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KT-T810 SWING ARM TIRE CHANGER



Read the entire contents of this manual before using this product. Failure to follow the instructions and safety precautions in this manual can result in serious injury or death. Make sure all other operators also read this manual. By proceeding with setup and operation, you agree that you fully understand the contents of this manual and assume full responsibility for product use.

Verson: _____

Series No.: _____

Production Date:_____

USER'S MANUAL

Operation Manual & Instruction

TYRE CHANGER

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PREFACE

Thanks for choosing this tyre changer. This guide is an important document for the machine, for ensuring correct and safe operation, and also granting a long working life and the best efficiency to the machine. Please read this manual carefully before the installation and operation.


Carefully keep this manual for use at any time.

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.
- 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 decal's on the unit clean and visible.


Do not attempt to operate this equipment if you have never been trained on basic tyre service and mounting/dismounting procedures.


Unauthorized people should not stand close to the place with warning stickers and never take off the stickers.

Never touch the moving parts during the operation.

The damage, due to the accident, misusing, unauthorized changing and repairing of the machine caused by the operators or the third person, is not in charged by the manufacturer.

1. INTRODUCTION

1.1 SCOPE OF APPLICATION

This tyre changer is designed and manufactured specially for changing the tyres of cars, vans, light trucks and motorcycle with the principle of best quality and highest working efficiency.


Note: This machine can only be used for the purpose designed by the manufacturer. Do not use it for any other purpose.

Any damage caused by incorrect using or beyond the scope of application will not be covered under warranty.

1.2 TECHNICAL DATA

Rim clamp from outside	10" - 19" / 22" / 24"
Rim clamp from inside	12" - 21" / 24" / 26"
Max. wheel diametery	960mm / 1040mm
Tire width	3"-15"
Working air pressure	0.8-1.2Mpa
Motor	380v / 220v / 110v

1.3 TRANSPORT

Make sure transport the machine with its original package, and place it according to the marks on the package. The packed machine should be moved by means of a fork lift truck of suitable capacity, insert the forks at the points shown in (Fig. 1).

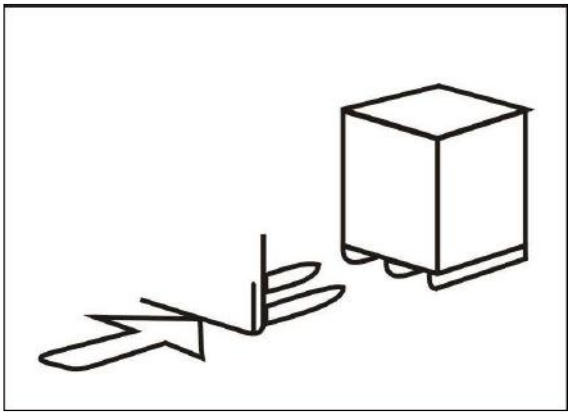


Fig. 1

The temperature for the transportation should be -250 to +550, some measure should be use to prevent the humidity, shake and concussion.

1.4 STRUCTURE

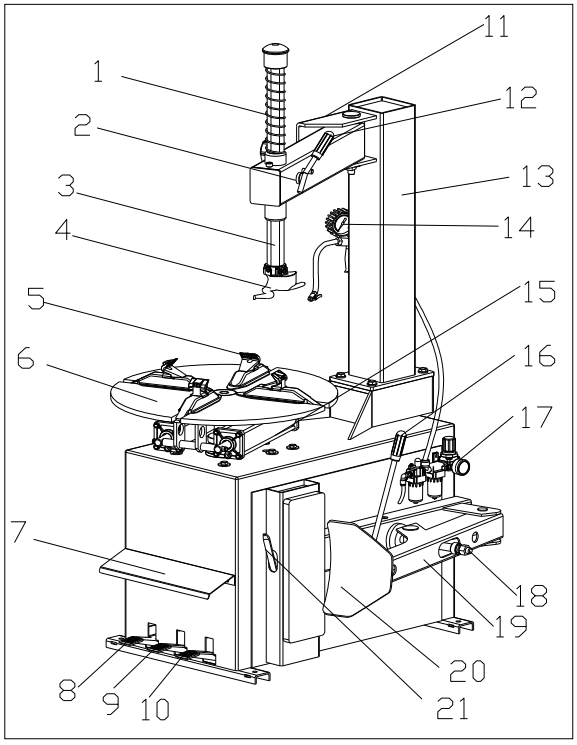


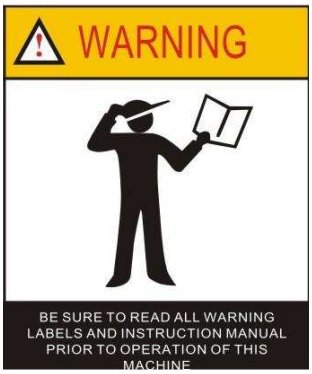
Fig. 2

1. Vertical shaft spring
2. Rocker valve
3. hexagon shaft
4. demount head
5. claw
6. Turntable
7. Operation label
8. Turntable pedal
9. Clamp pedal
10. Tyre press pedal
11. Limit handle
12. Lock handle
13. Column
14. Inflation gun
15. Clamp cylinder
16. Blade handle
17. Air source fitting
18. Bead breaking cylinder
19. Tyre press arm
20. Bead breaking blade
21. Crow bar

1.5 WARNING STICKERS AND INSTRUCTIONS OF THE MACHINE



Keep your hands far from tyre when operation.



Carefully read operation manual before operation.



When operation, wear the protective facilities.



When rapid inflation, ensure the wheel clamped.



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



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



Electric shock.



Never place leg between the bead breaker blade and bead breaker rubber, so as to avoid stepping the wrong pedal and injury the operator.



Never place hand on the tyre when the demount head is on the working position, so as to avoid the injury of the operator.



Never place your hand between the tyre and gripping device when operate the rim, so as to avoid the injury of the operator.



The jaws should be in closed position when do the bead break, so as to avoid the injury of the operator.



The operator should wear the protection glasses when inflate the tyres with the machine with GT system, so as to avoid something blow into the eyes.



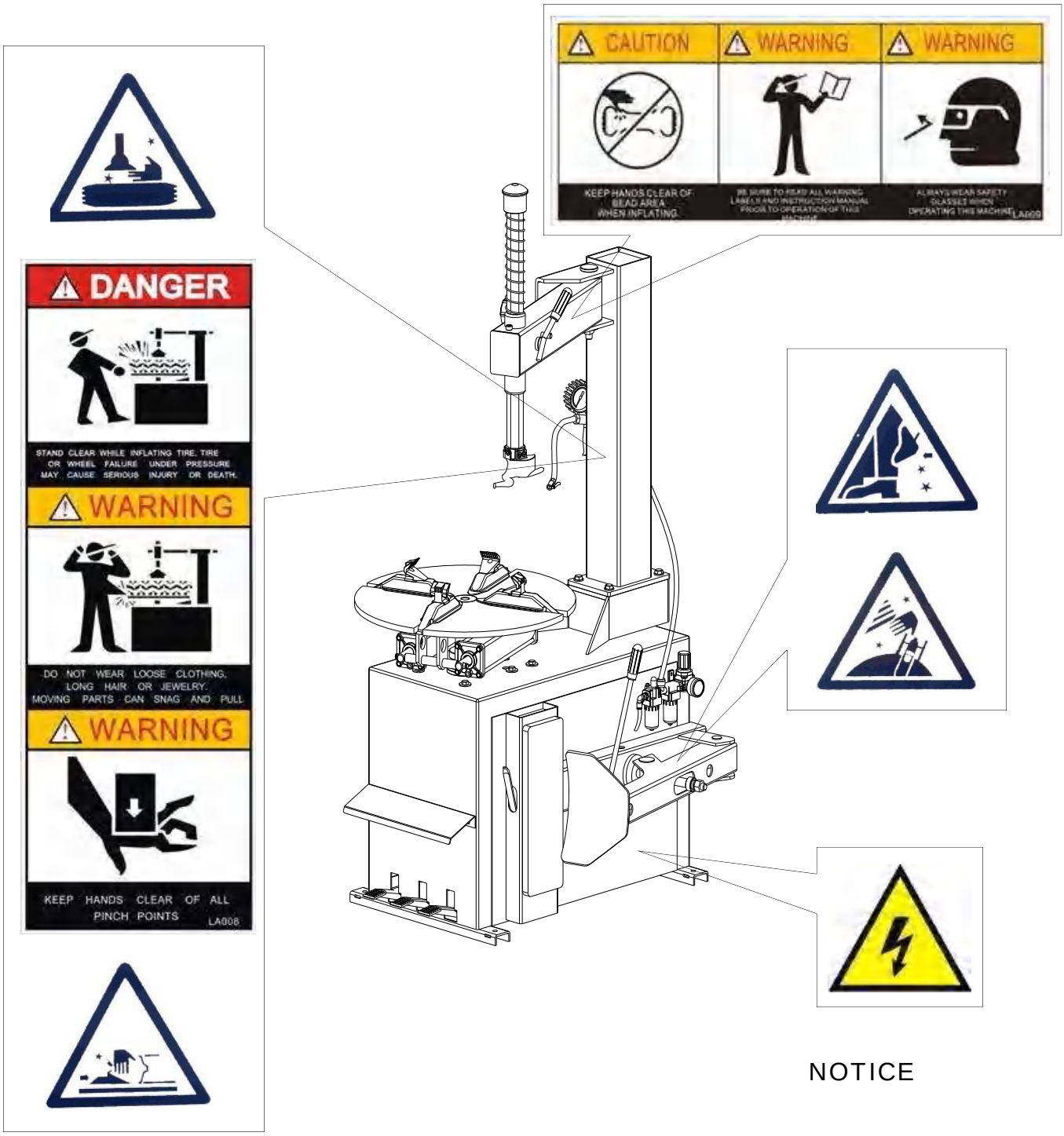
Never put the hand between the rim and tyre when inflate the tyre, so as to avoid the injury of the operator.

There should be nobody behind the tilting post, when the machine is on the working position.

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

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

1.6 SAFETY LABEL POSITION DIAGRAM



NOTICE

Tire machines come with Japanese style fittings, please have the proper fitting on your air supply.

2. INSTALLATION AND DEBUGGING

2.1 INSTALLATION

2.1.1 INSTALLATION PLACE

When choose the place for installation, be sure that it complies with current safety regulations.

The semi-automatic tire changer must be connected to the main electric power supply and air compressed system. It is therefore advisable to install the machine near these power sources.

The place of installation must provide at least the space shown in Fig. 3, so as to allow all parts of the machine to be operated correctly and without any restriction.

If the machine is installed outdoors, it must have the protective shed to avoid being exposed to the rain and sunlight. It is forbidden to use in the site with the flammable gas!

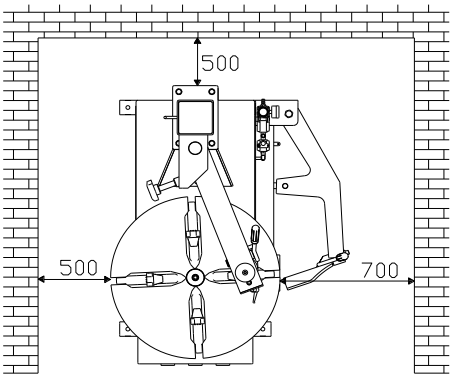


Fig. 3

2.1.2 UNPACKING

After unpacking the package, check the eyeable damage on the machine and the component due to the shipment, if there is some problems please contact with the dealer. The packing material such as plastic, nail, screw, wood and carton should be put into the waste box or be handled according to the local regulations.

Note: The operator should wear the gloves, so as to avoid the injury when unpack the machine.

2.1.3 Installation of the main machine

This tyre changer is disassemble packed before delivery, the vertical arm are disassembled before packed, the customer should assemble it according to the manual.

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

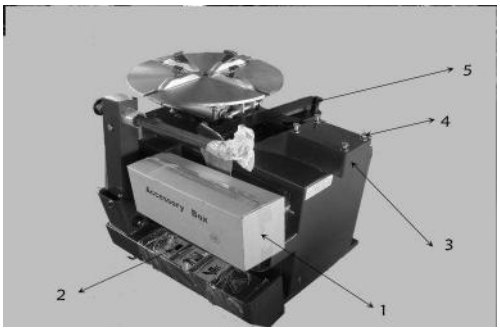


Fig. 4

- 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 3.2.1The torque is 70 N·M (FIG5) Use torsion wrench to tight.

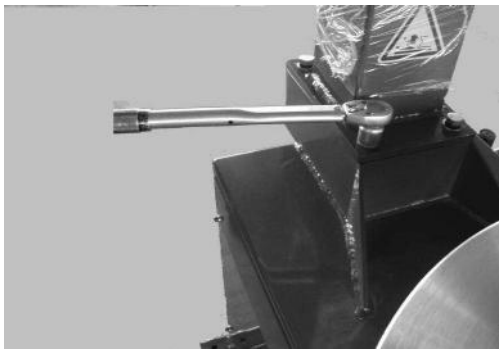


Fig. 5

- 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 remove the screw on the vertical shaft cap, you need use the lock handle to lock

the hexangular shaft to avoid sliding off to damage the machine or injury personnel!

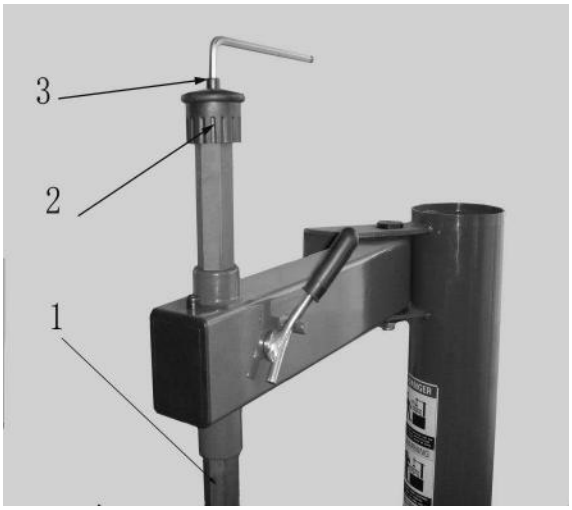


Fig. 6

- 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).

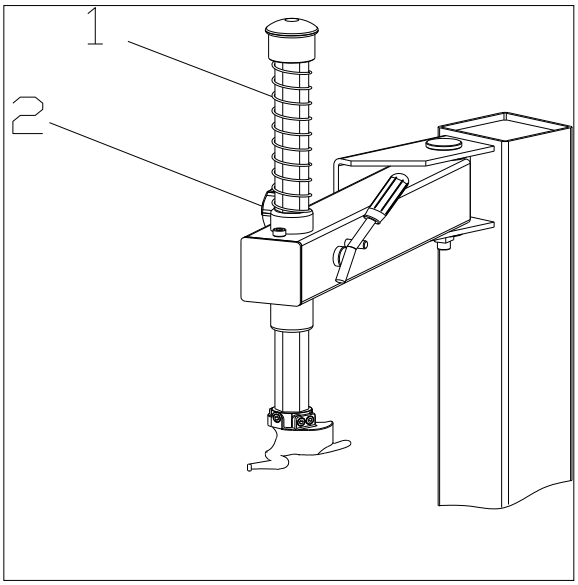


Fig. 7

- 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).

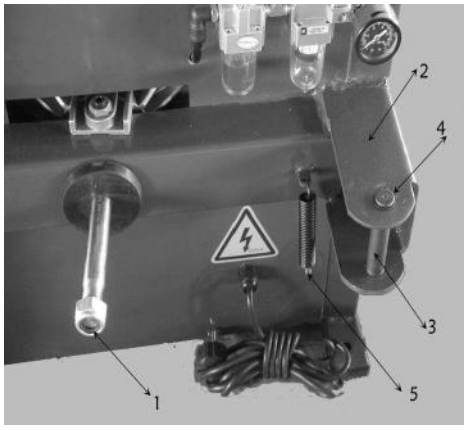


Fig. 8

- 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 30～40mm (FIG11). Hang the spring. (FIG9-3).

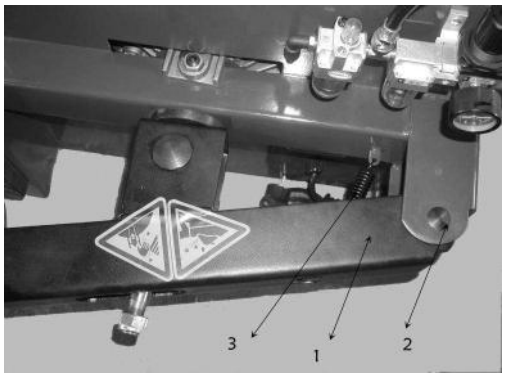


Fig. 9

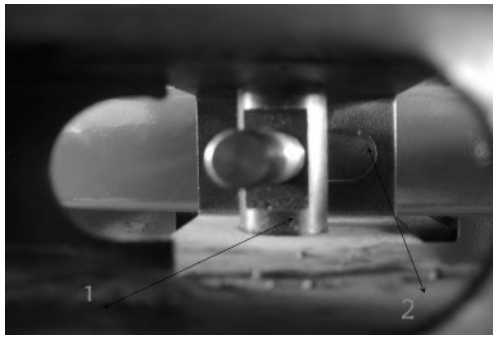


Fig. 10

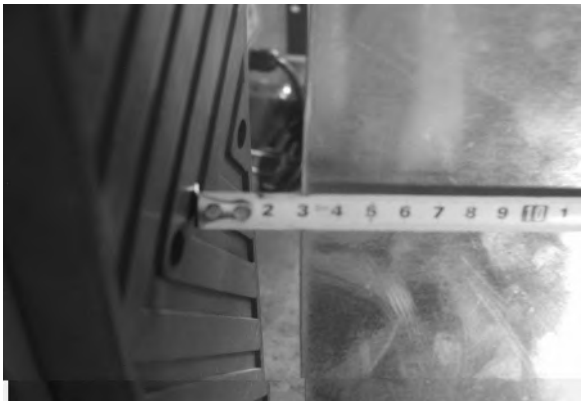


Fig. 11

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.

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

2.1.4 AIR SOURCE FITTING INSTALLATION

When the machine out of the factory, the air source fitting has been detached and placed in the accessory box and the fitting will be installed when it is in the site of the customers again.

- Take out the air source fitting out 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. 12

- 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. And the adapter is to keep the hose from sliding into the body.



Fig. 13

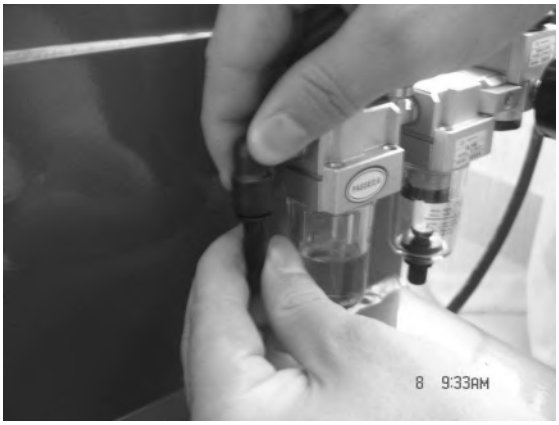


Fig. 14

- 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. Tight the open nut and then connect the air source.



Fig. 15

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 fast.

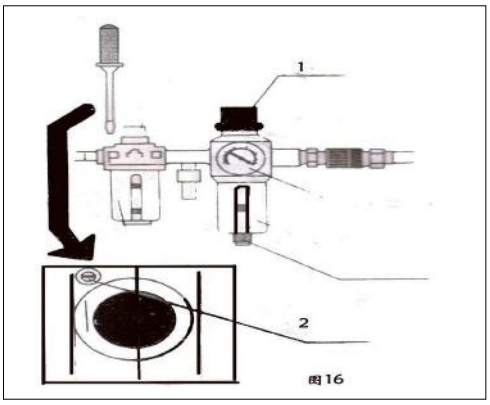


Fig. 16

2.2 DEBUGGING

- Check the three pedals are in their original position; connect the air source, the operation can begin when the pressure up to 8-10bar.

Note: After the connection with the air source, the clamp on the turntable should automatic open, which is setted before delivery.)

- Pressing the pedal (Fig. 2-8), the turntable will turn in the clockwise direction.
- Raising the pedal (Fig. 2-8), the turntable will turn in the counterclockwise direction.
- Pressing the pedal (Fig. 2-10), the bead breaker blade will begin to move, when the pedal is released the bead breaker blade returns to its original position. In the meantime, please check towards the body to see if the air regulator works well. Normally, it will drop one drop of oil after the pedal is pressed for 5-6 times. If it drops too quick or too slow, please adjust the index on the air regulator by a screwdriver.
- Pressing the pedal (Fig. 2-9), the clamps on the turntable close; (when lightly step the pedal the machine can show the step moving function.) when the pedal is pressed again, the clamps open.

Notes: The machine must be fixed well to avoid the shake during the operation.

The machine must place on the ground completely.

Cut off the air and electric power sources before any maintenance.

Check the screws on every parts of the machine is tight.

Keep the human body and hands away from the moving parts of the machine during the operation. The necklace, bracelet, loose clothes and long hair is dangerous for the operators. The operator should wear safe clothes such as gloves and glasses.

Keep the working area tidy and clean, or it may cause sudden accident

The working area should be well lighted.

3. OPERATION

Never use the machine before read this instruction and warning carefully.

3.1 DEMOUNTING TYRES

3.1.1 PREPARATIONS

- Release all the air inside the tyre.
- Remove the weight on the rim. (Fig. 17)

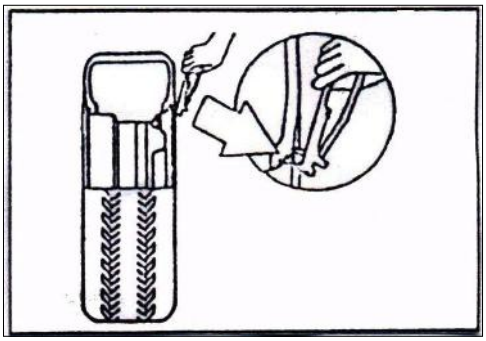


Fig. 17

3.1.2 Demounting Tyre.

- Place the tyre between the bead breaker blade and rubber pad, and place the blade on the bead 2 cm from the rim, step on the pedal (Fig. 2-10) to separate the bead from the rim. (Fig. 18) The wenthole on the tyre should not near to the bead breaker blade during the operation.

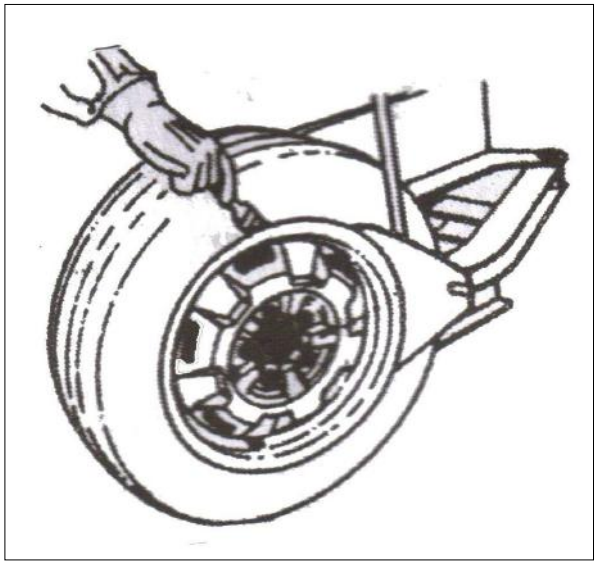


Fig. 18

- Repeat above steps on the other parts of the tire to get the tire separated thoroughly from the rim.
- Place the wheel with the tire detached from the rim on the turntable and step the clamp pedal (Fig. 2-9) to clamp the rim. You can select the outer clamp and inner clamp to clamp the wheel according to the different rim. To detach the lip smoothly, you can use the brush to spread the lubricant or thick soap liquid between the lip and rim.
- 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. The demount tool will automatically move a little of gap (Fig. 19).

  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.

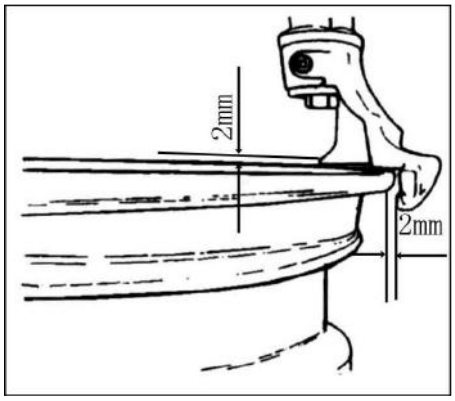


Fig. 19

- Lift the bead onto the mount/demount head with the crowbar, and step on the turntable control pedal (Fig. 2-8) to turn the turntable clockwise till the bead is completely separated (Fig. 20). It is suggested to place the mount/demount head about 10 mm to the right side of the air valve if the wheel has a tube, so as not to damage the tube.

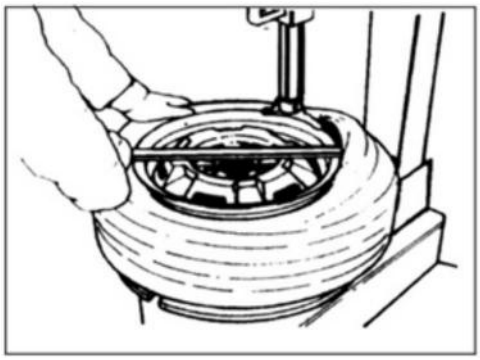


Fig. 20

- Take out the tube if there is. Turn over the wheel to let the other side toward the mount/demount head, and repeat the above steps to demount the other side of the bead. (Fig. 21)

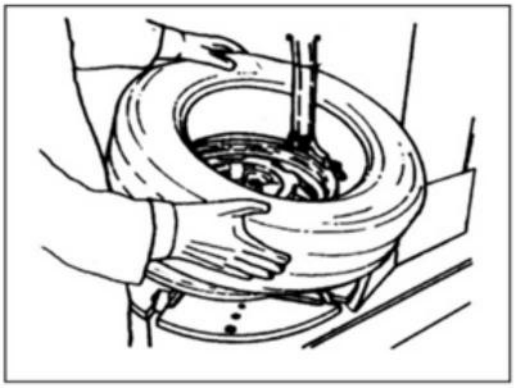


Fig. 21

3.2 MOUNTING TYRES

Note: Make sure that the size of the rim and the tire is the same before mounting.

- Clean the dirt and rust on the rim and lock it on the chuck. Lock the rim on the turntable.
- Spread the lubrication liquid or soap liquid around the lip. Tilt the tire against the rim and keep the front end upwards. Press down the hexangular 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 22), Clockwise rotate the turntable to guide the bottom lip into the tire detaching slot.

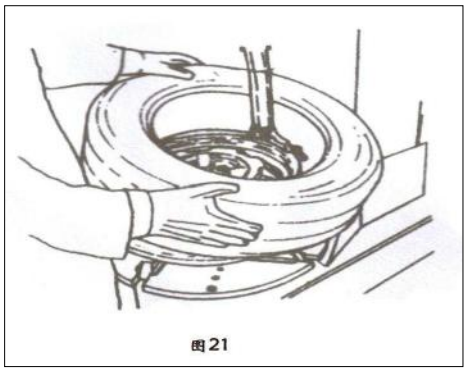


Fig. 22

- If there is tube, place it in the tire and plug the core. And assemble the lip according to the above mentioned step (FIG23). 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. 23

Do not put your hand between the tyre and clamps and never stand behind the machine, avoiding body injury. (Never adjust the pressure control valve inside the machine, otherwise the locking valve might be damaged.)

3.3 INFLATING

This machine is equipped with a gauge for pressure reading during inflation.

Keep your hand and body away from the tyre during the operation, and do the inflation carefully, so as to avoid the injury.

Inflate the tyre strictly following instruction below, please note there is no protection device for the safety of the operator (or third person) on the machine if the tyre explode suddenly.

Make sure the rim has the same size as the tyre, and the tire is not damaged before the inflation.

- Loose the tyre from the turntable.
- Connect the inflator with the air valve on the tire. (Fig. 24)



Fig. 24

- In the process of inflation, you should repeat switching the inflation gun to confirm the pressure indicated on the pressure gauge not exceed the scope specified by the manufacturer. The pressure decrease valve equipped in the machine make the pressure not to exceed 3.5bar. And the customer can get different

inflation pressure by adjust the pressure decrease valve according to the requirement.

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

4. MAINTENANCE

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 (Fig. 25), Use the machine oil to lubricate.

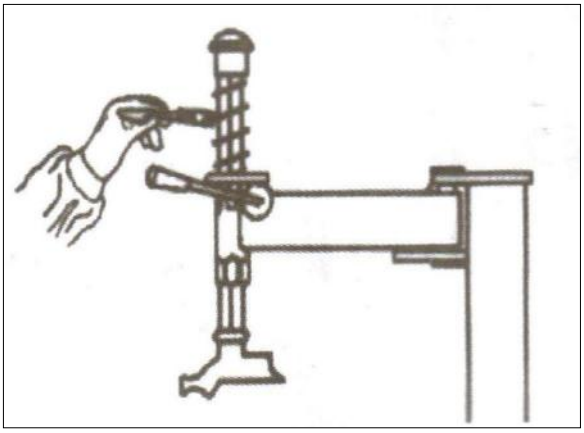


Fig. 25

- Use the diesel oil to clean the turntable claw and its guide and use the lithium base oil to lubricate (Fig. 26).

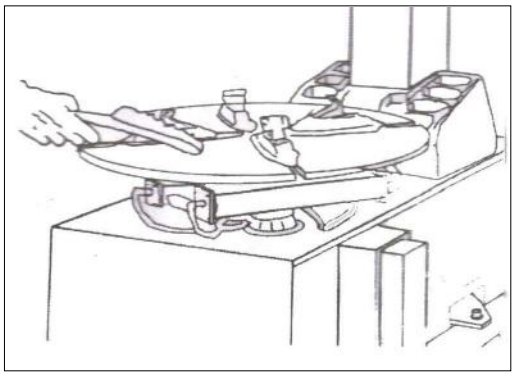


Fig. 26

- 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. 27)

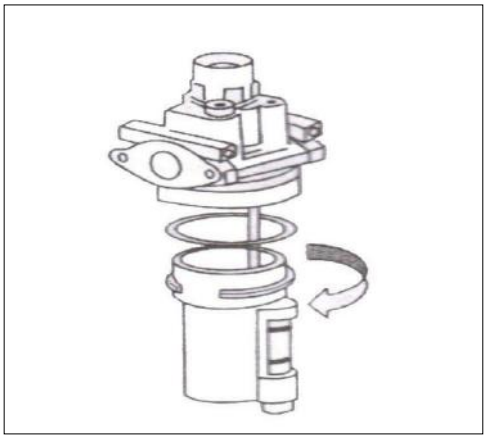


Fig. 27

- Periodically drain out the water and impurity in the oil water separator.
- Periodically check and adjust the tension of the driven belt. Properly adjust the adjust nut in A and B to realize the proper tension. (Fig. 28).

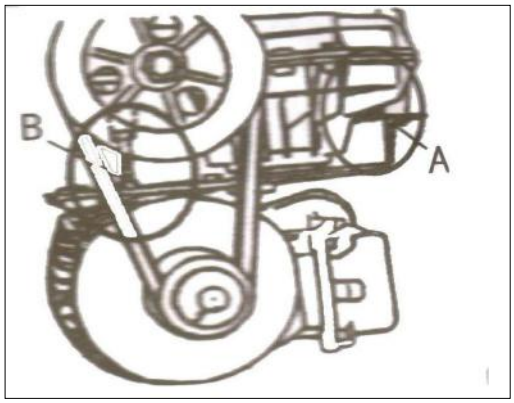


Fig. 28

- Check all the connect parts and tight the loosen bolt.

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. 29)

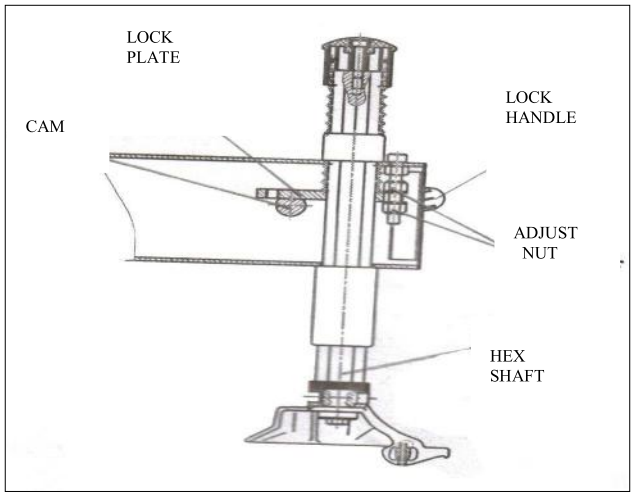


Fig. 29

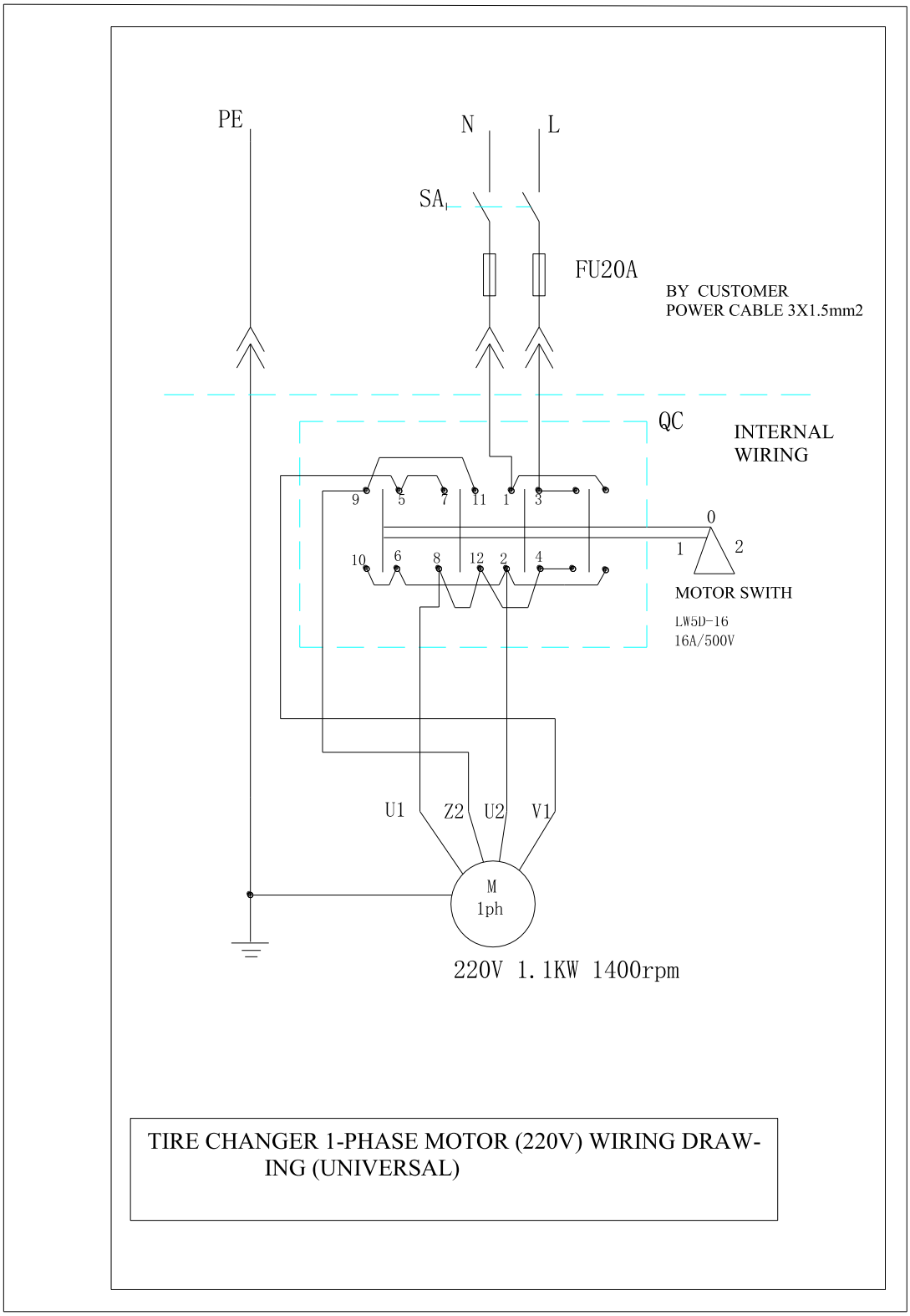
5. TROUBLESHOOTING

(See the following page)

PHENOMENON	REASON	TROUBLESHOOTING
Turntable rotates in one direction.	Universal switch contact burned	Change Universal switch
Turntable does not rotate.	Belt damage Belt too loose Motor or power source have problems Universal switch contact damage	Change belt Adjust the tension of the belt Check motor, power source and power source cable Change motor 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	Refer to the chapter V
Chassis pedal not return.	Pedal return spring damage	Chang 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
Air Leakage	Air hose broken Pipe fitting broken Sealing head broken Loss of the sealing glue	Change broken parts Refill the sealing glue

ELECTRICAL SCHEMATIC DIAGRAM

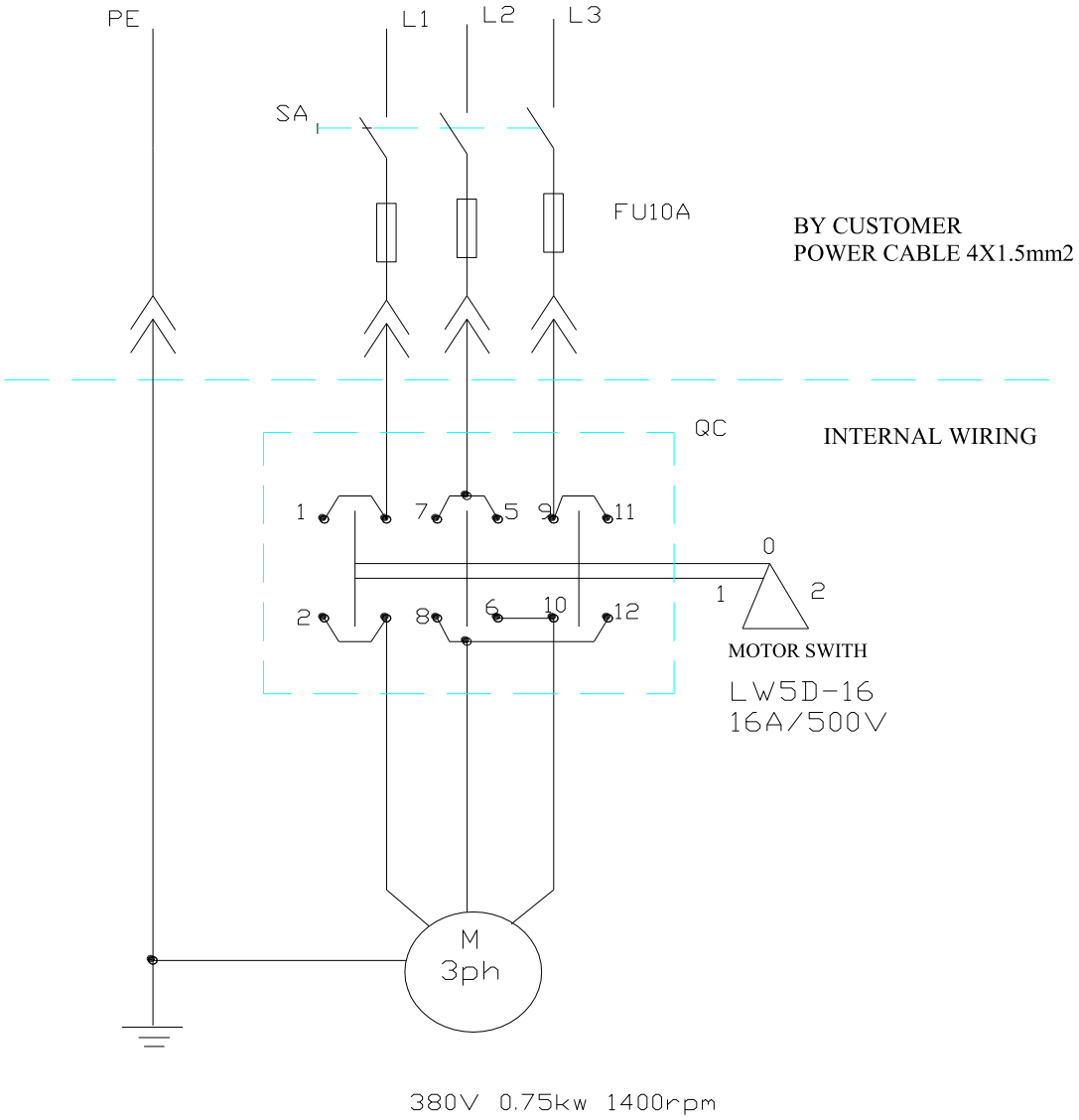
A. 220V-50hz/60hz 1P 1.1KW



TIRE CHANGER 1-PHASE MOTOR (220V) WIRING DRAWING (UNIVERSAL)

ELECTRICAL SCHEMATIC DIAGRAM

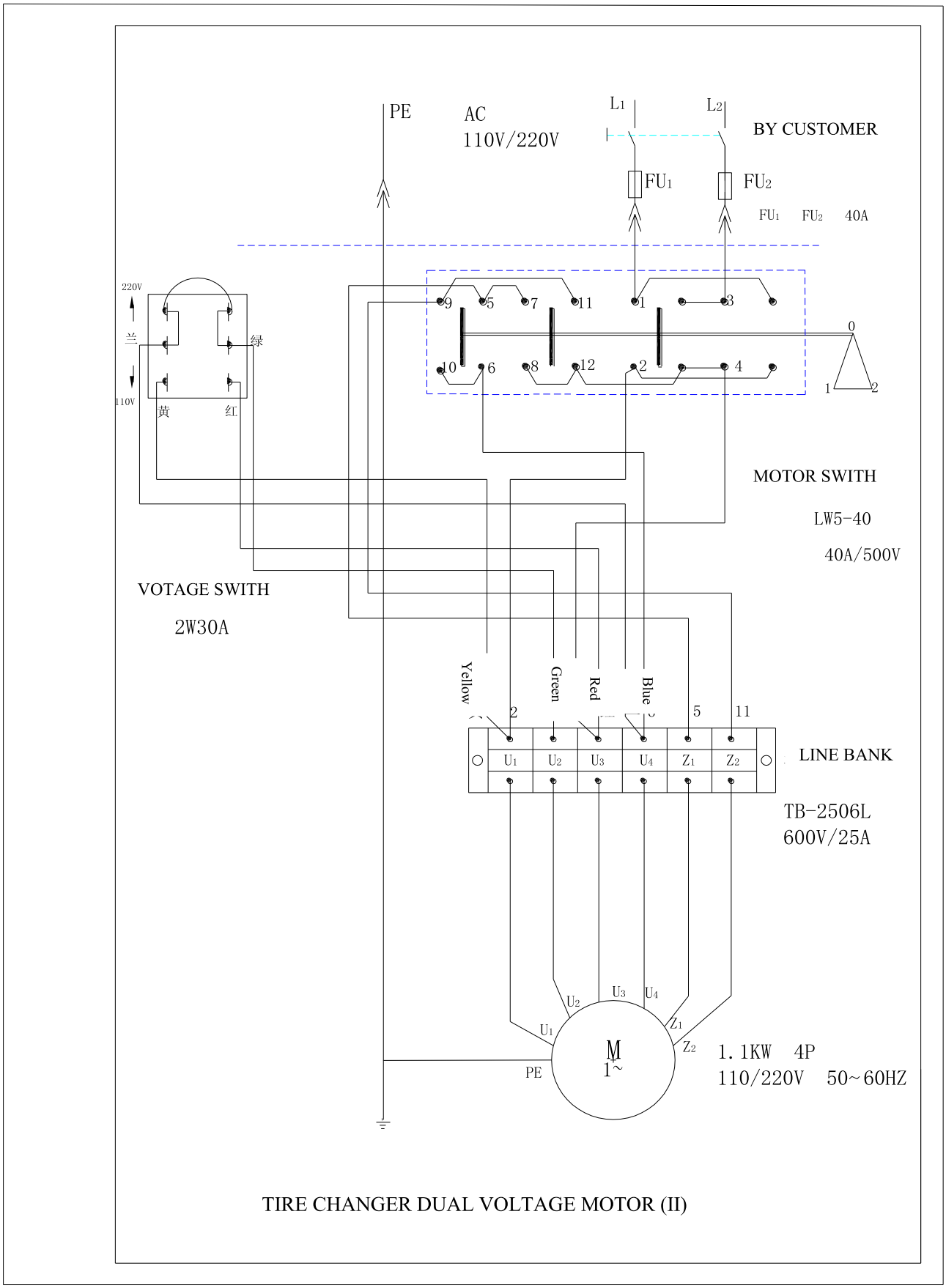
B. 380V-50hz/60hz 3P 0.75KW



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

ELECTRICAL SCHEMATIC DIAGRAM

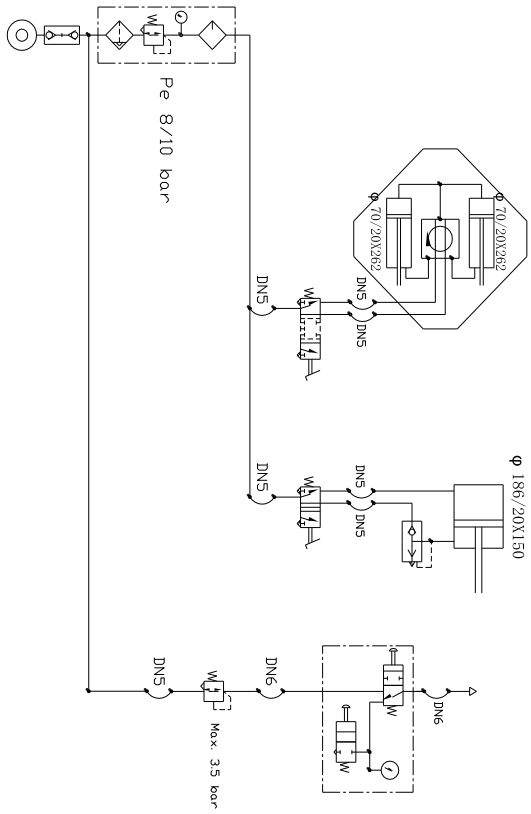
C. 110V/220V-50hz/60hz 1P 1.1KW



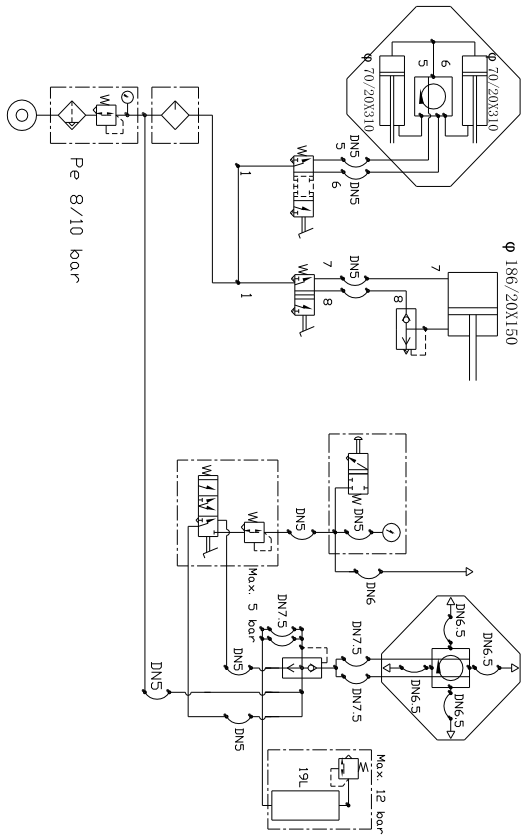
TIRE CHANGER DUAL VOLTAGE MOTOR (II)

PHEUMATIC PRINCIPLE DRAWING

SEMI AUTO-MATIC PNEU-MATIC



SEMI AUTO-MATIC PNEU-MATIC (IT)



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

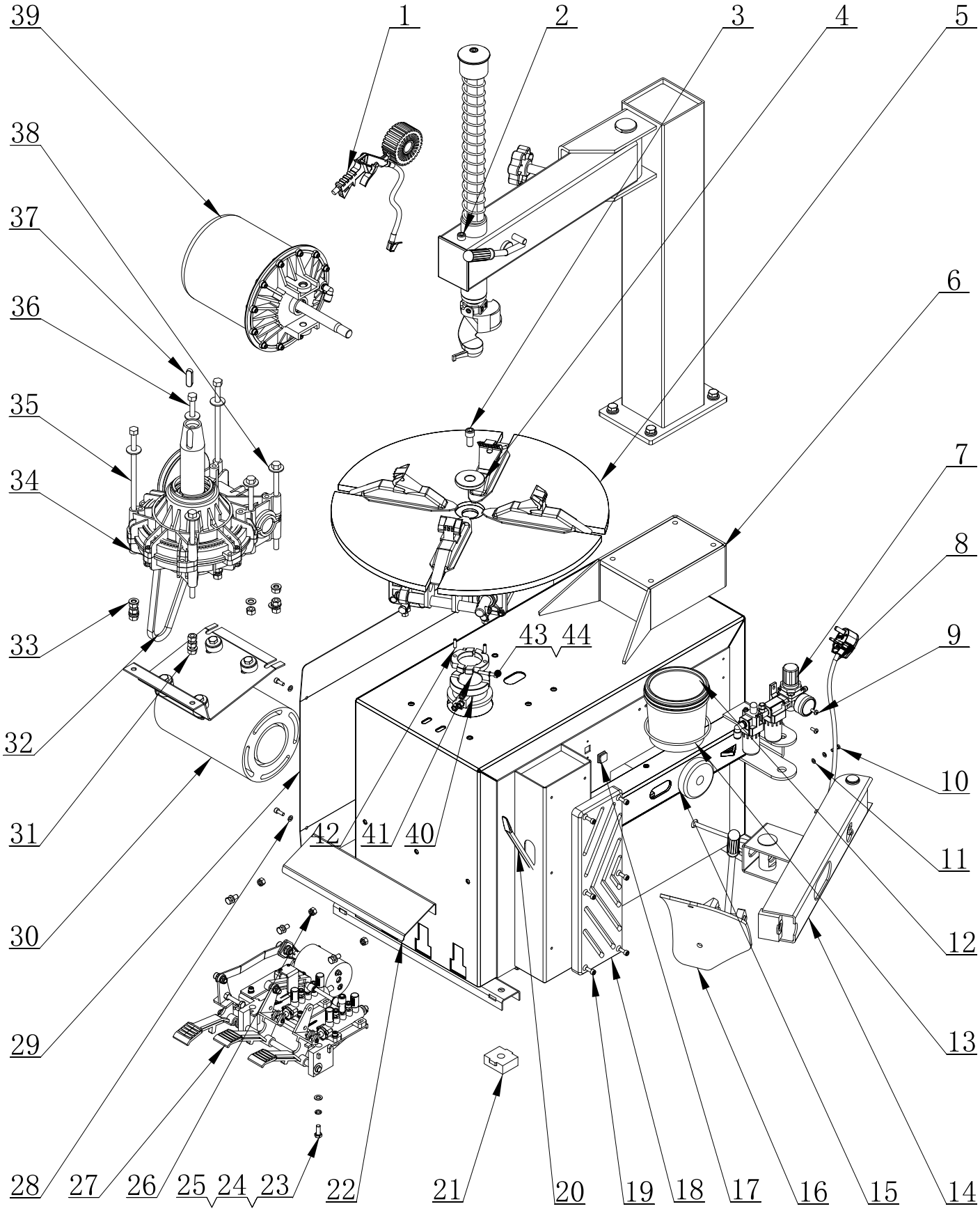
ITEM	QUALITY STANDARD
Density 15℃	0.893
Flash point	224
Pour point ℃	-18
Viscosity 40℃	100
Viscosity 100℃	11.2
Viscosity index	97

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℃ 100 h)	0.2
Anticorrosion (52℃ 48 h)	1 level
Similarity viscosity (-15℃、 $10S^{-1}$)/(P a ·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


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28 27 26 25 24 23 22 21 20 19 18 17 16 15 14

ITEM	QTY.	PART NO.	DESCRIPTION.
1	1	5004098	INFLATING GUN
2	1	6004537	TILTING ARM ASSEMBLY
3	1	5010032	SCREW M12X25
4	1	6000106	PRESS WASHER
5	1	6000100	TURNTABLE ASSEMBLY
6	1	6004526	BODY
7	1	5506002	AIR REGULATOR ASEMBLY
8	1	5004107	CABLE PLUG
9	2	5006007	SCREW M5X12
10	1	5006042	BOLT M5X16
11	2	5010045	WASHER 5
12	1	5004093	GREASE CONTAINER
13	1	5004092	BRACKET
14	1	6000358	BEAD BREAKER ARM ASSEMBLY
15	1	5004073	RUBBER PLATE
16	1	6000012	BEAD BREAKER BLADE
17	1	5004103	RUBBER BLOCK
18	1	5004218	RIM SUPPORT
19	10	5010074	SCREW M6X16-N
20	1	5004094	CROWBAR
21	4	5004102	RUBBER FOOT
22	1	6004531	PROTECTIVE COVER
23	5	5010077	BOLT M8X20
24	5	5004046	WASHER 8
25	5	5000018	WASHER 8
26	3	5002060	NUT M8
27	1	6000230	PEDAL ASSEMBLY
28	4	5000007	WASHER 6
29	1	6004530	SIDE PANEL
30	1	6000180	MOTOR ASSEMBLY
31	14	5010004	NUT M10
32	1	5502039	BELT A26
33	14	5006005	WASHER 10
34	1	6000351	GEARBOX ASSEMBLY
35	4	5004006	BOLT M10X200
36	2	5004004	BOLT M10X160
37	1	5006044	PLAIN KEY 12×40
38	6	5004005	WASHER 10
39	1	6000020	BEAD BREAKER CYLINDER ASSEMBLY
40	1	6000619	AIR GUIDER ASSEMBLY

41	1 6000618	CLAMP RING
42	2 5006040	SCREW M6X20-N
43	2 5004031	SCREW M6X35
44	2 5010058	WASHER 6

WARRANTY

The tyre changer is warranted for one year to the original purchaser, to be free of defects in material and workmanship.

The manufacturer shall repair or replace at their option for this period those parts returned to the factory freight prepaid which prove after inspection to be defective.

This warranty only applies to the original purchaser of the equipment. This warranty does not extend to defects caused by ordinary wear, abuse, misuse, shipping damage, or damage as the result of improper maintenance.

This warranty is exclusive and in lieu of all other warranties expressed or implied.

In no event shall the manufacturer be liable for special, consequential or incidental damages for the breach or delay in performance of the warranty.

The manufacturer reserves the right to make design changes or add improvements to its product line without incurring any obligation to make such changes on product sold previously.