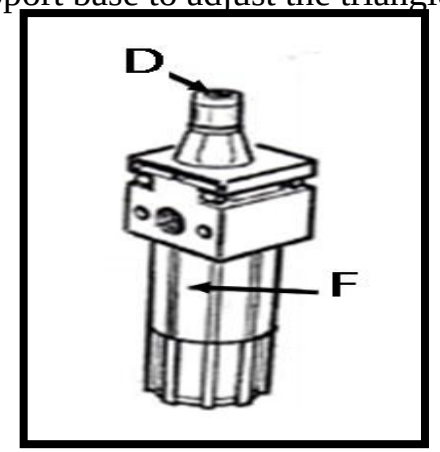
◇ It must be professional staff to use the original spare parts do the timely replacement of damaged parts. The safety device (safety valve, control valve) of the unauthorized removal or replacement is a violation of state regulations on work safety. (**Note:** the manufacturer is not responsible for damage caused by the parts of other manufacturer and the damage caused by the disassembling of the safety device).

5. 1. 2 Tending

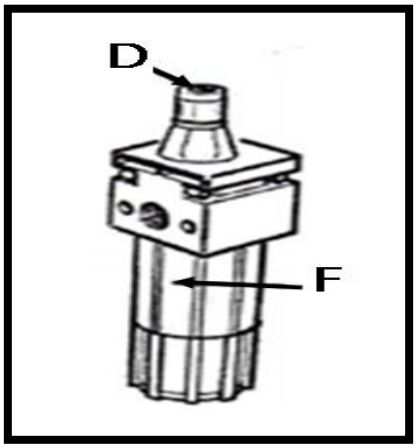
◇ Regular use of diesel oil to clean Center Spindle to prevent the formation of dirt. Coat fixing clamps rail with lubricant oil.

◇ As shown in Picture 15-A, control oil mist level in the Oil Drier. If the oil level is lower, you need to unscrew the Oil Drier cover F, and then as figure 15-A, add some oil. HG ISO and viscosity of VG32 ISO type oil mist is recommended.(likeESSO Febis K32，MOBIL Vacouline 1405，KLUBER32). When stepping the pedal 3 to 4 times, check whether there is oil drops into the oil cup F, if not, adjust screw D.

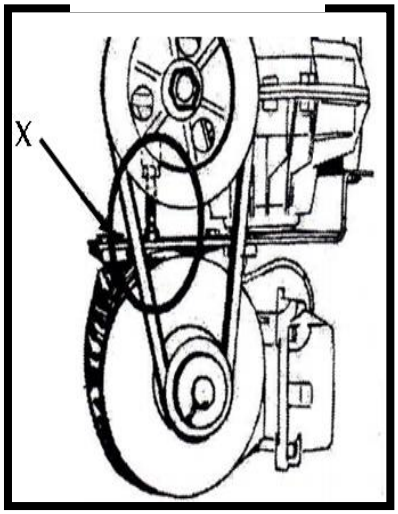
◇ As shown in Picture 15-C, machine motor is not powerful enough, adjust the triangle belt of the motor by the following steps: (before any operation, cut off the power)First, Unscrew the 4 screws on the side of the box, remove the left side protective plate of the tire changer. Second, use special adjustment screw X (Figure 15-C) that is in the motor support base to adjust the triangle belt.



Picture 15-A



Picture 15-B



Picture 15-C

5.2 Storage and scrap

5. 2. 1 Storage

◇ If long time storage of machine is needed, please disconnect all the energy supply, and lubricate the skidway of the clamps on the Fixer to prevent oxidation.

5. 2. 2 Scrap

◇ In accordance with the law of the metal and nonmetal for scrap processing. In the specified place release the oil inside the machine.

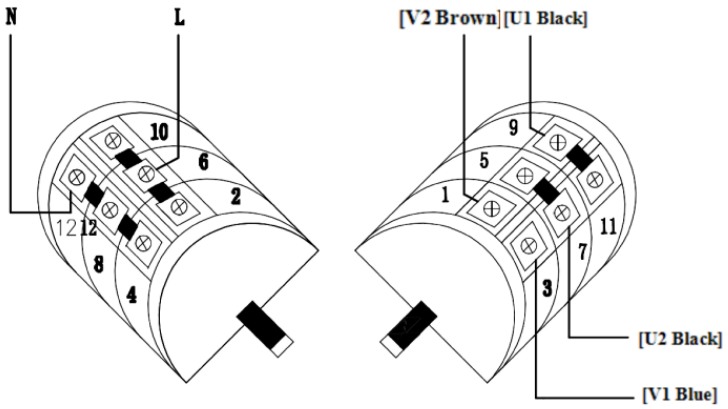
Common Fault causes and Solutions

Note: if you can not solve the problem, please contact the manufacturer to provide help. We will be the first time to help you to solve the problem. Provide the relevant fault information and fault pictures, thus the manufacturer can get rid of the trouble at the fastest speed.

Problems	Causes	Resolutions
Unidirectional rotation of the Center Spindle	Universal steering switch damage	Replace universal steering switch
Center Spindle does not rotate	Triangle damage	Replace triangle belt
	Universal steering switch damage	Replace universal steering switch
	Motor damage or wire damage	Check motor and external plug or socket.
The Clamp Wheel cannot work	Dust or mist blocked the rail	Regularly coat lubricant
Hook Head loosens	Screws in Hook Head loosens	Tighten loosening screws
Pedals cannot rebound	Return spring has trouble	Replace return spring
Bead Breaking works hard	Silencer blockage	Clean or replace the silencer
	Seals for Bead Breaker cylinder damage	Replace damaged seals/Check the Electricity wires.
Hydraulic works less	Valve or sealers damage	Change Valve or sealers

Assistant data

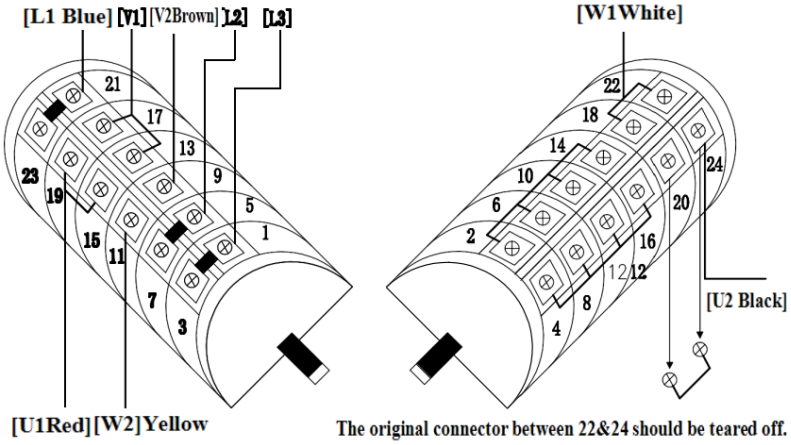
7.1 Electrical circuit diagram



LN-T5 AC220V 1PH Switch circuit diagram

Switch Model: EN60947; 32A

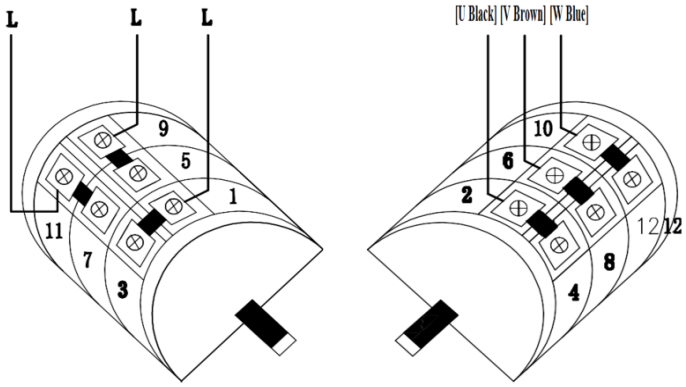
LN-T5



The original connector between 22&24 should be teared off.

LN-T5 LW31-32 380V 3PHTwo Speed Motor and One Speed

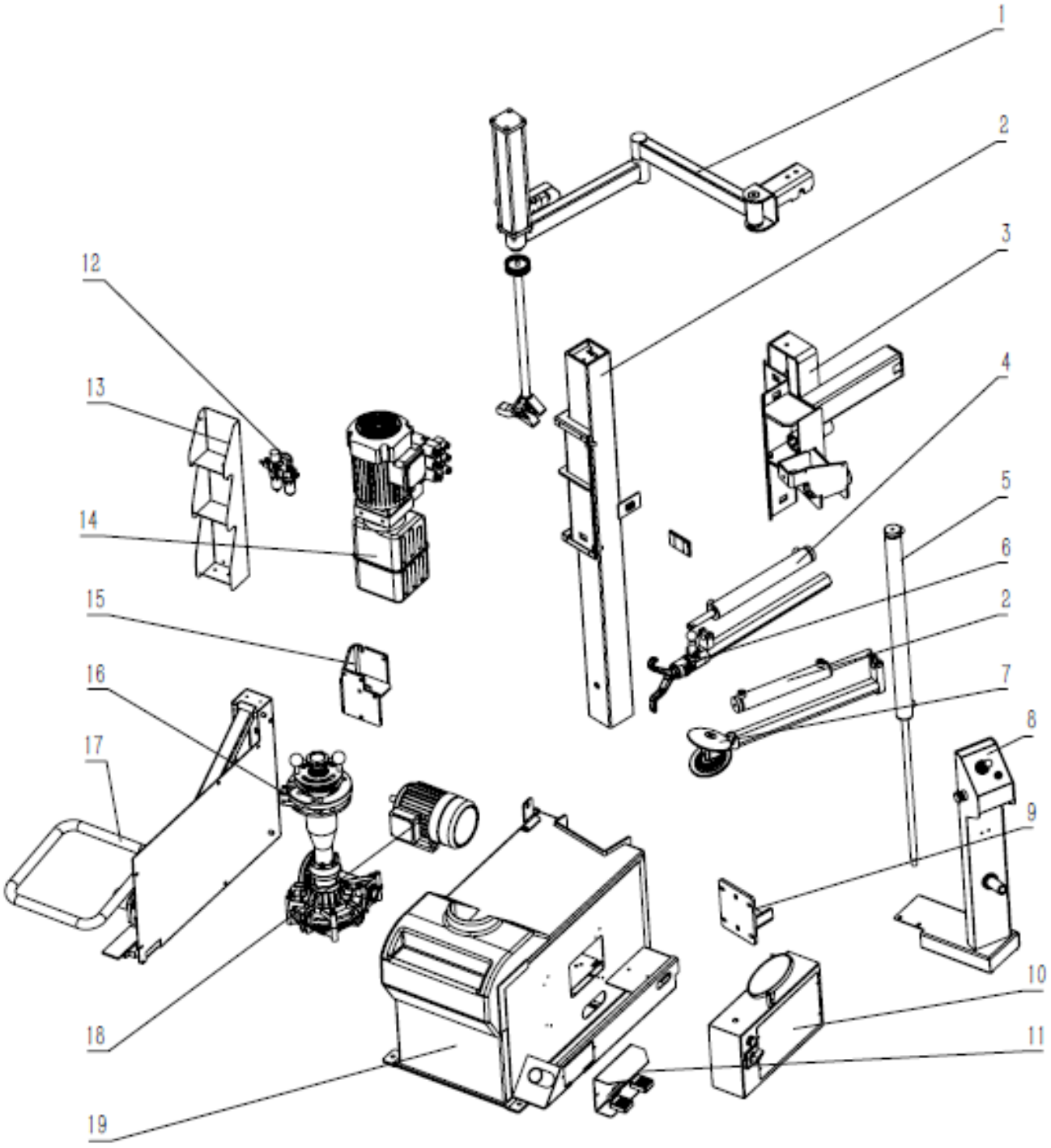
Motor to exchange Switch Circuit Diagram Switch Model: EN60947; 32A



LN-T5 AC380V. One Speed Motor Switch circuit diagram

Motor Switch: EN60947;32A

8.0 Explosive View



Item: No.: Name:

1. 001Left Helper Arm
2. 002 Column
3. 003Frame of Column (Right)
4. 004 Hydraulic cylinder for Hook Control
5. 005 Hydraulic cylinder for Column moving
6. 006 Hook and Controller
7. 007Double Wheel Disk for up and down
8. 008Crossing Switch
9. 009Fixing Plate for Column
10. 010Electricity Control Box
11. 011 Pedals
12. 012 Oil Drier
13. 013 Box
14. 014 Pump
15. 015 Pump and Lift Connector
16. 016 Central Spindle and Gear Box
17. 017 Lift Frame
18. 018 Motor
19. 019 Body Weldment