

TC-950 & TC-950-WPA

TYRE CHANGER

USER MANUAL

! Pls read this manual before operation

WARNING

This instruction manual is the important part of the product. Please read it carefully and keep it properly in order to use it when maintain and examine 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 operation not properly and out of the 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 stuck on the machine.

Operators should wear safety protective facilities such as working suit, protective glasses, and earplug 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, 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 the professional service personnel.

SAFETY LABEL INSTRUCTIONS

 CAUTION	 WARNING	 WARNING
		
KEEP HANDS CLEAR OF BEAD AREA WHEN INFLATING.	BE SURE TO READ ALL WARNING LABELS AND INSTRUCTION MANUAL PRIOR TO OPERATION OF THIS MACHINE	ALWAYS WEAR SAFETY GLASSES WHEN OPERATING THIS MACHINE LA009

 **DANGER**



STAND CLEAR WHILE INFLATING TIRE. TIRE
OR WHEEL FAILURE UNDER PRESSURE
MAY CAUSE SERIOUS INJURY OR DEATH.

 **WARNING**



DO NOT WEAR LOOSE CLOTHING,
LONG HAIR OR JEWELRY.
MOVING PARTS CAN SNAG AND PULL

 **WARNING**



KEEP HANDS CLEAR OF ALL
PINCH POINTS LA008

CAUTION LABELS



Electrical Shock!



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



When breaking tire bead, the bead breaking blade will quickly move to the left.



Note: When pressing the tire to the rim, the opened clamp cylinder may cause injury to the hand of the operator. Ensure not touch the sidewall of the tire during pressing operation.

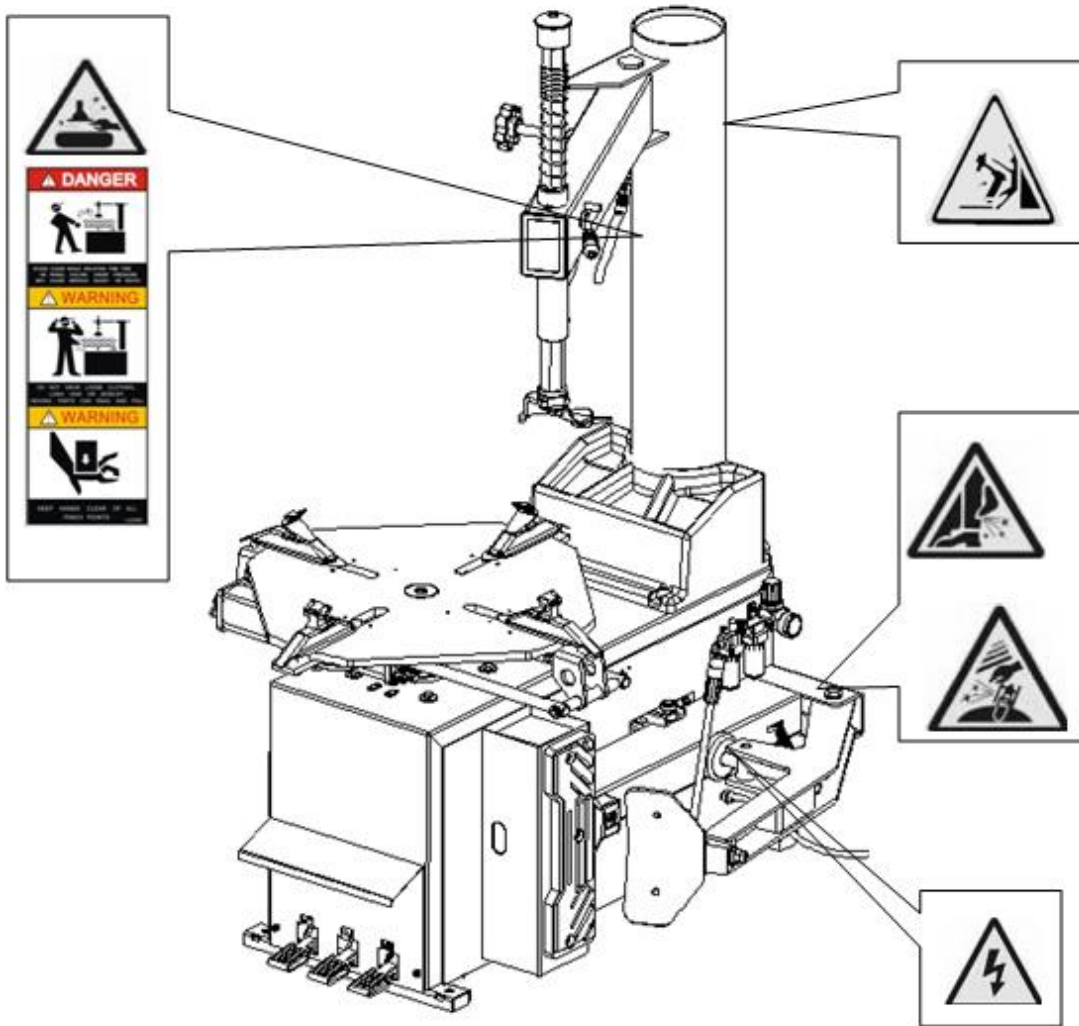


When clamping the rim, do not place hand or other parts of the body in between the clamp & the rim.

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, safety 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)
TC-950	1250mm (47)	400mm (15.74)	12+- 23+	10+- 20+

1.4 ENVIRONMENT REQUIREMENT

- Ambient temperature 0°C~45°C (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

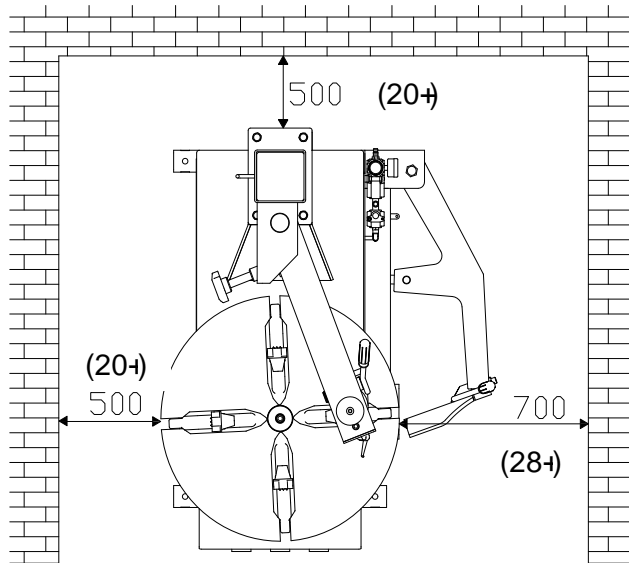


Fig. 1



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. Lock Handle
3. Hexagon Shaft
4. Demount Head
5. Claw
6. Turntable
7. Operation Label
8. Turntable Pedal
9. Clamp Pedal
10. Bead Breaker Pedal
11. Limit Handle
12. Lock Handle
13. Column
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. Air Tank
23. Inflation Gauge Box

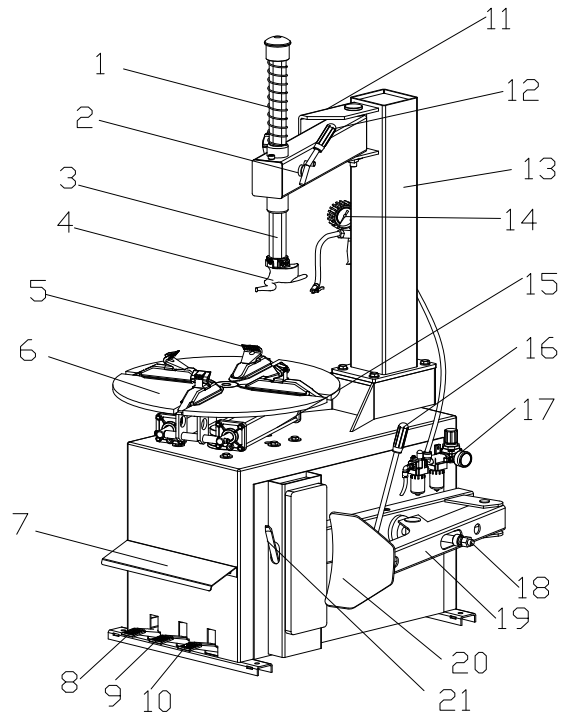


Fig. 2

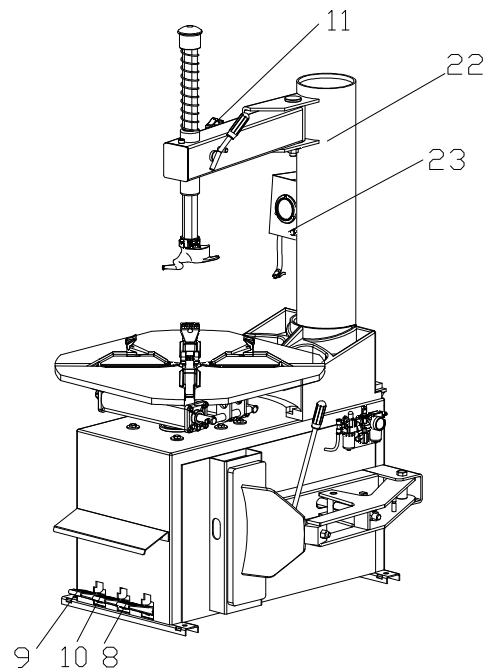


Fig. 3

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 the 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).

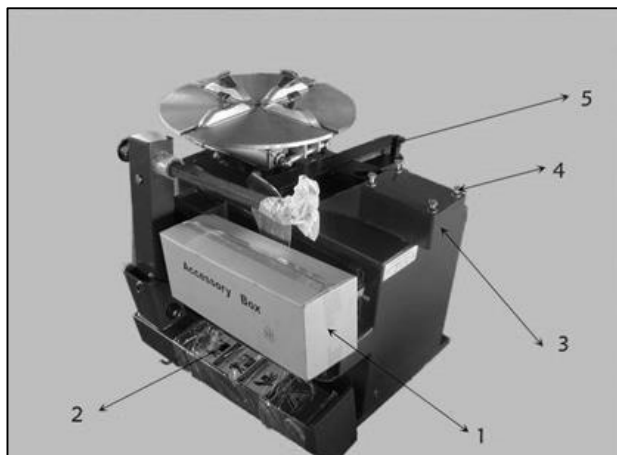


Fig. 4

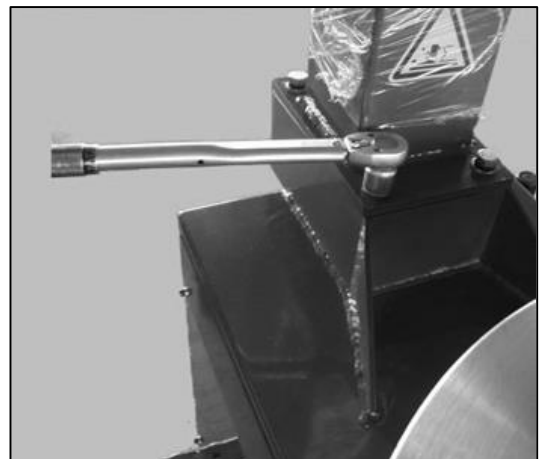


Fig. 5

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 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 and mount the removed screw and assemble the hand wheel into the nut bushing of the rocker arm (Fig. 7-2).

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

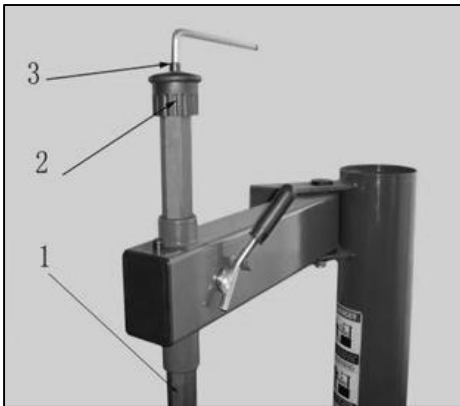


Fig. 6

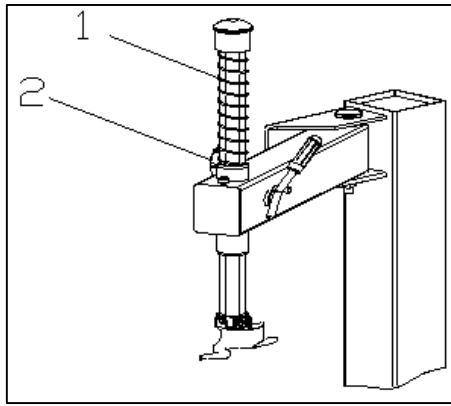


Fig. 7

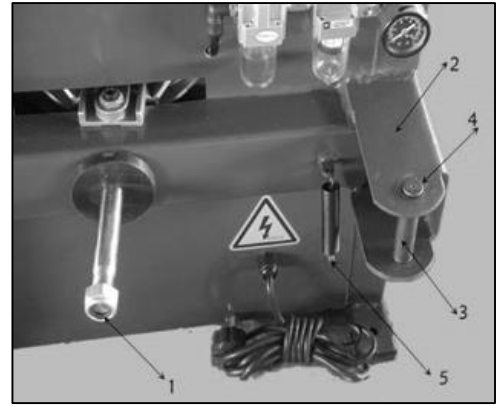


Fig. 8

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 $1\frac{3}{16} + 1\frac{1}{2} + (30-40\text{mm})$ as shown in Fig.11. Install the return spring (Fig. 9-3)

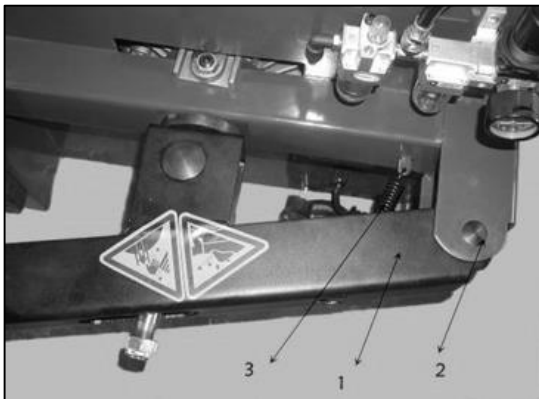


Fig. 9

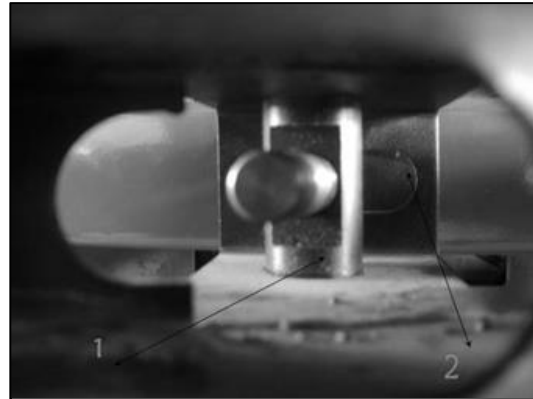


Fig. 10

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 being equipped with the tool box, you must fix firmly and the column 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 damages 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).

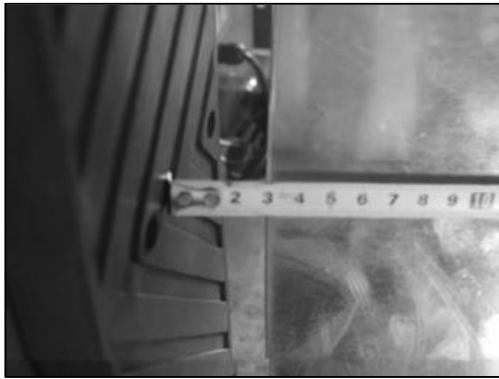


Fig. 11

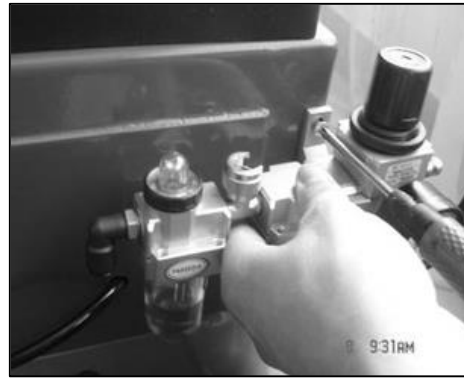


Fig. 12

3.3.2 To connect air hose: Detach the adapter on the $\varnothing 8$ 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

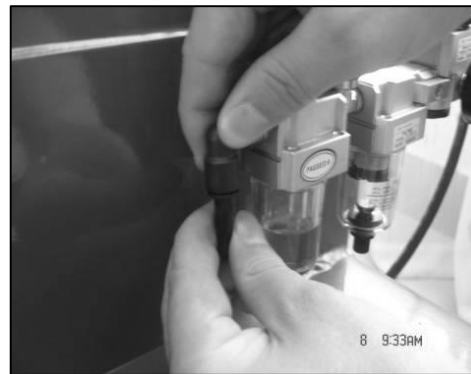


Fig. 14

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 counter-clockwise, 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 counter-clockwise, the oil flow will be increased.

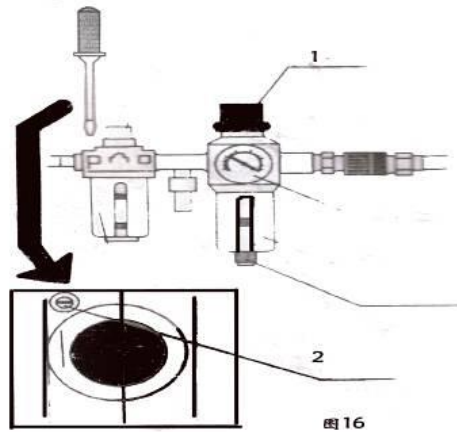


Fig. 16

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).

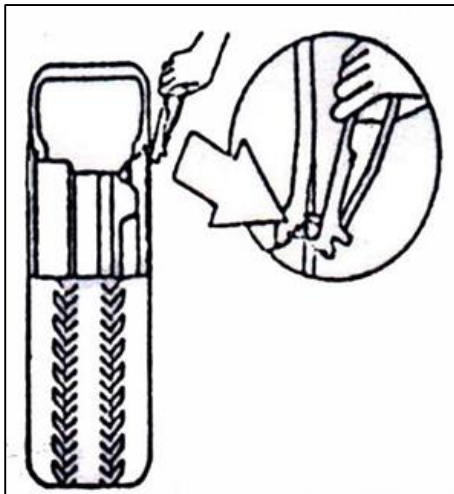


Fig. 17

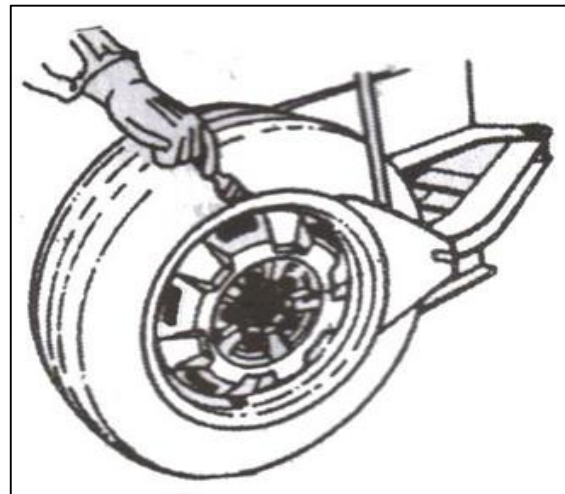


Fig. 18

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.

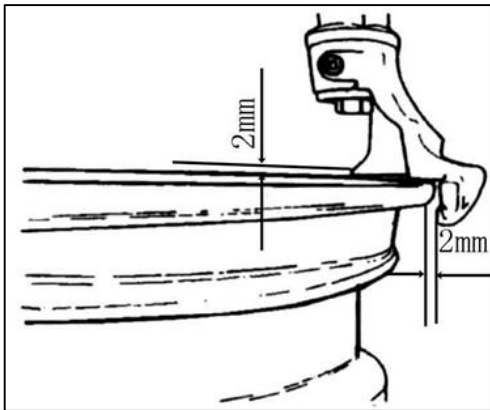


Fig. 19

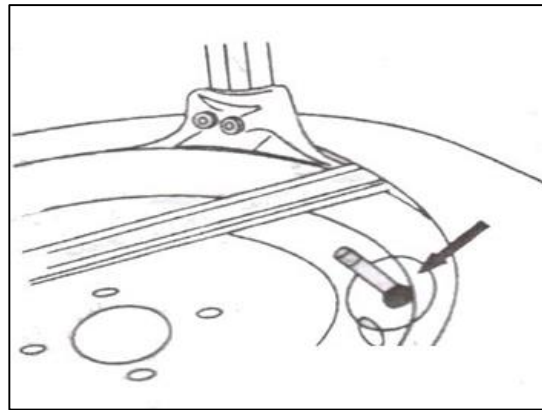


Fig. 20

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).

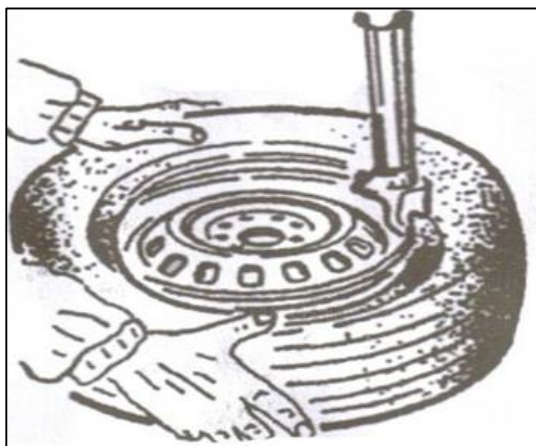


Fig. 22

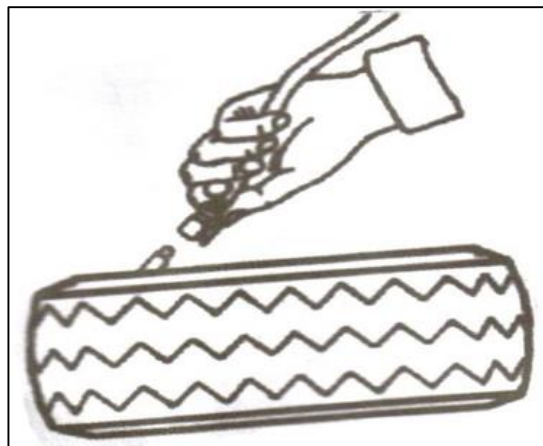


Fig. 23

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 monitoring 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 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 exceeds 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 isn't damaged before inflation!



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

CHAPTER 5 - MAINTENANCE & 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 made, 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 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.

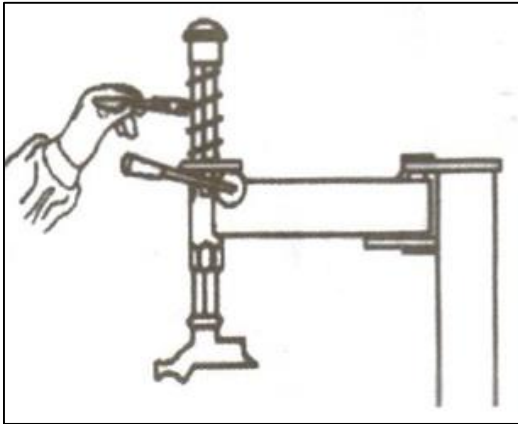


Fig. 25

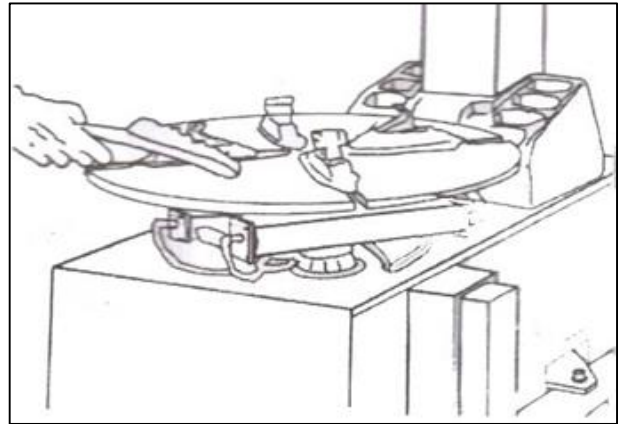


Fig. 26

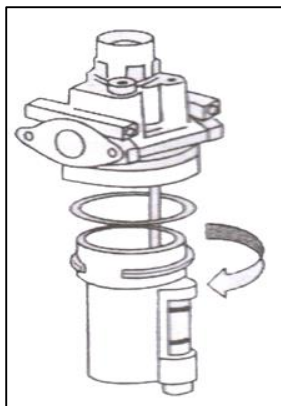


Fig. 27

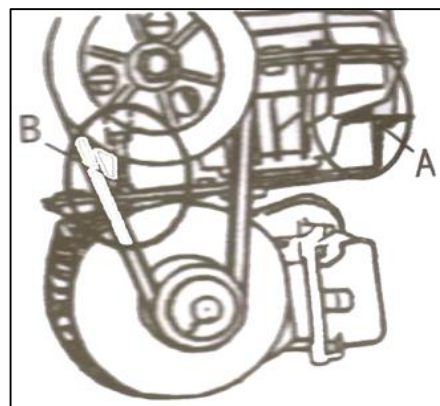


Fig. 28

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).

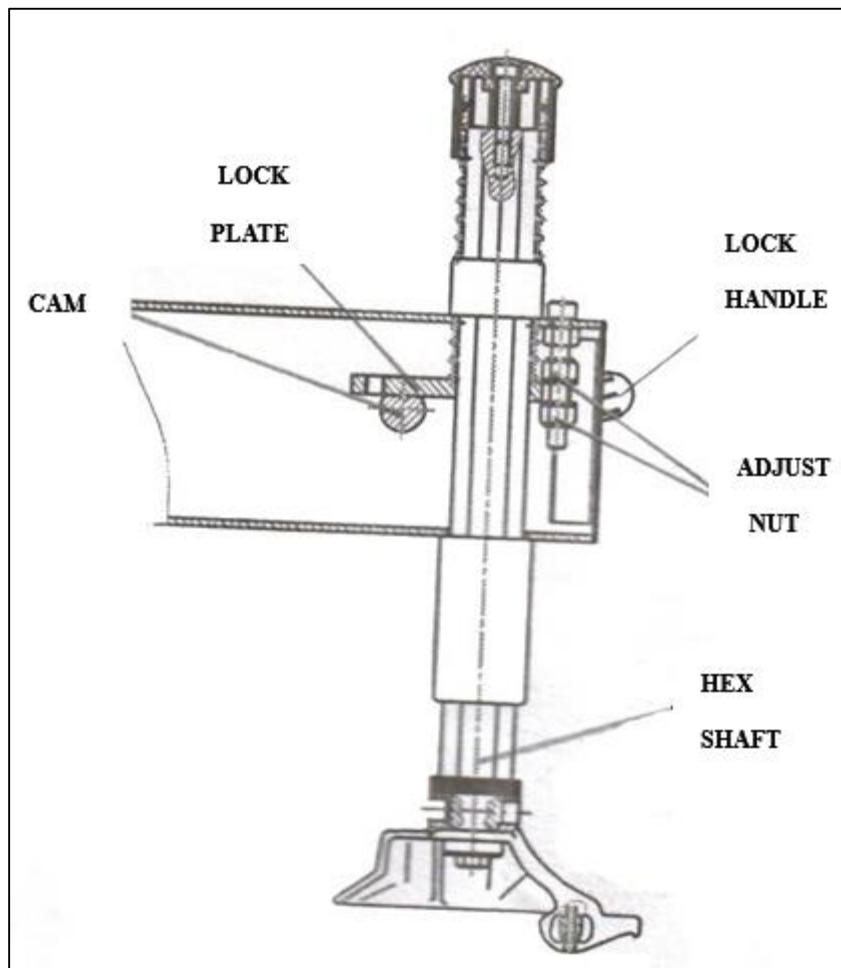


Fig. 29

TC-950-WPA

Left Side Press Arm Assist Installation and Operation

(Left Side Press Arm Assembly)

TYRE CHANGER

USER MANUAL

Pls read this manual before operation

CHAPTER 6 - INSTALLATION & OPERATION - LEFT SIDE PRESS ARM

6.1 INSTALLATION - LEFT SIDE PRESS ARM

6.1.1 The Left Side Press Arm assistant can be equipped on the tire changer which can handle a tire with the rim diameter of 20 to assist in the operation of demounting stiff and/or low profile tires. The Left Side Press Arm provides assistance for single operator capability.



Before installation, the power and air supply must be shut off!

6.1.1 The left and right side of the base plate of body of the tire changer can handle a tire with a diameter of more than 20 all have the installation hole for the left assistant prepared. Before installation, you can remove the side panel and take off the installation rubber plug. If there is a tool box, you should detach the tool box and set aside.

6.1.2 Unpack the Side Press Arm package and ensure all parts & components are included according to the packing list. After confirmation, take out the base assembly and install using the hex socket screw and washer (Fig. 30).

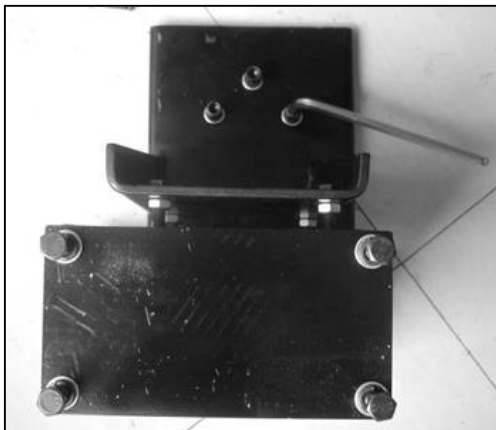


Fig. 30



Fig. 31

6.1.3 Position the platform of the base plate, for the base assembly into the body through base plate on the left-back side of the body. Align the threaded holes to the reinforced holes on the body's base and connect using hex bolts and washers (Fig 31).

6.1.4 Install the body bracket (Fig.32-1) on the base assembly. Align holes and connect to base using the screws that were removed. Do not fully tighten at this time.

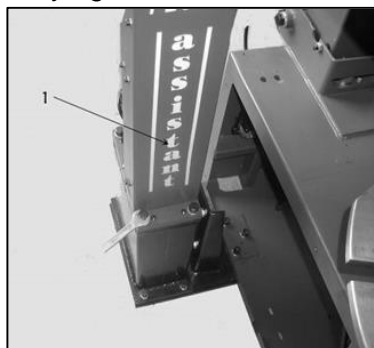


Fig. 32-1

6.1.5 Use the fixed supporting bracket (Fig. 33) to connect the body bracket and the body. Insert the screw to connect.

6.1.6 Connect the air source hose (Fig. 34-2) using the Tee fitting to connect the outlet hose and the other end to connect with the inlet of the assistant pressure adjusting valve (Fig. 34-1).

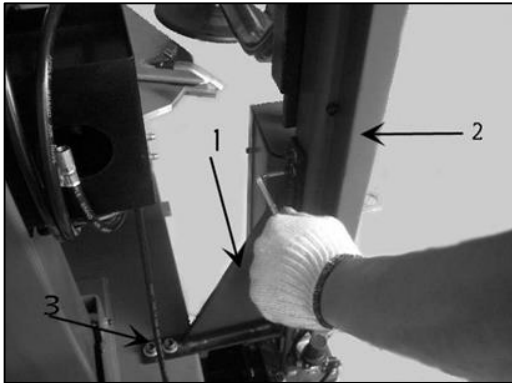


Fig. 33

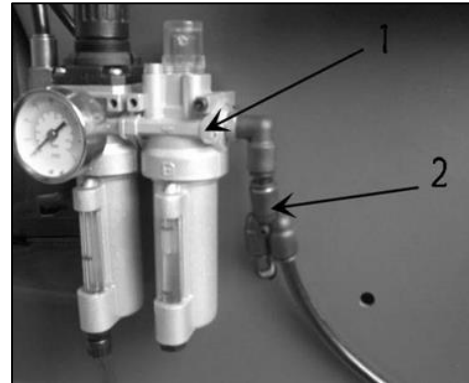


Fig. 34

6.1.7 According to the (Fig. 35), fit the bracket on the body that secures the tool box on the fixed bracket and then use the lock nut to tighten.

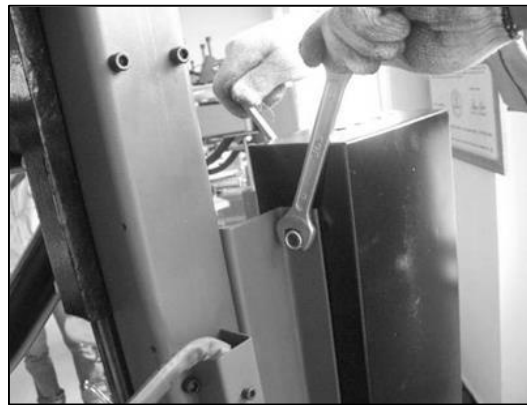


Fig. 35

6.1.8 Loosen the nut below the base and turn the screw clockwise until it's against the ground and is tight (Fig. 36). Re-install the side panel and tool box that was removed section 6.1.1.



Fig. 36

The installation of the Left Side Press Arm assembly is now complete.

6.2 USING THE LEFT SIDE PRESS ARM

6.2.1 After detaching the tire from the rim according to the instruction of the Chapter 5, you can execute the following operations.

6.2.2 First, position the claws according to the dimension of the tire and then clamp the rim by the claws and position the tire press cone roller at the center of the rim (Fig. 37). Push down on the manual valve to press the rim down until the rim is lower than the surface of the claws. At this moment, you can immediately lock the rim. Lift up the support arm and place it at the working position and take off the press cone roller and place it on the support.



Fig. 37



Fig. 38

6.2.3 Use the press (Fig. 38-1) to press down the tire by sections of the rim that is detached from the tire and use the brush to spread the lubricant on edge of the lip. Position the demount tool (FIG 40-2) in the demount position. Place the press beside the demount tool to press down the lip and insert the crowbar below the demount tool in between the rim and lip (Fig. 39). Then lift up the press and move it to the position opposite to the demount tool and press the lip into the tire detach groove and then rotate the crowbar to lift the lip onto the demount tool (Fig. 40). Rotate the turntable to detach the upper lip.

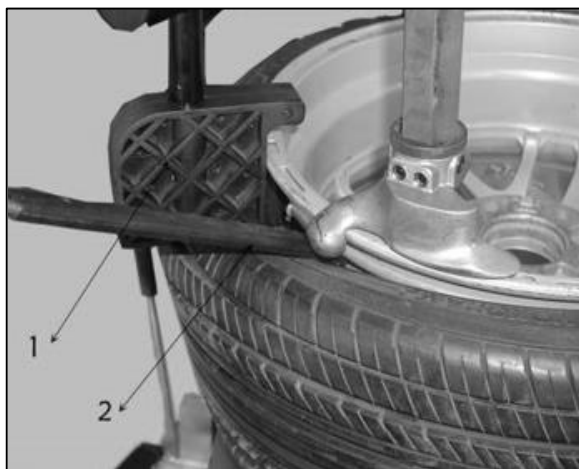


Fig. 39



Fig. 40

6.2.4 DETACH THE LOWER LIP: Use the disk to lift up the bottom section of the tire from the bottom of the mouth (Fig. 41) and detach the lower lip (Fig. 42).



Fig. 41



Fig. 42

6.2.5 MOUNT TIRE: First, according to the steps in section (4.2.1 thru 4.2.3), install the lower lip and use the press tool to press the lower lip as shown in Fig. 43. Rotate the turntable by about 90° then clamp and apply the demount tool (Fig. 44) while continually rotating the turntable until the operation is complete, as noted in section 6.2.5



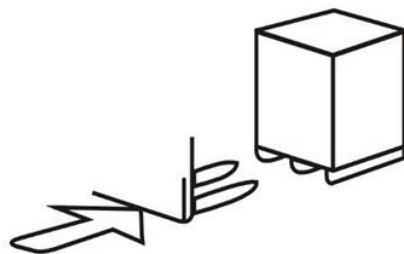
Fig. 43



Fig. 44

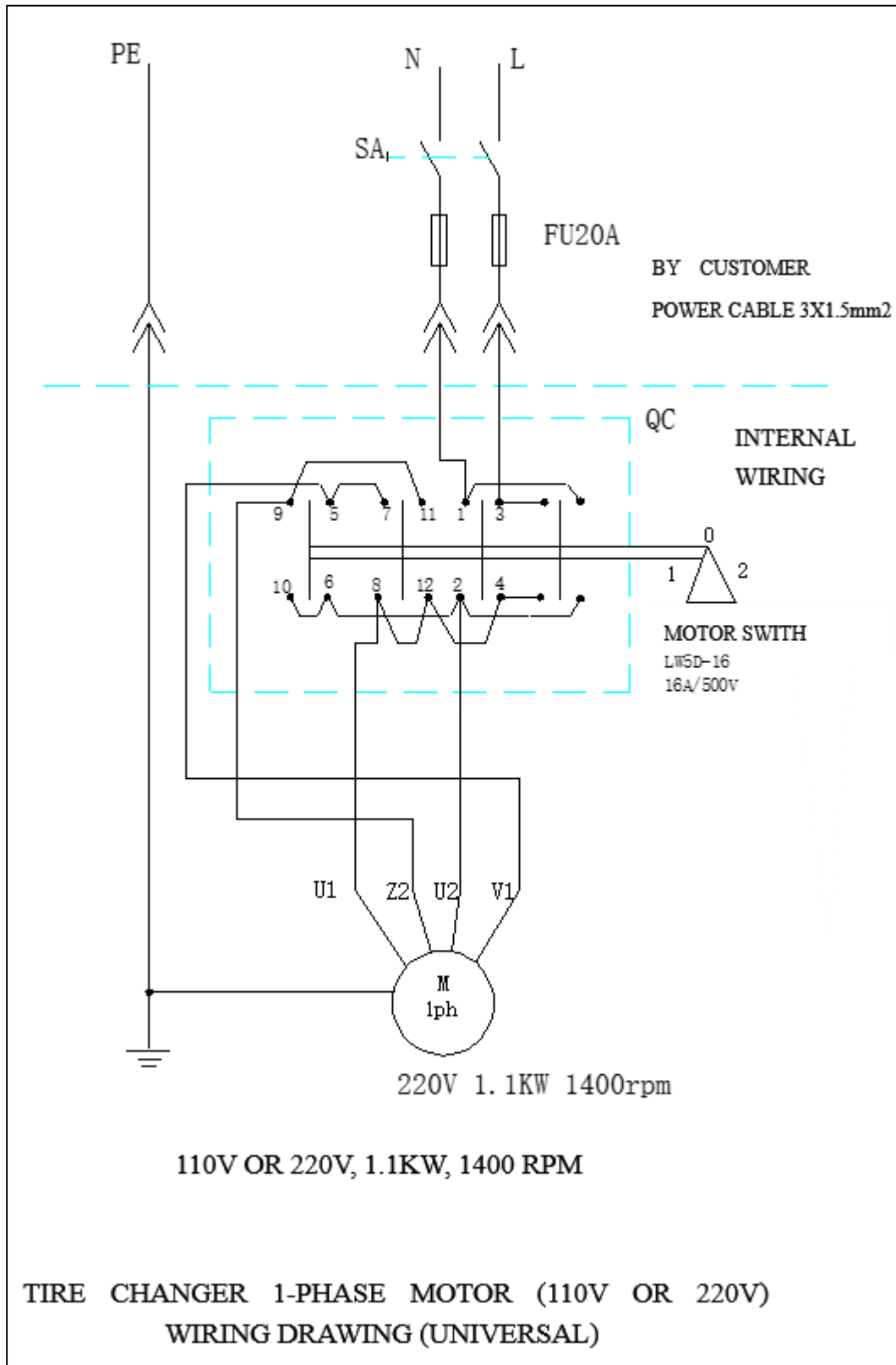
CHAPTER 7 - TRANSPORTATION

It is highly recommended that the Tire Changer crate is transported by the forklift, once delivered. When transporting an unopened Tire Changer machine, ensure to place forks according to the markings on the outside of the crate packaging to reduce the possibility of damages.

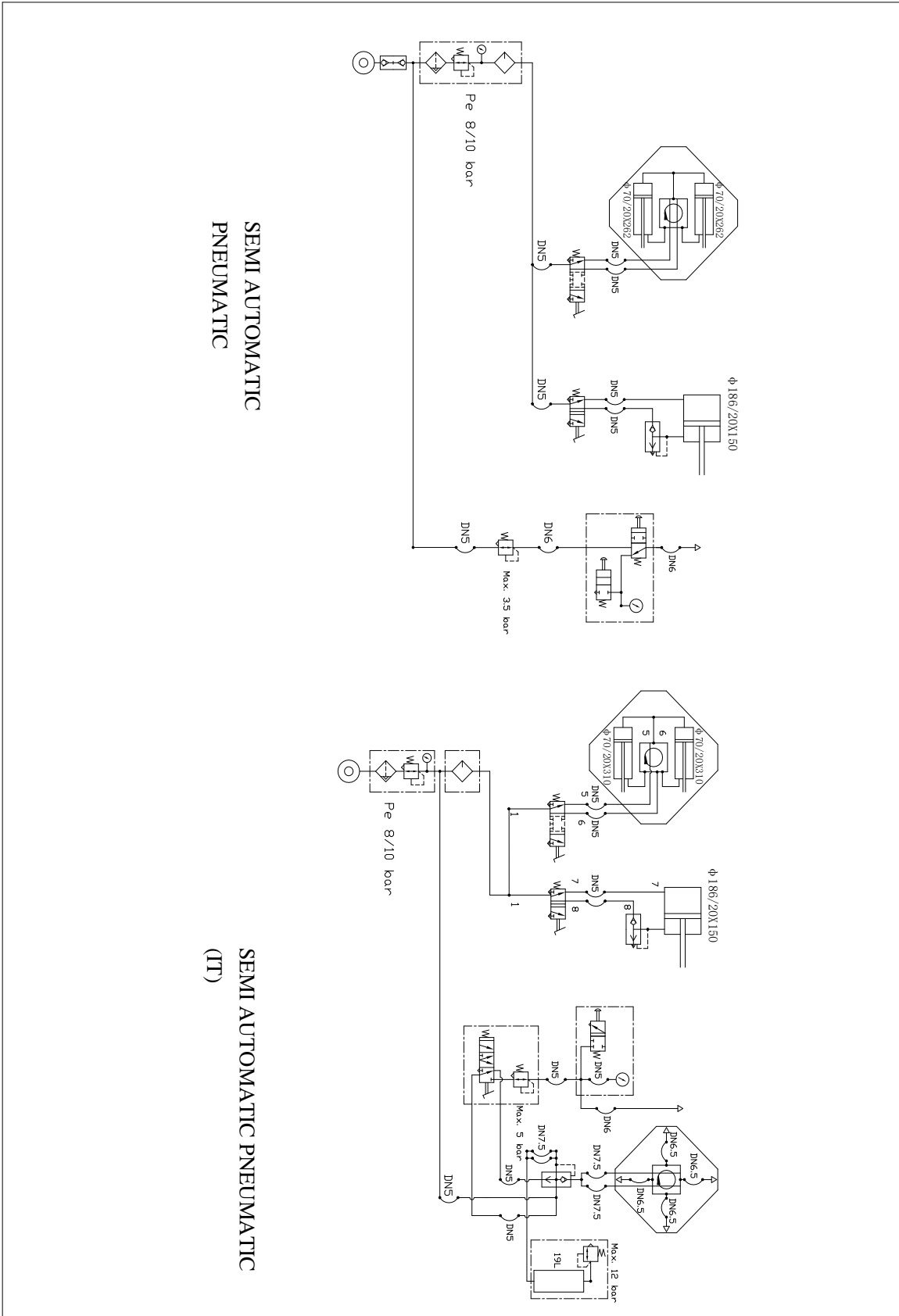


CHAPTER 8 - ELECTRICAL AND PENUMATIC DRAWING

110V OR 220V SINGLE PHASE ELECTRICAL DRAWING



PNEUMATIC DRAWING



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°C mm/10	280
Dropping point °C	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°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

LIMITED WARRANTY

Structural Warranty:

The following parts and structural components carry a five year warranty:

Columns	Arms	Uprights	Swivel Pins
Legs	Carriages	Overhead Beam	
Tracks	Cross Rails	Top Rail Beam	

Limited One-Year Warranty:

Tuxedo Distributors, LLC (Tuxedo) offers a limited one-year warranty to the original purchaser of Lifts and Wheel Service equipment in the United States and Canada. Tuxedo 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 lift and 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 Tuxedo of any missing parts within 72 hours. Timely notification must be received to be covered under warranty.

Tuxedo 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.

Tuxedo reserves the right to make improvements and/or design changes to its lifts without any obligation to previously sold, assembled or fabricated equipment.

There is no other express warranty on the Tuxedo lifts 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, Tuxedo 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.

8320 E Hwy 67, Alvarado, TX 76009
Ph. 817-558-9337 / Fax 817-558-9740

Model No. 953 Wheel Balancer

Instruction Manual

The specifications stated in this manual are not binding, and due to the process of continuous improvement & development we reserve the right to change any specification without prior notification.

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1. PREFACE

WARNING

During this period, the manufacturer will repair or replace the parts returned or the machine itself, sustaining the costs but not accepting responsibility for normal wear and tear, incorrect use or transportation, or failure to carry out maintenance. The manufacturer will not inform the customer about any improvements to the products or the upgrading of the production line.

INTRODUCTION

The purpose of this manual is to provide the owner and operator of this machine with a set of safe and practical instructions for the use and maintenance of the wheel balancer.

If such instructions are carefully followed, the machine will offer you the levels of efficiency and duration.

The following paragraphs define the levels of danger regarding the machine.



DANGER: Refers to immediate danger with the risk of serious injury or death.



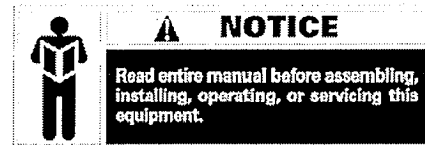
WARNING: Dangers or unsafe procedures that can cause serious injury or death.



ATTENTION: Dangers or unsafe procedures that can cause minor injuries or damage to property.

Read these instructions carefully before using the machine. Keep this manual and the illustrated materials supplied with the equipment in a folder near the place of operation so as to allow the machine operators to consult the documentation at any time.

The manual is only to be considered valid for the machine serial number and model stated on the attached nameplate.



The instructions and information described in this manual must always be complied with: the operator will be held responsible for any operation not specially described and authorized in this manual.

Some of the illustrations contained in this booklet have been taken from pictures of prototypes: standard production machines may differ slightly in certain respects. These instructions are for the attention of personnel with basic mechanical skills. We have therefore condensed the descriptions of each operation by omitting detailed instructions regarding, for example, how to loosen or tighten the fixing devices. Do not attempt to perform operations unless properly qualified or with suitable experience. If necessary, please contact an authorized Service Centre for assistance.

INSTALLATION



Take the utmost care when unpacking, assembling, lifting and setting up the machine as indicated below. Failure to observe these instructions can damage the machine and compromise the operator's safety. Remove the original packing materials after positioning them as indicated on the packaging.

 **WARNING**

All regulations in force concerning safety at work must be complied with when choosing the installation position. In particular, the machine must only be installed and operated in protected environments where there is no risk of exposure to water or liquids.

IMPORTANT: for the correct and safe operation of the machine, the lighting level in the place of use should be at least 300 lux.

Environmental operating conditions must comply with the following requirements:

- relative humidity ranging from 30% to 80% (without condensation);
- temperatures ranging from -5° to +50°C.

 **WARNING**

The floor must be strong enough to support a load equal to the weight of the equipment plus the maximum load allowed.

 **WARNING**

The machine must not be operated in potentially explosive atmospheres.

SAFETY REGULATIONS

 **WARNING**

Failure to comply with the instructions and danger warnings can cause serious injuries to the operator or other persons.

Do not operate the machine until you have read and understood all the danger/warning notices in this manual.

The correct use of this machine requires a qualified and authorized operator. This operator

must be able to understand the manufacturer's written instructions, be suitably trained and be familiar with the safety procedures and regulations. Operators are forbidden to use the machine under the influence of alcohol or drugs that could affect his/her physical and mental capacity.

The following conditions are essential:

- read and understand the information and instructions described in this manual;
- have a thorough knowledge of the features and characteristics of the machine;
- keep unauthorized persons well clear of the working area;
- make sure that the machine has been installed in compliance with all relevant standards and regulations in force;
- make sure that all machine operators are suitably trained, that they are capable of using the machine correctly and safely and that they are adequately supervised during work;
- do not touch power lines or the inside of electric motors or any other electrical equipment before making sure that they have been powered off;
- read this booklet carefully and learn how to use the machine correctly and safely;
- always keep this user manual in a place where it can be readily consulted and do not fail to refer to it.

 **WARNING**

Do not remove or deface the DANGER, CAUTION, WARNING or INSTRUCTION decals. Replace any missing or illegible decals. If any decals have become detached or damaged, it is possible to obtain them from your nearest reseller.

-Observe the unified industrial accident prevention regulations relating to high voltages and rotating machinery whenever the machine is in use or being serviced.

- Any unauthorized changes or modifications

made to the machine automatically release the manufacturer from any liability in the case of damage or accidents resulting from such changes or modifications.

positioned on the rear left side of the machine, indicates where to connect the ground wire.

DECAL LOCATION DIAGRAM



WEAR PROTECTIVE GLOVE



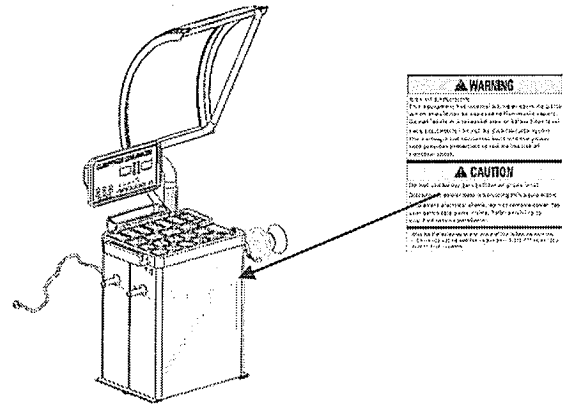
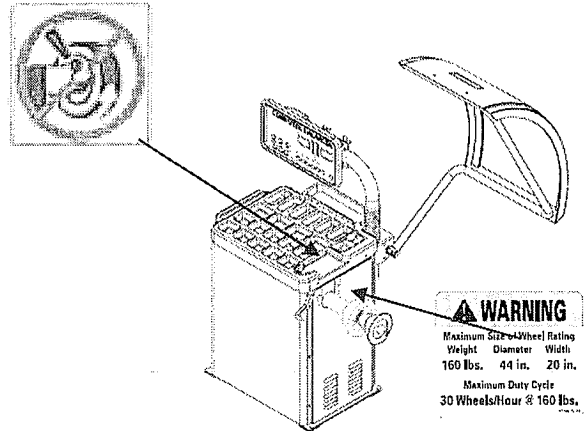
READ OPERATION MANUAL



WEAR PROTECTIVE GLASSES



POWER OFF THE ELECTRICAL SOURCE OF THE MACHINE DURING MAINTANCE



Meaning of the decals

(including the one indicating caution)



Lightning symbol

This decal, positioned on the back of the machine, indicates where to insert the power supply cable and warns the user to pay attention to his safety.

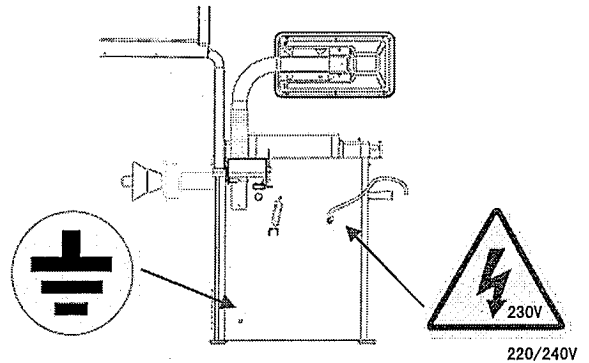


Warning for rotating machine part

This decal, positioned next to the balancing shaft, reminds the user that this is a rotating part and is therefore dangerous and should not be touched with the hands. The arrow indicates the rotation direction.



Grounding symbol This decal,



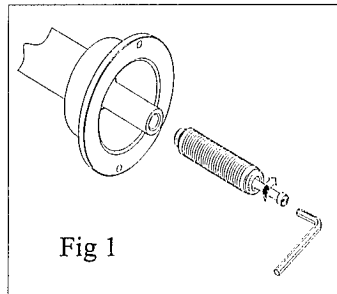
2.0 INSTALLATION & OPERATION

Before installation and use of the wheel balancer, you should carefully read this installation and operation manual. The manual should be kept for future reference. Operators should be familiar

with this instruction manual to ensure correct operation and safety.

2.1 PROTECTIVE COVER INSTALLATION:

2.2 MAIN SHAFT INSTALLATION



This machine must be grounded with reliable earth wire.

2.3 ELECTRICAL CONNECTION & EARTHING

All electrical connections must be carried out by a qualified electrician. If in doubt, contact your local distributor.

Make sure the technical parameter shown on the the machine is comparable with the power supply.

This machine must be fitted with 13Amps fuse.

The voltage stabilizer is recommended to be installed in the power supply.



Any electrical connection to be carried out by a qualified electrician and must comply with all standard regulations.

- Power voltage on the data plate on the machine;
- Voltage decrease cannot exceed 4% of the rated voltage on the data plate when fully loaded (10% at startup)

-Operators must:

- Install the plug;
- It is recommended the machine is installed with a 30ma circuit breaker and voltage stabilizer in area supply voltage can not be guaranteed;
- To prevent the unauthorized use of the machine,

it is recommended to disconnect the machine from the power supply.



Perfect ground is necessary for the correct operation. Do not connect the machine with air pipe, water pipe, telephone line and the other unsuitable objects.

3.0 TECHNICAL FEATURES

3.1 FEATURES:

- It must be ensured the machine is grounded correctly to earth. If not, contact your local distributor.
- Low noise, wear resistant bearing for high precision.
- Computerized wheel balancer with dynamic, static, multiple ALU modes and ALU mode for motorcycle.
- self-calibration and automatic trouble diagnosis

3.2 MAIN TECHNICAL SPECIFICATION

- rated voltage 220V/240V (selectable) 50/60HZ
- power 250W
- Average Balancing time 7S (20Kg wheel)
- accuracy $\pm 2g$
- noise $\leq 69dB$
- rim diameter 10"~24"
- maximum wheel weight 70kg
- rim width 1.5~20"
- net weight 112 kg
- max wheel diameter 39inch(1000mm)
- working environment: temperature 0°C-50°C, relative humidity: 30% —80% (no condensation);

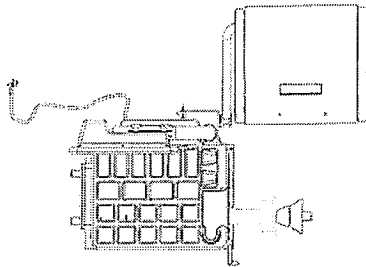
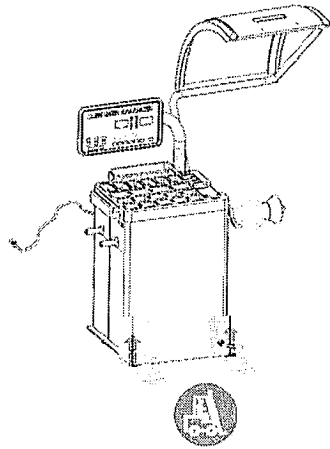
4. TRANSPORTATION &

INSTALLATION

4.1 TRANSPORTATION

- Place, carry and store the machine according to the indication of the label on the packaging.

- Store environment: RH20%-95% temperature -10°C-+60°C
- When transporting or using the machine, do not lift or impact the shaft as it is to cause the permanent damage.



Transport the machine in the accordance of the figure above.

4.1.1 Ensure there is no external package damaging before unpacking the out of the machine.

Position balancer in a desired working position and ensure with the requirement of figure 4.

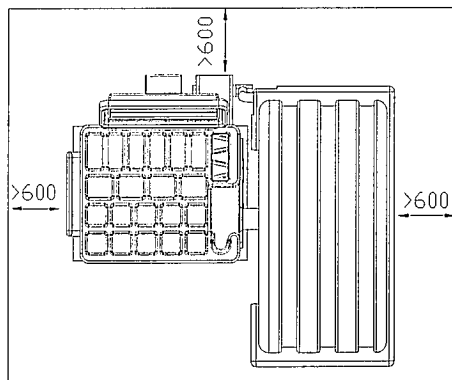


Fig5

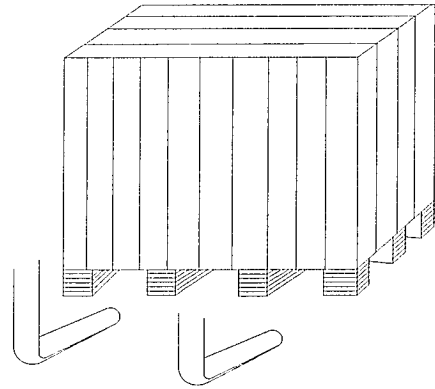


Fig 4

4.1.2 Packaging materials must be disposed in accordance with environmental regulation for the region.

Remove all packaging and check contents with below list of items. If any parts missing or damaged, please contact your distributor.

4.2 INSTALLATION

Position wheel balancer in the desired position for use. It must be ensured the floor is leveled and of solid construction. The wheel balancer is designed for operation indoors and should not be exposed to moisture or direct sunlight.

5.SAFETY PRECAUTIONS

5.1.1 Before operation, ensure you have read the instruction manual and all warning labels. Not working in accordance with the safety instructions should cause serious injury or death to the operator or bystanders.

5.1.2 Keep hands removed and loose clothing and jewelry and stand clear of all moving parts of the machine when in use. Inspect the machine before use for any damage. In the event of any damage, the machine must not be used until repaired or replacement of the fault part. Do not wear long hair, necklace or loose clothing. The operators should stand beside the machine to ensure the unauthorized personnel are kept clear from the area.

5.1.3 In the event of the emergency, you should press the “STOP” button immediately. To prevent injury, it must be ensured the protective cover is fitted all time.

5.1.4 Before balancing, operators should check all the tyres and wheels for possible defects. Do not balance the tyres and wheels with fault.

5.1.5 Do not attempt to balance the wheel if it is to be found to be defect in any way.

GENERAL CONDITIONS OF USE

The wheel balancers described in this manual must be used exclusively to measure the extent and position of car wheel unbalances, within the limits specified in the technical data section. Furthermore, models equipped with motors must be provided with a suitable guard.



Any use other than those described in this manual is to be considered improper and unreasonable.



Do not start the machine without the wheel locking equipment.



Protective cover plays the role of prevention and safety.



Do not clean or wash the wheels mounted on the machine with compressed air or jets of water.



Get to know your machine. The best way to prevent accidents and obtain top performance from the machine is to ensure that all operators know how the machine works.



Learn the function and location of all the controls.



Carefully check that all controls on the machine are working properly.



The machine must be installed properly, operated correctly and serviced regularly in order to prevent accidents and injuries.

NAMEPLATE

Model:		Serial No.:	953B1006001
Voltage:	230V~	Frequency:	50Hz
Phase:	1PH/PB	Input Power:	0.3kW
Full-load current:	4.0A	Weight:	125kg
Date of Mfg.:	2008-05-13		



CE APPROVED

Note: The nameplate is stuck in the center to the top on the rear of the machine.



CE mark indicates that this model of machine has CE certification.

6. CONFIGURATION & USE

6.1 CONFIGURATION

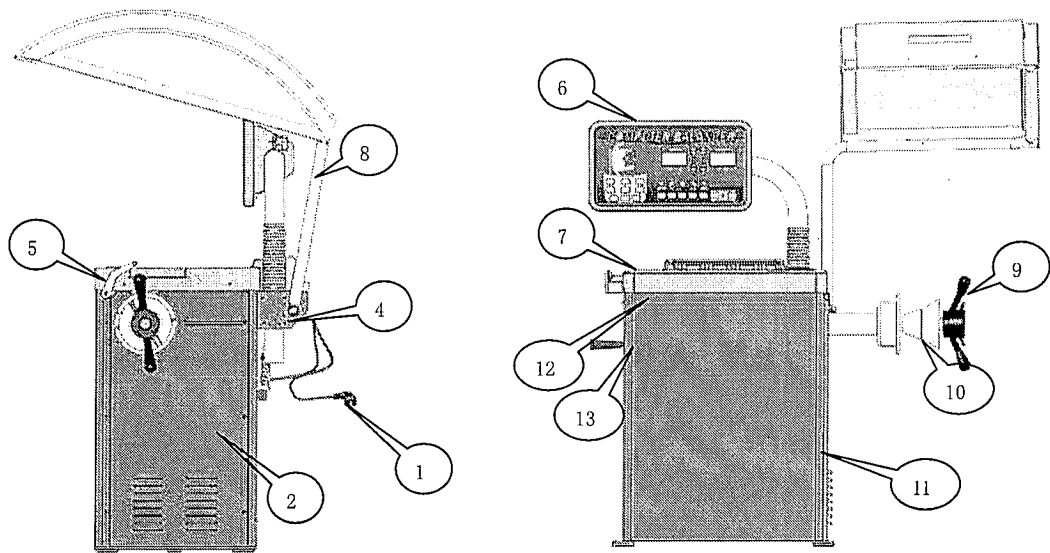
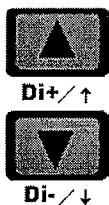
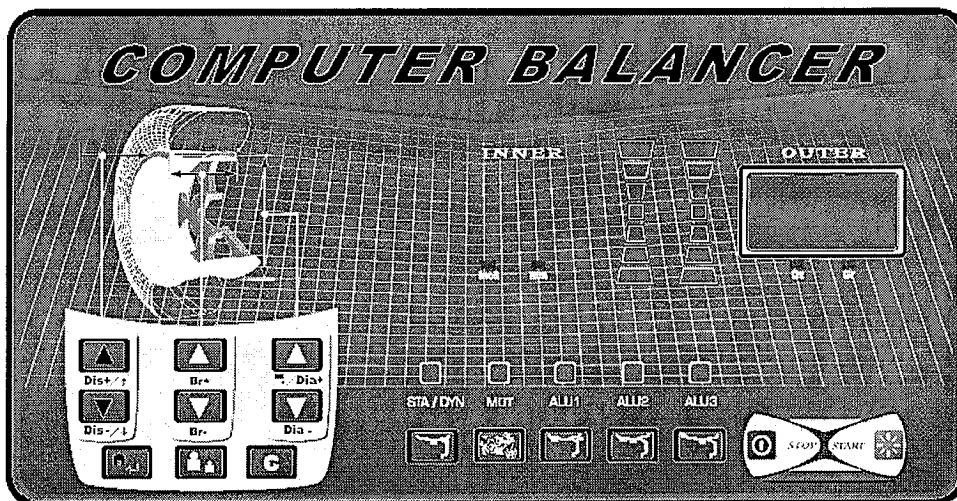


Fig 5

- | | | | |
|-------------------------|-------------------|------------------|-----------------------|
| 1. Power plug | 2. Side Cover | 3. Return Spring | 4. Positioning Switch |
| 5. Scale | 6. Control Panel | 7. Weight Tray | 8. Protective Cover |
| 9. Quick Nut | 10. Balance Shaft | 11. Body | 12. Power Switch |
| 13. Cone storage handle | | | |

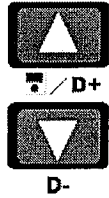
6.2 CONTROL PANEL



(1) In the state of parameter input, it is the distance from wheel to balancer input key. You can change the Br set value of the window by press the up/down key.



(2) Br value input key You can change the Br set value of the window by press the up/down key.



(3) In the state of parameter input, it is the diameter of the rim input key . You can change the Br set value of the window by press the up/down key.



(4) High accuracy balance press key When the display is "00", press this key. The display will display 5g of residual unbalance.



(5) Unbalance value conversion key



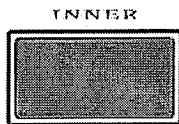
(6) Static/Dynamic/ALU/Motorcycle mode select key



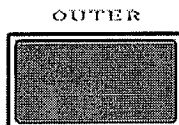
(7) Emergence press key



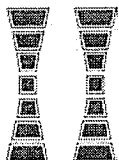
(8) Start key



(9) Inner unbalance value and tyre parameter display



(10) Outer unbalance value and tyre parameter display



(11) Unbalance point positioning lamp



(12) Individual balance mode lamp

6.3 BASIC OPERATION

6.3.1

Switch on the main switch on the left side of the machine, the display will display "CB-953" and then "0", "0" (it will display "0.00", "0.00" in ounce state)

6.3.2 MOUNT WHEEL

Preparation before test: Check and clean the dust and mud and if there are foreign bodies, such as metal, stone, clipped weights on the surface of the tyre or wheel. And also check the air pressure of the tyre is according with the specified value. Check if there are deformation on the rim positioning surface and installation hole.

Check if there are any foreign bodies in the tyre. Take off the original weight.

The installation methods of the wheel: positive

positioning , negative positioning & flange disk You can select different methods according to the practice.

6.3.2.1 SMALL CAR WHEEL POSITIVE POSITION

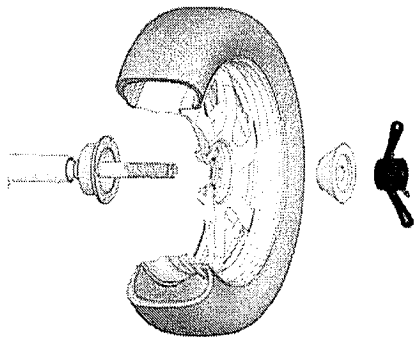


FIG7

Positive positioning is the normal method. It is featured with simple and quick operation. It is mainly suitable to the common steel rim and aluminum alloy rim with small deformation.

Main shaft → wheel (direction of the rim installation surface is inside) → cone → quick nut

6.3.2.2

When the deformation of the outside of the wheel, adopt this method to positioning to guarantee the accurate positioning of the steel rim inner hole and main shaft. It is suitable to the steel rim, especially the thick ALU

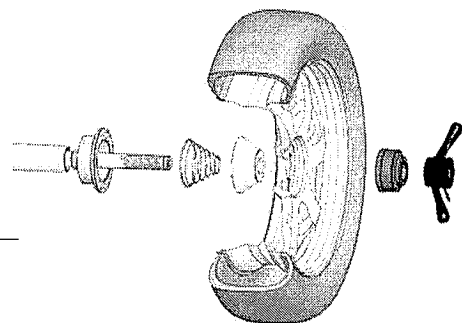


FIG 8

Main shaft → tower spring → suitable cone
 wheel → bowl → quick nut

6.3.2.3 FLANGE DISK POSITIONING (OPTIONAL)

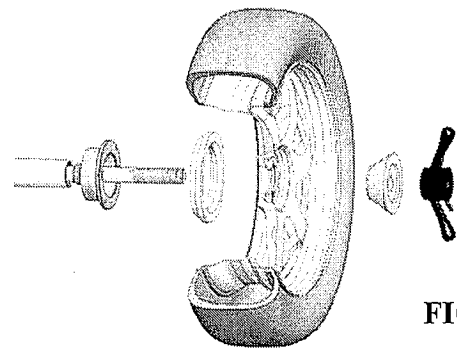


FIG9

Suitable for larger wheels

Main shaft → flange disk (fixed on the main shaft) → wheel → cone → quick nut



The choice on the cone should be adapted to the rim center hole and pay attention to its direction. Or it will cause the inaccurate measurement.

6.4 INPUT VALUE

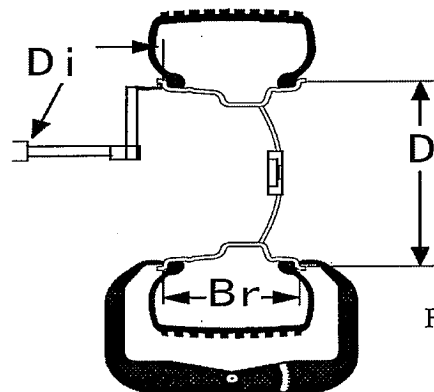


Fig10

6.4.1 Input (Di) stance



Press the key to input the Di value into the display. At this moment, the display will display "Di": "XXX", And we can also adjust this value by rotating the tyre fixed on the main shaft.

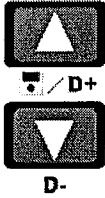
6.4.2 Input (Br) eadth Value



Use the Br measurement caliper to measure the Br of the rim, press the key to input the Br value into the

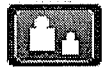
will display "Br": "XXX", And we can also adjust this value by rotating the tyre fixed on the main shaft.

6.4.3 Input the Tyre Diameter Value



After confirming the rim diameter, press the key to input the rim diameter into the display. At this moment, the display will display "D": "XXX", And we can also adjust this value by rotating the tyre fixed on the main shaft.

6.4.4 UNIT CONVERSION:



①The unit conversion of the Br of the rim from inch to mm:

Normally, the display of Br should be in inch. When you need the unit of the display to be mm, you can use the key to realize the unit conversion from inch to mm.



②The unit conversion of the D of the rim from inch to mm:

Normally, the display of D should be in inch. When you need the unit of the display to be mm, you can use the key to realize the unit conversion from inch to mm.


After unit conversion, the unit of the display values of rim Br and D are , but when you switch off and then on the wheel balancer, the unit will be still inch.



③The unit conversion from gram to ounce:

Normally, the unit of the unbalance value is gram (g). If you want to make the ounce(Oz) to be the unit,you can execute the g/Oz conversion.



The unit of the displayed unbalance value is gram (g) . The way to realize the unit conversion from gram to ounce is to press .

6.4.5 When press the start key  , the wheel balancer starts to run. A few seconds later, the machine automatically stops. The machine can also start by lowering down the protective

cover which can be set by the program.

6.4.6 DISPLAY UNBALANCE VALUE

When the spin ends, the display will display the

inner  and outer  unbalance value of the rim. Use your hand to pull the wheel. When all the positioning lamps light inside and outside light, the weight adding position will be indicated.

6.4.7 Rotate the wheel, when the left side positioning lamp all light, at this moment, the highest position is the inner unbalance position and when the right side positioning lamp all light, at this moment, the highest position is the outer unbalance position.

6.4.8 Add the corresponding weight at the unbalance point and start test again until the balance of the tyre.




1. When start the machine, use hand to pull the wheel to help it start rotation, especially to the relative bigger tyre, to prolong the working life of the motor.
2. Check if there are any mistakes on the dimension.
3. Check if the balance methods meet the configuration of the rim and select the balancer most easily to balance.
4. Check if the contract nut tight or not.
5. When the balance ends, remove the tyre. Pay attention to handle it with gentle and avoid knocking the main shaft.
6. When clipping the weight. Use the hammer to clip the weight on the rim without too much force.






Do not knock the main shaft hardly to avoid damaging the sensor. The position to add the weight should be free from the grease and should be dry.

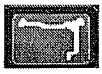
6.5 UNBALANCE VALUE DISPLAY RESIDUAL

The minimum value of the standard weight is 5g so if the weight you use is less than 5 g, the wheel balancer will not display the value and only displays the state of "00". When you need to display the residual unbalance value, you should

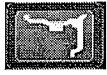
press  and the display will immediately display the inside or outside unbalance value of less than 5g. The maximum residual unbalance value is 4 g.


6.6 BALANCE MODE SELECT

Select the balance mode according to the weight adding position and      the balance mode. Press the corresponding key to select the balance mode. When you switch on the machine the machine will automatic enter into the dynamic balance mode and no need to select.

 dynamic—clip the weight on both sides of rim (dynamic balance test once start)

static— Stick weight in centre.

 static—optional for balancing the motorcycle

 When balancing motorcycle wheels, you require the (optional) motorcycle adaptor accessory MJ-II. With the assistance of the extension scale to measure Di, Br and Di. Input the measure value into the Di, Br and Di display window. The input method is similar to the parameter input of the car..

When we balance the motorcycle tyre, we do not select the MOT function if the present scale can measure the value of dis. And if the present scale can not measure the value of dis, we need the extension scale to execute the dynamic balance. First we should select MOT and then input the parameter to execute the dynamic balance.

ALU1—to balance the light aluminum alloy rim. Adopt clip the weight on the shoulders of the rim

ALU1

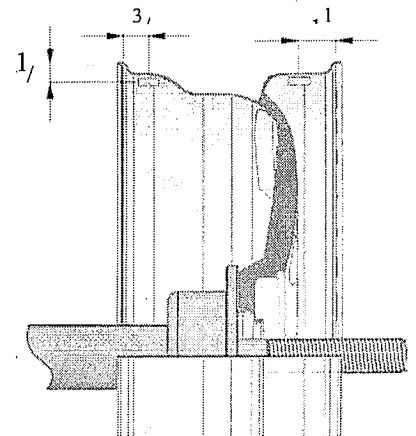


$$Di1=Di+\frac{3}{4}"$$

$$Di2=Di+Br-\frac{3}{4}"$$

$$D1=D-1"$$

$$D2=D-1"$$



ALU2—ALU2—for ALU rim, hidden weight Inside ALU2



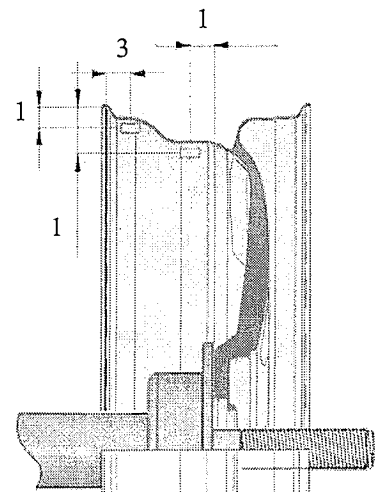
$$Di1=Di+\frac{3}{4}"$$

Di2=from 0 point to The Outer of the

$$\text{flange disk}-\frac{1}{2}"$$

$$D1=D-1"$$

$$D2=D-2\frac{1}{2}"$$



ALU3—clip weight inside and stick weight outside (outside position) similar to ALU2)

ALU3

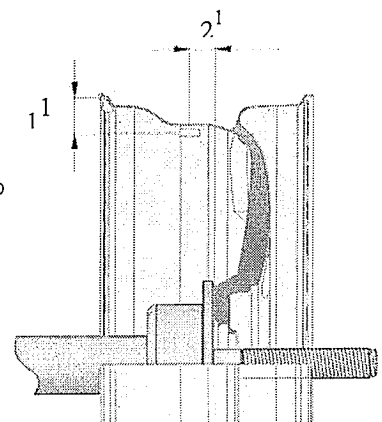


$$Di1=Di$$

Di2= from 0 point to disk

$$D1=D$$

$$D2=D-2\frac{1}{2}"$$







6.7 SUPPLEMENTARY EXPLANATION:



Once switching on, you will see standard dynamic balance mode setup by the computer. When selecting ALU mode and the configuration of the aluminum alloy rim is similar to the above standard ALU1\ALU2\ALU3, you can get relative accurate balance effect. If the section of the tyre similar to the one given by the program, you need do some adjustment on the position and weight of the weight. General speaking, 1~2 times of adjustment can reach relative satisfactory balance effect.

7 PROGRAM SETUP

7.1 PROGRAM FUNCTION INTRODUCTION


Press program key  to enter the program setup menu.-p- (protective cover set-up) Press  key again to confirm the entrance. Select  set up the ON& OFF of the protective cover control function. Press  key to confirm to return to the above level.

SP (protective cover control function set-up)


Select  to enter. Press  to confirm the entrance. The set up see the above.


APP(minimum unbalance value setup) can setup to 1Grand 5Gr.

BIP (beeper setup) setup the on and off of the beeper

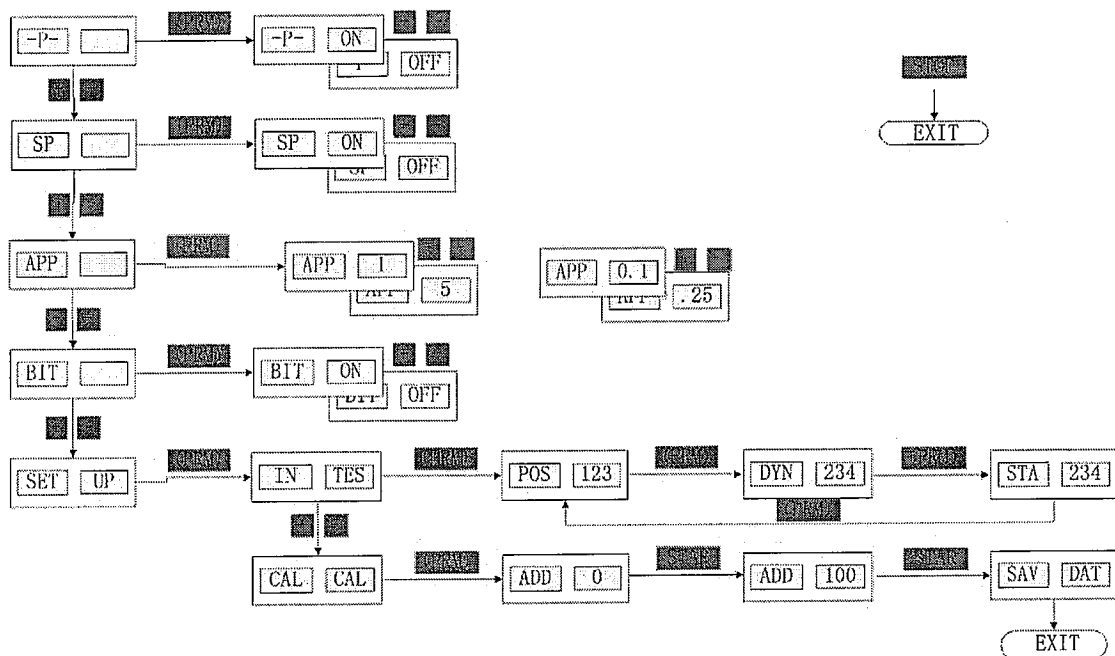
UP ENT Press  to enter the special function setup. IN TES (sensor test) can test the photocell and stat/dynamic piezoelectric sensor. SELECT ON THE NEXT MENU

Enter into CAL -CAL, this function is used when long time no use of the machine or the lost of the

accuracy. Press  to enter  the program

and press  to confirm and the display will display ADD -0. Press the start key to start the test. After running ,the display will display ADD -100. Rotate the tyre and clip a weight of 100g at the 12clock position when all the unbalance position indication lamps light. And then start the machine again to realize the self calibration.

The above operation step vector diagram is as follows:



2 ERROR INDICATION

DISPLAY	CAUSE	SOLUTION
ERR OPN	protective cover not lower down	Lower down the protective cover
ERR SP	rotation speed not enough	Check the motor and belt.
ERR OFF	stop the error	Press the start key or raise up the protective cover.
ERR FAC	factory set-up fault	Correct factory set-up
ERR USR	customer set-up fault	set-up fault

If the problems still cannot be solved, please contact with the professional persons.



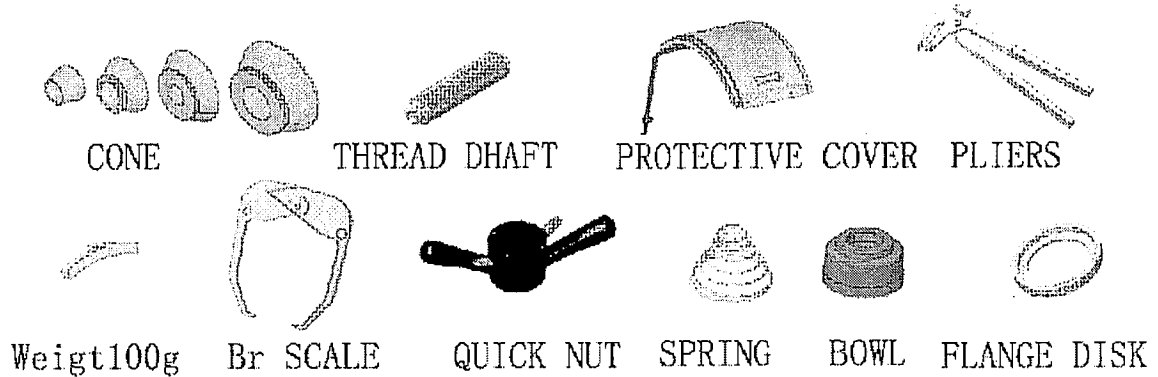
When changing the computer board, phase sensor or pressure sensor, you should self-calibrate again.

7.3 GENERAL TROUBLESHOOTING & SOLUTION

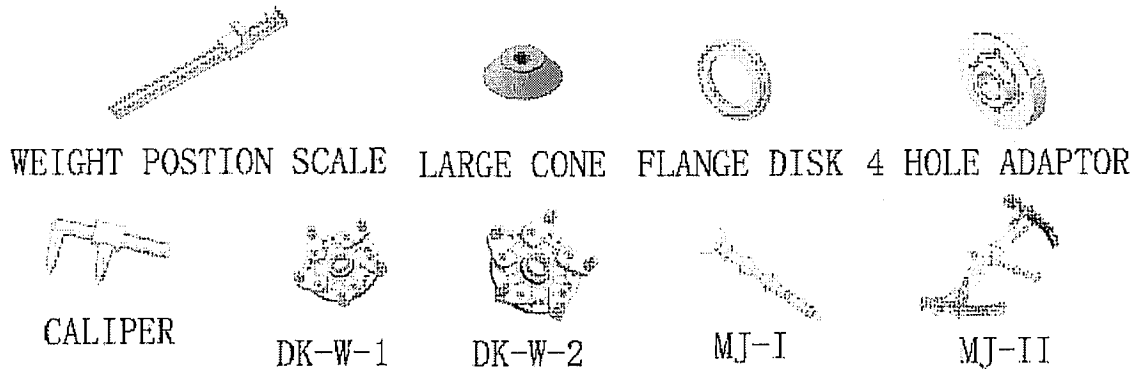
Description	Cause	Solution
Start the machine but not display.	<ol style="list-style-type: none"> 1. Check the circuit of 220V is normal or not. 2. power board fault 3. The cable between the power board and computer loose 4. computer board fault 	<ol style="list-style-type: none"> 1. Check and connect the external power source. 2. Changer the power board 3. Check the plug cable 4. Change the computer board
Display is normal but the start button and input push button not working.	<ol style="list-style-type: none"> 1. contact switch not good 2. machine breakdown 	<ol style="list-style-type: none"> 1. Open the housing of the machine and plug in and tight the contact switch plug. 2. Start the machine again
Display is normal but not braking after start.	<ol style="list-style-type: none"> 1. The cable between the power board and computer loose 2. power board fault 3. computer board fault 	<ol style="list-style-type: none"> 1. Plug in and tight the cable between the computer board and power board. 2. Change the power board 3. Change the computer board
Balance is not accurate & difficult to reach "00"	<ol style="list-style-type: none"> 1. sensor lead connect or contact no good 2. memory value lost 	<ol style="list-style-type: none"> 1. Connect again 2. Correct the memory value according to the manual.
Each spin, the change of the value will not exceed 5g.	<ol style="list-style-type: none"> 1. There are foreign body on the rim or the assemble surface in the rim center deformation 2. sensor damp or quick nut not tightly clamped 3. The external power voltage or the air pressure not enough. The flange dick not locked. 	<ol style="list-style-type: none"> 1. Change the wheel 2. Oven, recalibrate the sensor. 3. Fix the anchor bolt.
Each spin, the range of the change of value will be 20-90g.	<ol style="list-style-type: none"> 1. There are foreign bodies on the wheel or the unbalance of the wheel value too big. 2. sensor damage 3. external power source voltage too low 	<ol style="list-style-type: none"> 1. Change the wheel 2. Check the sensor and wiring. 3. Check power source and assemble stabilizer.
Balance is not accurate & difficult to reach "00"	<ol style="list-style-type: none"> 1. Sensor damp or damage 2. Program chore 	<ol style="list-style-type: none"> 1. Calibrate again, oven and then self-calibration or change. 2. Self-calibration again
When second mount & demount, the error will exceed 10g.	<ol style="list-style-type: none"> 1. Wheel internal hole irregular 2. Flange disk assemble not properly 	<ol style="list-style-type: none"> 1. Change the wheel 2. Check the assemble surface and try again.

7.4 OPTIONAL ACCESSORIES OF THE WHEEL BALANCER

STANDARD ACCESSORIES OF THE WHEEL BALANCER



OPTIONAL ACCESSORIES OF THE WHEEL BALANCER



CONTENT LIST OF ACCESSORIES SUPPLIED WITH DWB953 WHEEL BALANCER

Weight Pliers	1 off
(Br)eadth Measuring Scale	1 off
Centering Cone	4 off
Quick Nut	1 off
Threaded Shaft	1 off
M10X160 Screw	1 off
Calibration Weight	1 off
Bowl	1 off
Bowl Protective Cover	1 off
Spring	1 off
Protective Cover	1 off
Weight Position Gauge	1 off

8. MAINTENANCE



WARNING

The manufacturer declines all responsibility in the event of claims resulting from the use of non-original spare parts or accessories.



WARNING

Unplug the machine from the socket and make sure that all moving parts have been locked before performing any adjustment or maintenance operation.



WARNING

Do not remove or modify any part of the machine (except for service interventions).



CAUTION

Keep the work area clean. opened for the test, so insert a screwdriver and check the sound produced. As the bearing acts as a clamping support, it is not easy to change or take out the grease. In addition, the rotation speed is not high for the machine, so it is not necessary to change the grease. If you notice an incorrect working or a noisy bearing, replace the bearing. If the customer confirms that the bearing has not been replaced, just change the grease, then disassemble the bearing, open the dust guard ring and add the grease (XHP103), carrying out these operations under the guidance of a professional. Calibrate the machine after replacing the bearing. If the operation has not been carried out correctly, the machine precision will be affected, so reposition the dust guard ring, reassemble the machine and repeat the adjustment.

Never use compressed air and/or jets of water to remove dirt or residues from the machine. Take all possible measures to prevent dust from building up or rising during cleaning operations. Keep the wheel balancer shaft, the securing ring nut, the centering cones and range clean. These components can be cleaned using a brush previously dipped in environmentally friendly solvents. Handle cones and ranges carefully so as to avoid accidental dropping and subsequent damage that would affect centring accuracy. After use, store cones and ranges in a place where they are suitably protected from dust and dirt. If necessary, use ethyl alcohol to clean the display panel. Perform the calibration procedure at least once every six months.

USING THE GREASE

Greasing the wheel balancer

The only rotating parts of the wheel balancer are the motor and the balancing shaft, so the bearing of these components must be checked periodically by the operator and greased. If the machine is used frequently (more than two hours per day), check the bearing every year; if the machine is not used so often, the check can be made every two years. The bearing cannot be

wheel balancer
Mobilgrease XHP
NLGI degree
Type of thickener
Colour, appearance
Penetration on the processed item 25°, ASTM D 217, mm/10
Dropping point, °C, ASTM D 2265
Viscosity oil base, ASTM D 445, cSt @ 40°C
Change of penetration consistency, ASMT D 1831 (established upon the rolling of the greases), mm/10
4 spheres test, impression diam., ASTM D 2266, mm
4 spheres test, welding load, ASTM D 2509, kg
Test Timken OK load, ASTM D 2509, lb
Stability of oxidation bomb method, ASTM D 942, pressure
drop at 100 hours, kPa
Corrosion prevention, ASTM D 1743
Emcor rust, IP 220, wash away with acid water

Resistance to water spray, ASTM D 4049, % spray

Wash away with water, ASMT D 1264, loss (weight%),


When purchasing this product, your distributor will inform you of the possibility to return another end-of-life piece of equipment free of charge as long as it is of equivalent type and had the same functions as the purchased product.

SCRAPPING

If the machine is to be scrapped, separate all electrical, electronic, plastic and ferrous components and dispose of them separately, as provided for by local regulations in force.


If the machines have the crossed-out bin symbol



on their data plate , the following disposal procedure must be applied to.

This product may contain substances that can be hazardous to the environment and to human health if it is not disposed of properly.

Electrical and electronic equipment must never be disposed of in the usual municipal waste but must be separately collected for their proper treatment.

The crossed-out bin symbol , placed on the product and on this page, reminds the user that the product must be disposed of properly at the end of its life.

Thus, the hazardous consequences that non-specific treatments of the substances contained in these products, or improper use of parts of them, may have on the environment or on human health are prevented. Furthermore, this helps to recover, recycle and reuse many of the materials contained in these products.

Electrical and electronic manufacturers and distributors set up proper collection and treatment systems for these products for this purpose.

Contact your local distributor to obtain information on the collection procedures at the end of the life of your product.

Any disposal of the product performed in a different way from that described above will be liable to the penalties provided for by the national regulations in force in the country where the product is disposed of.

Further measures for environmental protection are recommended: recycling of the internal and external packaging of the product and proper disposal of used batteries (only if contained in the product).

Your help is crucial to reduce the amount of natural resources used for manufacturing electrical and electronic equipment, minimise the use of landfills for product disposal and improve the quality of life, preventing potentially hazardous substances from being released in the environment.

FIREFIGHTING MEANS TO BE USED

Consult the following table to choose the most suitable fire extinguisher.

Dry materials
Water YES
Foam YES
Powder YES*
CO2 YES*

YES* Use only if more appropriate extinguishers are not at hand or when the fire is small.

Flammable liquids
Water NO
Foam YES
Powder YES
CO2 YES

Electrical equipment

Water NO

Foam NO

Powder YES

CO2 YES



Warning

This table contains general instructions to be used as guidelines for users. All the applications of each type of extinguisher must be obtained from the relevant manufacturer.

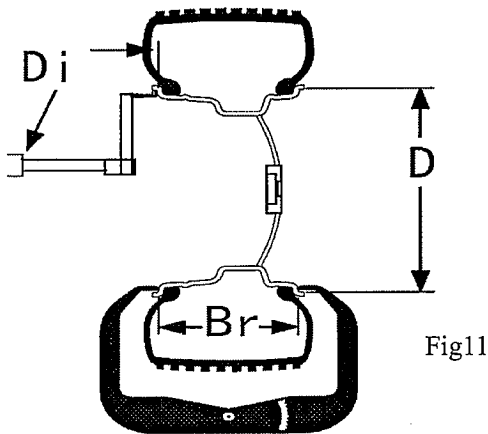


Fig11


9 DETAILED MACHINE OPERATION

9.1 How to balance a tire?

1. Switch on the power source
2. Select the cone according to the tire. Assemble the tire on the main shaft of the wheel balancer and firmly lock it.
3. Input the tire parameter.


3.1 Pull out the scale of the balancer to measure the Di value which means the distance from the insides of the tire to the body.

According to measured reading, the unit of which


is cm, press  to adjust the value to make the value displayed in the right side window to be the measured value. But the unit of this displayed value is mm. eg You should input 55mm if the measured value is 5.5cm.

3.2 Use the width measurement scale to measure





the Br value means the rim distance. Press  to input the Br value which is the implied value with the unit of inch. If you want to convert this value into the value with the unit of mm,



you can press  to realize the conversion between the units.


3.3 Check the D value, which means the diameter




of the rim, marked on the tire. Press  to adjust the displayed in the right side display window until the displayed value to be the rim diameter value. You can also use  to realize the conversion of the Br unit.

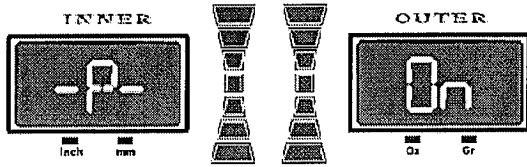
4. Lower down the protective cover (you can also press the start key) . After the machine start, rotate and test, it will automatic stops. In the left /right window ,the corresponding values will be displayed. Rotate the tire, when all the position indication lamps light. Pls add the weight corresponding to the value displayed in the window. Once again, start the machine to test. The window will display the unbalance value. The balance process will be completed until reaching the balance range you required.

9.2 MACHINE PARAMETER SETUP

Press program key  to enter the program set-up menu.

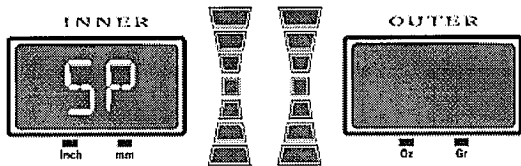


1.1 -p- (protective cover set) press  key to confirm the enter.

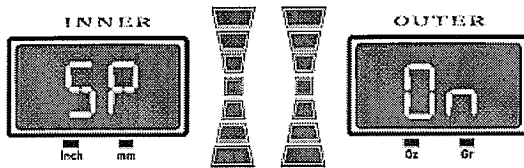


Select key to setup the on and off of the protective cover . Press

1.2 -SP-(protective cover function set),



Press key to confirm the enter.



Select key to setup the on and off of the protective cover control function . Press

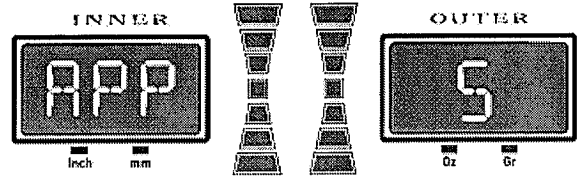
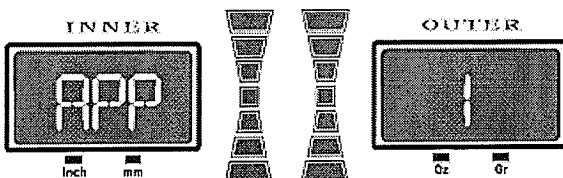
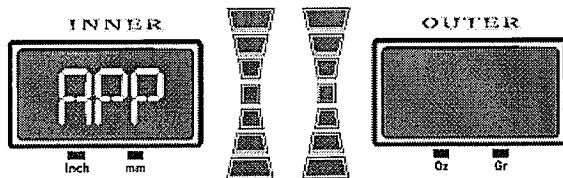
Press to confirm.

1.3 APP(minimum unbalance value setup) Press

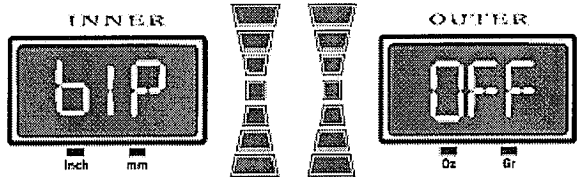
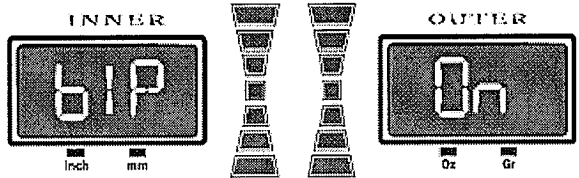
can enter to setup the unit of 1Gr and 5Gr. All adopts diagraph not arrow.

Press confirm enter, pres , to adjust the selection of the corresponding unit. Press

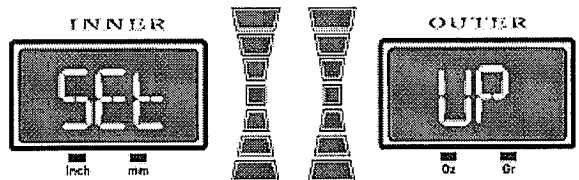
to adjust.



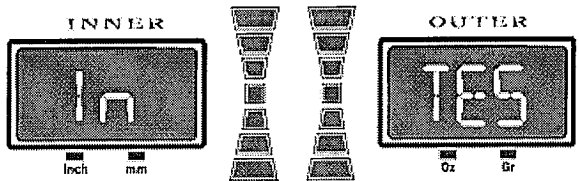
1.4 BIP (beeper setup) press can setup on/off of the beeper.



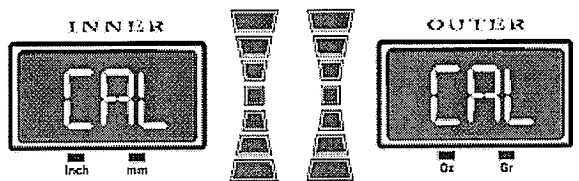
1.5 Press the to enter into the next level



"UP"—"Ent" press key to enter the special function setup. There are 2 optional selection "IN"—"TES" and "CAL"—"CAL"



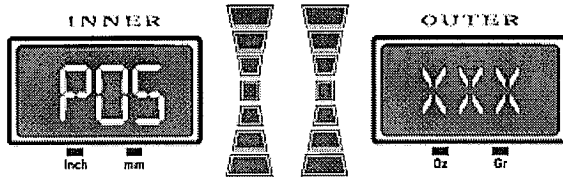
Press to enter.



In the state of I N"—"T E S", press to enter into the test test.

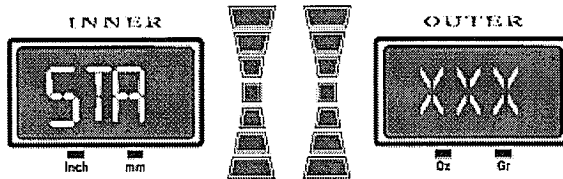
In the state of POS, rotate the tire clockwise. The

value in the right window will increase. If counterclockwise, it will decrease.

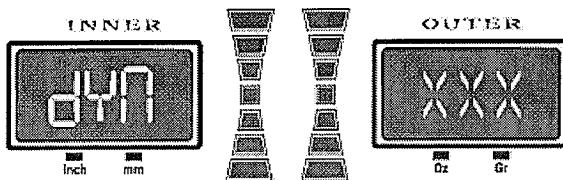


In the state of STA, press piezoelectric sensor vertical to the main shaft. And the value in the right window will increase. When loose your hand, the value will decrease. This means the installation of the sensor is correct.


In the state of STA, press pie

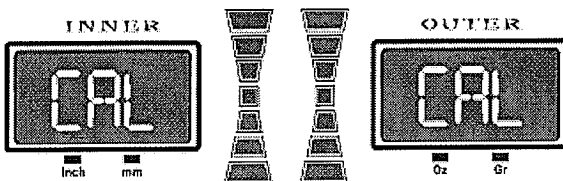




zoelectric sensor parallel to the main shaft. And the value in the right window will increase. When loose your hand, the value will decrease. This means the installation of the sensor is correct.



9.3 Customer self-calibration

In the state of IN TES, press  you can enter into CAL -CAL which means the state of customer self-calibration state. This function should be applied when long time no use of the machine or the machine has lost the accuracy.

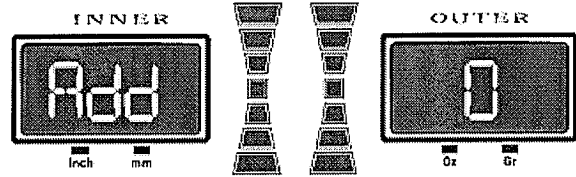



Press  to enter into program. Press 

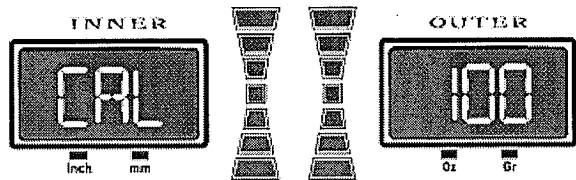
once again to confirm.


Enter into this function can be executed after entering the parameters of the tire. You can press &hold on display key

After 5seconds, you will enter into that situation.



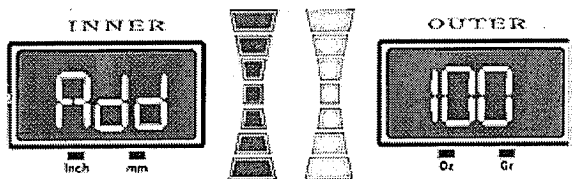
Press  to enter and the display will display "ADD"- "0"



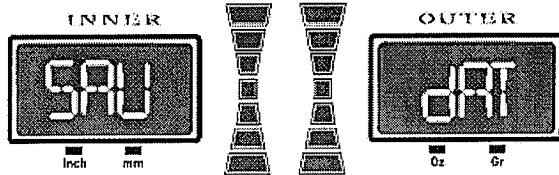
Press  to spin the tire/rim for one time at first.

"ADD"- "100" will be displayed, then use hand to rotate the tire. When the right indication lamps all light., add 100g of weight on the 12 clock of the outer tire. If not this position, the angle machine calculated will be inaccuracy and furthermore influence the measurement accuracy of the machine. Restart the machine can realize the self-calibration of the


machine. Press  to start the machine.



After customer self-calibration, the display will display "SAU"- "DAT" customer self-calibration is completed.

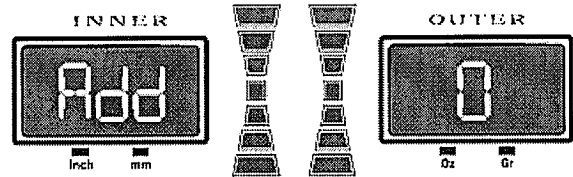


This time we enter into the accurate factory calibration.


Press the start key  to start. The machine will automatic break after rotation. The display will display.

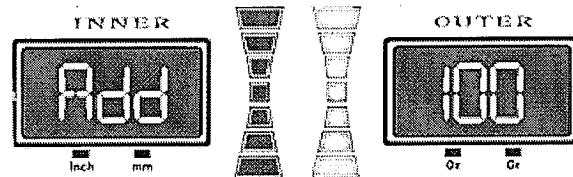
9.4 MACHINE ACCURATE CALIBRATION

Normally, we do not use this function. When the machine can not achieve the satisfied accuracy after the customer self-calibration, we can use this function. Before use, please strictly follow the following steps to calibrate. The inappropriate calibration can cause mistakes.

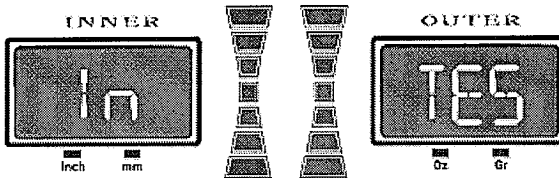



At this moment, when the right indication lamps all light, add a weight of 100g on the 12 clock position of the tire and then start.

In the test state "IN"_"TES", press the enter key  to wnter into "POS"

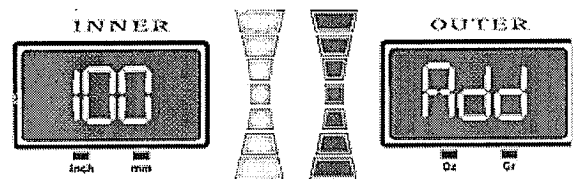


Rotation stops and the display will display "100"- "add"



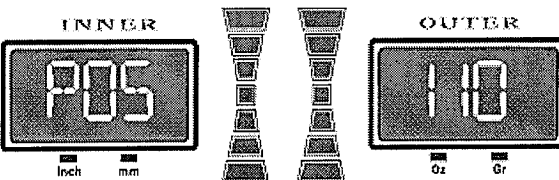
At this moment, when the left indication lamps all light, add a weight of 100g on the 12 clock position of the tire and then press  to start.

When rotating the tire, the POS will also corresponding change, when the display of POS

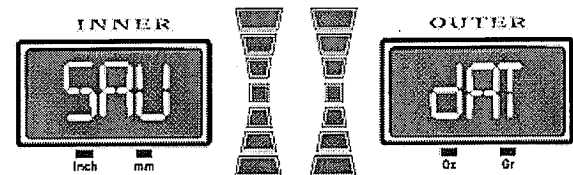


After the rotation stops, the display will display. If the beeper starts, there will be a whistle. The factory self-calibration completed and the machine restores the accuracy.

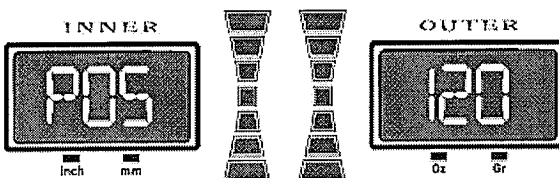
is "110", press  key.



Then continue forward and backward rotate the tire. When the display of POS changes to "120",



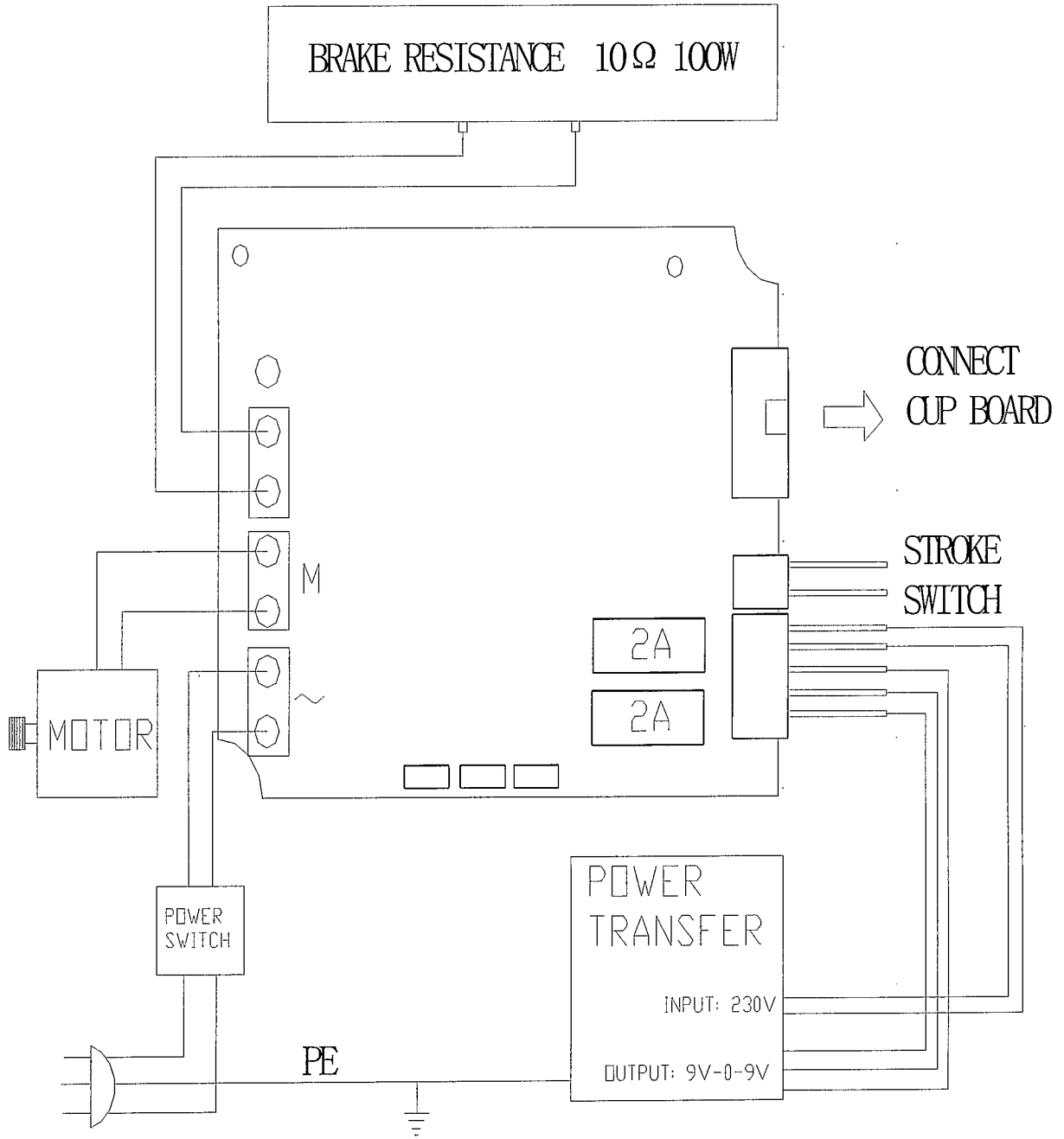
you can press  key again.



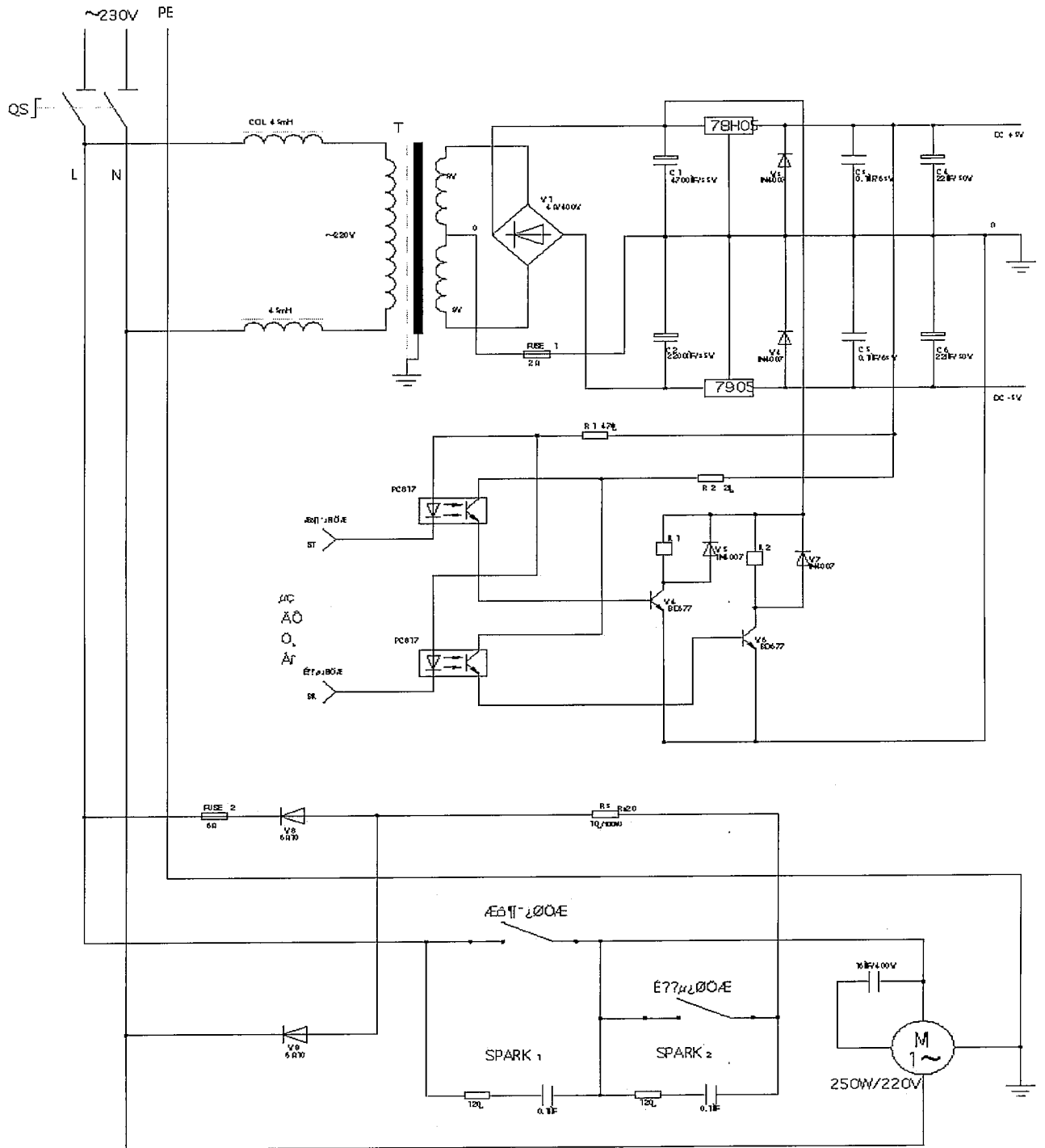
APPENDIX 1

LAYOUT OF THE POWER SUPPLY CARD-

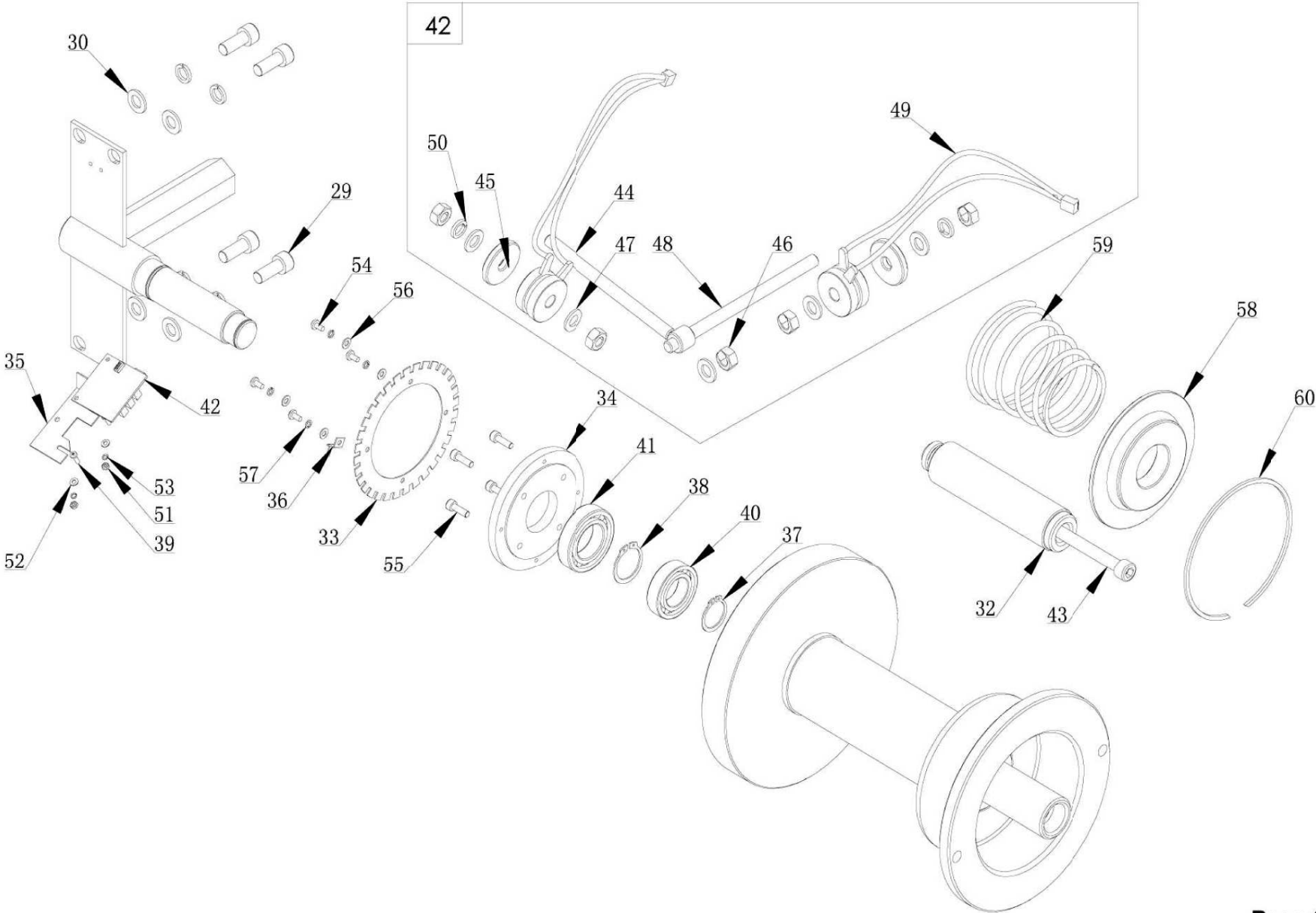
DRAWING FOR POWER SUPPLY
CONNECTION OF WHEEL BALLANCER



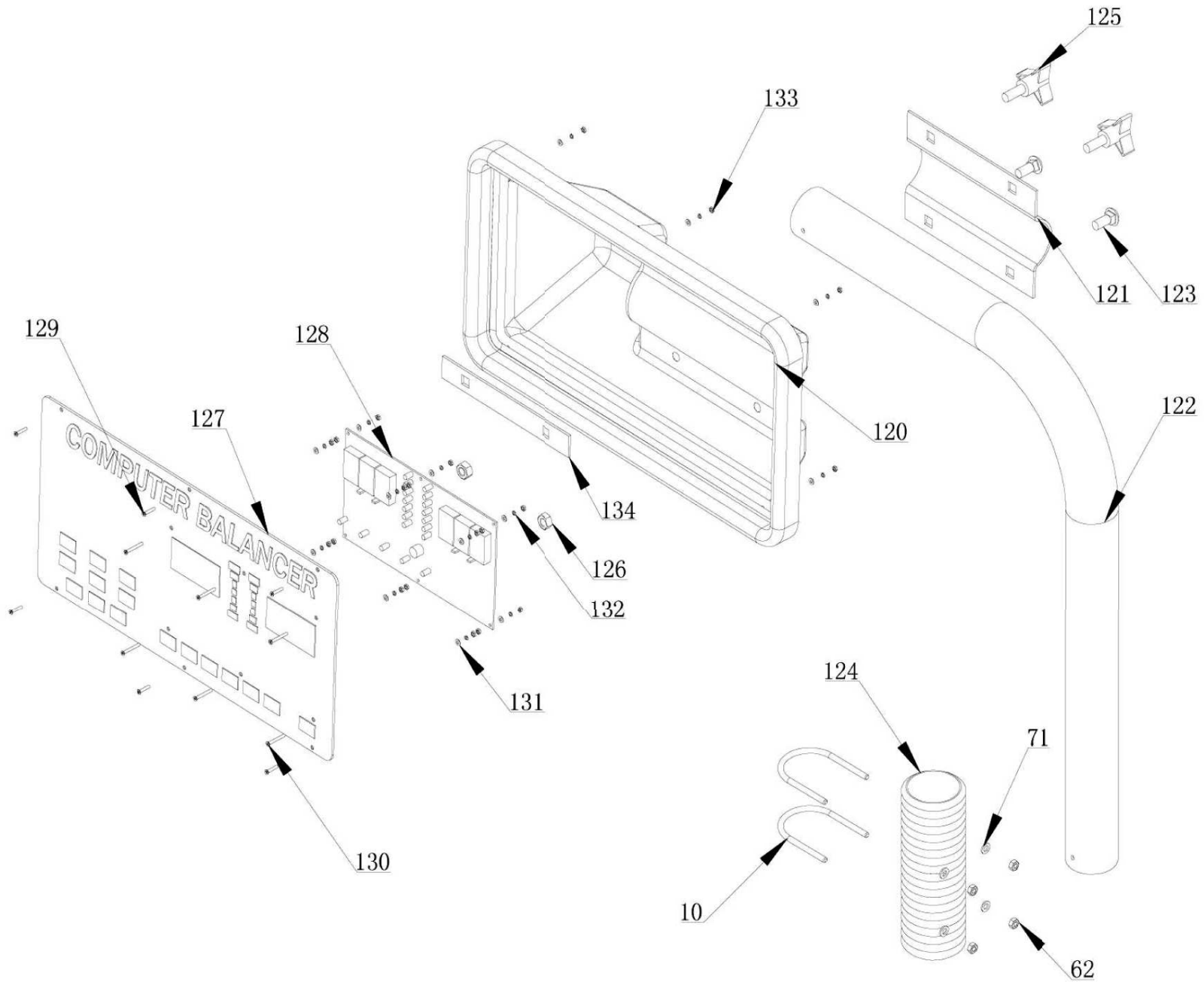
APPENDIX 2 Wiring Diagram



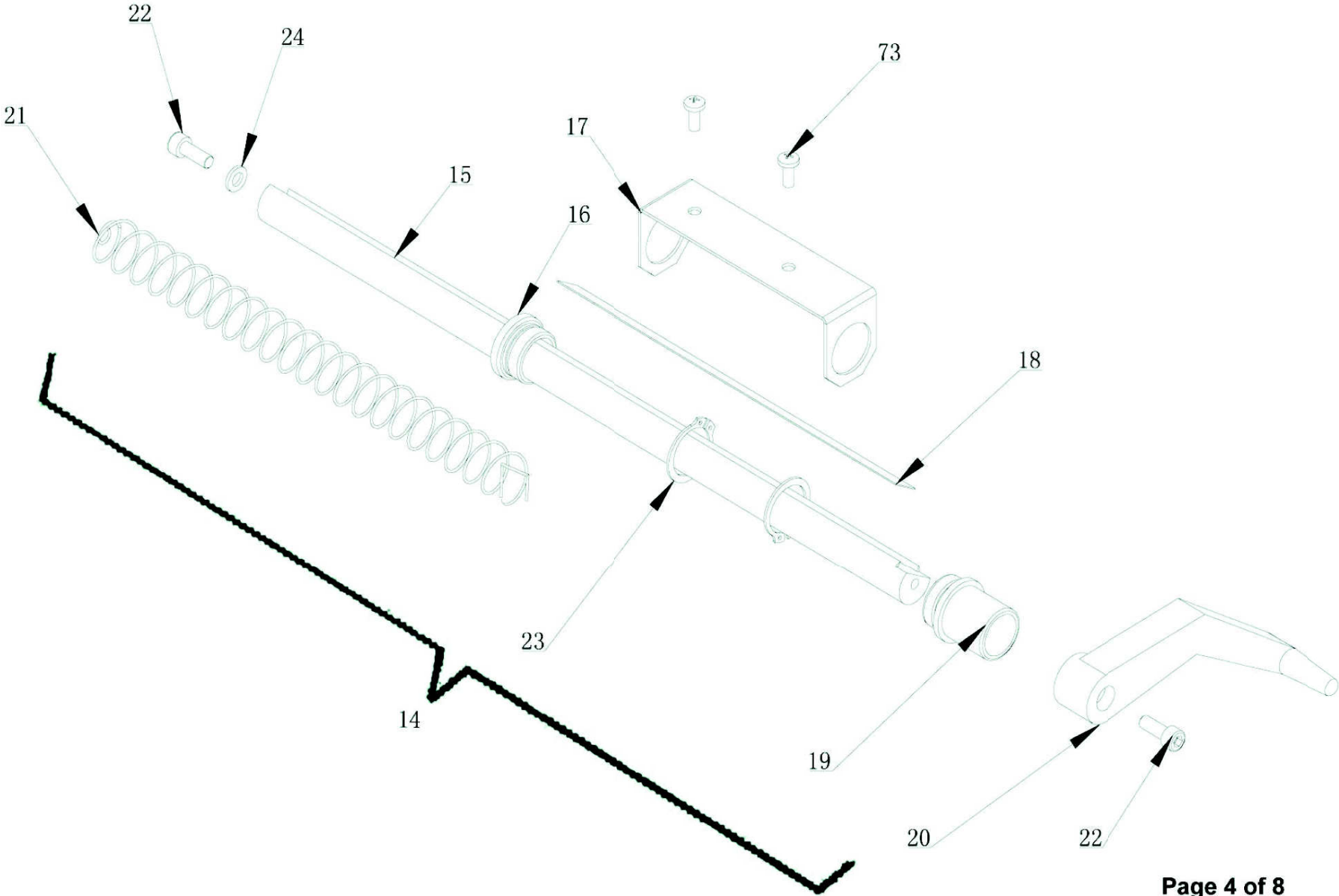
WB-953



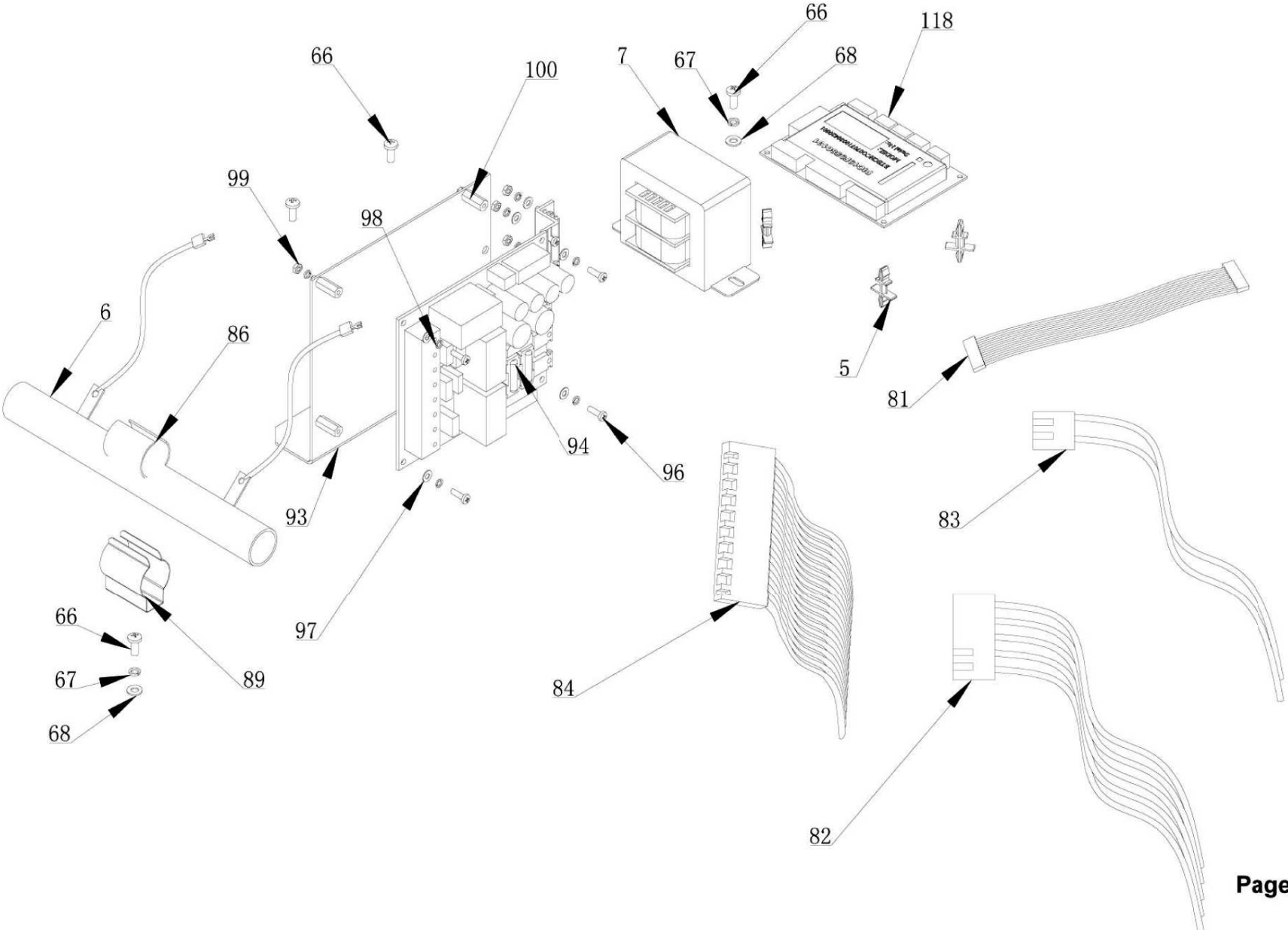
WB-953



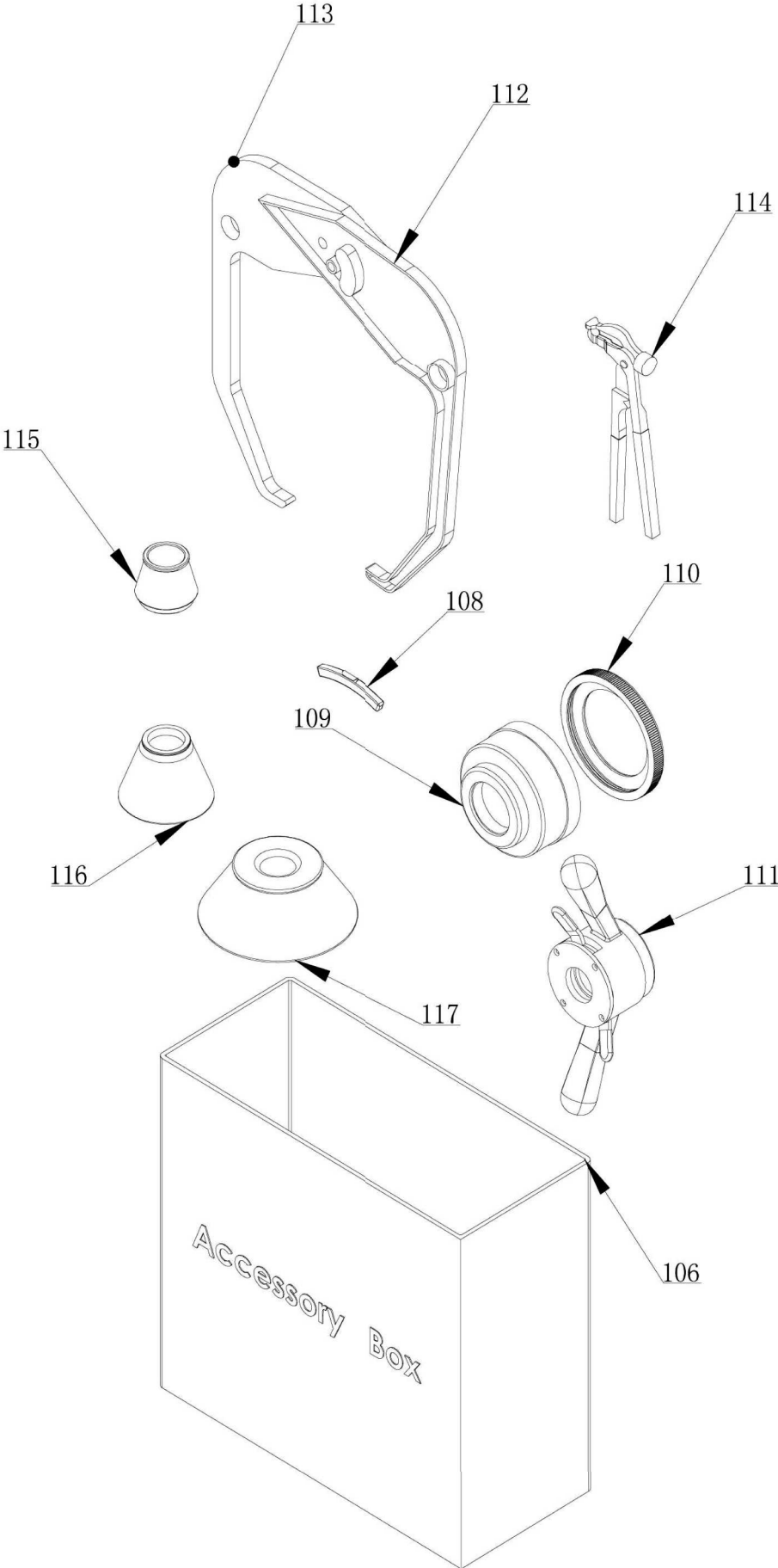
WB-953



WB-953



WB-953



WB-953

Spare Parts List

ITEM	PART CODE	DESCRIPTION	QTY
1	WB-1060-101	BODY	1
2	WB-1030-7009	MOTOR	1
3	WB-1030-7007	COUNTER PULLEY	1
4	WB-1030-7003	BELT	1
5	WB-1030-7012	NYLON SPACER	4
6	WB-1030-7015	RESISTOR	1
7	WB-1030-7011	TRANSFORMER	1
8	WB-1030-7020	HANDLE	2
9	WB-1030-7059	POWER SWITCH	1
10	WB-1060-140	U-CLAMP	2
12	WB-953-018	SUPPORT SHAFT	1
13	WB-953-017	SPRING	1
14	WB-1030-7113	SCALE ASSEMBLY	1
15	WB-1030-7027	SCALE ROD	1
16	WB-1030-7032	GUIDE	1
17	WB-1030-7030	SCALE SUPPORT	1
18	WB-953-061	MEASURING TAPE	1
19	WB-1030-7028	SPACER	1
20	WB-1030-7026	SCALE HANDLE	1
21	WB-1030-7033	SPRING	1
22	WB-1030-7025	BOLT, M6 X 16	2
23	WB-1030-7029	SNAP RING, # 25	2

ITEM	PART CODE	DESCRIPTION	QTY
24	WB-1030-7034	FLAT WASHER, # 6	1
25	WB-953-002	ELECTRICAL BULKHEAD FITTING	1
26	WB-1030-7025	BOLT, M6 X 16	4
27	TC-530-9119	LOCK WASHER, # 6	8
28	TC-530-9142	FLAT WASHER, # 6	4
29	WB-1030-7081	BOLT, M10 X 20	4
30	WB-1030-7079	FLAT WASHER, # 10	4
32	WB-1030-7061	THREADED ROD	1
33	WB-1030-7074	ENCODER DISK	1
34	WB-1030-7068	BEARING COVER	1
35	WB-1030-7084	ADJUSTABLE PLATE	1
36	WB-953-090	TOOTH, ENCODER DISK	1
37	WB-1030-7075	SNAP RING, # 25	1
38	WB-1030-7071	SNAP RING, # 30	1
39	WB-1030-7120	Screw	2
40	WB-1030-7076	BEARING	1
41	WB-1030-7077	BEARING	1
42	WB-1030-7118	SENSOR ASSEMBLY	1
43	WB-1030-7060	BOLT, M10 X 160	1
44	WB-1030-7085	SENSOR SHAFT (HORIZONTAL)	1
45	WB-1030-7087	FLAT WASHER	2

ITEM	PART CODE	DESCRIPTION	QTY
46	WB-1030-7086	NUT, M10	5
47	WB-1030-7079	FLAT WASHER, # 10	5
48	WB-1030-7091	SENSOR SHAFT (VERTICAL)	1
49	WB-1030-7088	PIEZO SENSOR	2
50	WB-1030-7080	LOCK WASHER, # 10	2
51	WB-1030-7107	NUT, M3	2
52	WB-1030-7109	FLAT WASHER, # 3	2
53	WB-1030-7108	LOCK WASHER, # 3	2
54	WB-953-104	Screw	4
55	WB-1030-7069	BOLT, M5 X 16	4
56	WB-1030-7072	FLAT WASHER, # 4	4
57	WB-1030-7105	LOCK WASHER, # 4	4
58	WB-953-138	COVER	1
59	WB-953-137	SPRING	1
60	WB-953-139	SNAP RING	1
61	WB-953-015	BOLT, M6 X 20	1
62	TC-530-9269	NUT, M6	5
63	TC-530-9142	FLAT WASHER, # 6	2
64	TC-530-9297	NUT, M8	2
65	TC-530-9164	BOLT, M8 X 20	1
66	TC-530-9090	SCREW, M4 X 12	5

WB-953

Spare Parts List

ITEM	PART CODE	DESCRIPTION	QTY
67	WB-1030-7105	LOCK WASHER, #4	5
68	WB-1030-7072	FLAT WASHER, #4	5
69	TC-530-9322	BOLT, M10 X 50	2
70	TC-530-9185	LOCKNUT, M10	2
71	WB-1030-7034	FLAT WASHER, #6	5
72	WB-1030-7010	POWER CABLE	1
73	WB-1030-7031	SCREW, M5 X 12	2
74	WB-953-057	WIRING HARNESS (POWER SWITCH - POWER BOARD)	1
75	WB-1060-109	SIDE PANEL	1
76	WB-1030-7037	SELF TAPPING BOLT, M5 X 12	10
77	WB-1060-110	COVER	1
78	WB-1030-7037	SELF TAPPING BOLT, M5 X 12	2
79	WB-1060-152	WEIGHT TRAY	1
80	WB-953-080	WIRE RETAINER	2
81	WB-953-059	WIRING HARNESS (COMPUTER BOARD - DISPLAY BOARD)	1
82	WB-953-054	WIRING HARNESS (COMPUTER BOARD - ENCODER BOARD)	1
83	WB-953-055	WIRING HARNESS (COMPUTER BOARD - SENSORS)	1
84	WB-953-058	WIRING HARNESS (COMPUTER BOARD - POWER BOARD)	1
85	WB-953-049	WIRING HARNESS (HOOD SWITCH - POWER BOARD)	1
86	WB-1030-7014	INSULATION PAPER	1
87	TC-530-9149	SCREW, M5 X 16	1

ITEM	PART CODE	DESCRIPTION	QTY
88	WB-953-088	BUSHING	2
89	WB-1030-7016	RESISTOR CLAMP	1
90	WB-1030-7006	BOLT, M8 X 25	1
91	WB-1030-7004	FLAT WASHER, # 8	1
93	WB-953-041	MOUNT PLATE	1
94	WB-953-040	POWER BOARD	1
96	WB-953-038	SCREW, M3 X 8	9
97	WB-1030-7100	FLAT WASHER, # 3	9
98	WB-1030-7108	LOCK WASHER, # 3	13
99	WB-1030-7107	NUT, M3	9
100	WB-953-042	SPACER	4
101	WB-953-HD-1	HOOD ASSEMBLY	1
102	WB-1030-HD-2	HOOD	1
103	WB-953-080	HOOD BRACKET	1
104	WB-1030-7037	SELF TAPPING BOLT, M5 X 12	4
105	WB-953-026	LIMIT SWITCH	1
106	WB-1030-7110	ACCESSORY BOX	1
108	WB-1030-7116	100 GRAM WEIGHT	1
109	WB-1030-7102	PLASTIC BOWL	1
110	WB-953-140	PLASTIC BOWL PROTECTOR	1
111	WB-1030-7104	SPEEDNUT	1

ITEM	PART CODE	DESCRIPTION	QTY
112	WB-1030-7024	CALIPER	2
114	WB-1030-7035	HAMMER	1
115	WB-1030-7021	SMALL CONE	1
116	WB-1030-7022	MEDIUM CONE	1
117	WB-1030-7023	LARGE CONE	1
118	WB-953-047	COMPUTER BOARD	1
120	WB-953-068	DISPLAY HOUSING	1
121	WB-1060-144	MOUNTING BRACKET	1
122	WB-1060-141	DISPLAY NECK	1
123	WB-1060-142	CARRIAGE BOLT	2
124	WB-953-077	PLASTIC SLEEVE	1
125	WB-1060-143	ADJUSTMENT KNOB	2
126	TC-530-9298	NUT, M10	2
127	WB-953-065	DISPLAY PANEL	1
128	WB-953-067	DISPLAY BOARD	1
129	WB-1030-7127	SCREW, M3 X 25	6
130	WB-1030-7127	SCREW, M3 X 25	6
131	WB-1030-7128	FLAT WASHER, # 3	18
132	WB-1030-7129	LOCK WASHER, # 3	18
133	WB-1030-7130	NUT, M3	24
134	WB-1060-180	PLATE	1