

# **WB-953 & WB-953-B**

## **WHEEL BALANCER**

### **USER MANUAL**

**Pls read this manual before operation**

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## 1. INTRODUCTION

This manual is an integral part of the machine and must stay with it until it is scrapped.

Carefully read each section of this manual before using the machine. The manufacturer is not responsible for any damage and/or injury caused by failure to follow the instructions in this manual.

We also recommend:

- Keeping the manual near the wheel balancer for easy access
- Keeping the manual in a place protected from dirt
- Not damaging the manual.

In the manual the following symbols are represented:



Indicates operations that require special attention



Indicates prohibitions



Indicates possible danger for the operator

## 2. INTENDED USE

This manual is an integral part of the product.

Carefully read the warnings and instructions contained in this manual as they provide important information about SAFE USE and MAINTENANCE.



**KEEP THIS HANDBOOK WITH CARE NEAR THE MACHINE TO FACILITATE ANY CONSULTATION BY OPERATORS.**

The wheel balancers have been made to balance wheels for automobiles (CAR), Motorcycle wheel (MOT). The machines can work on wheels with diameter from 10" to 24" (or from 254 to 610 mm) and width from 1.5" to 20" (or from 38 to 508 mm). All functions and controls can be set via a number of keys arranged on the panel. The data is displayed on an LED display.

## 3. GENERAL SAFETY RULES

The wheel balancer must be used exclusively for the purpose for which it has been designed.

Any other use is considered INCORRECT and UNREASONABLE.

The wheel balancer may be used by authorized, trained personnel only.

Do not put any objects in the base which may affect the correct operation of the wheel balancer.



**THE MANUFACTURER IS NOT RESPONSIBLE FOR ANY DAMAGE TO PEOPLE OR PROPERTY CAUSED BY UNAUTHORIZED PERSONNEL OR IMPROPER, INCORRECT AND UNREASONABLE USE OF THE WHEEL BALANCER.**



**THE WHEEL BALANCER SHOULD NOT BE MODIFIED OR TAMPERED WITH WITHOUT THE MANUFACTURER'S PERMISSION. ANY UNAUTHORIZED CHANGE MADE TO THE EQUIPMENT RELIEVES THE MANUFACTURER FROM ANY LIABILITY IN CASE OF DAMAGE ATTRIBUTABLE TO SUCH ALTERATIONS.**

### 3.1 Safety Devices

The machine is equipped with the following safety devices: Rotation STOP button.

It is forbidden to tamper with, bypass or remove the safety devices installed, this being a violation of the safety regulations at work.



**REMOVING OR TAMPERING WITH SAFETY DEVICES ENTAILS A VIOLATION OF THE EUROPEAN SAFETY DIRECTIVES.**

## 4. TRANSPORT AND HANDLING

The wheel balancer is packed in a carton box on a pallet.

Transport and handling must be carried out BY AUTHORIZED PERSONNEL ONLY, using a pallet truck or forklift and adopting appropriate safety measures.

If the machine is not packed, take the following precautions:



**PROTECT SHARP EDGES AT THE ENDS WITH SUITABLE MATERIAL (bubble wrap or cardboard).**



**DO NOT USE METAL WIRE ROPES FOR LIFTING.**



**SLING WITH STRAPS OF AT LEAST 200 cm (79") IN LENGTH AND WITH A GREATER CAPACITY THAN 3000 kg (6,600 lbs.).**



**DO NOT USE FORCE ON THE SHAFT AND/OR FLANGE**



**ALWAYS UNPLUG THE POWER SUPPLY CABLE FROM THE SOCKET BEFORE MOVING THE MACHINE.**

The environmental working conditions must comply with the following requirements:

- Temperature from 0° C to + 45° C (32°F to 113°F)
- Relative humidity from 20% to 95%

## 5. UNPACKING

After removing the packaging, check the integrity of the appliance making sure there are no visibly damaged parts.

In case of doubt, DO NOT USE THE MACHINE and consult professionally qualified personnel (dealer or manufacturer). The packaging materials (plastic bags, expanded polystyrene, nails, screws, pieces of wood, etc.) must not be left within reach of children as they are potentially dangerous. Take the packaging materials to appropriate collection points if polluting or non-biodegradable.



**MAKE SURE YOU HAVE NOT THROWN AWAY THE ACCESSORY BOX WITH THE PACKAGING.**

## 6. INSTALLATION AND COMMISSIONING

After unpacking the various parts of the wheel balancer, ensure they are intact and check for any anomalies, then assemble the parts.

### 6.1 Electrical Connection

The standard version of the machine must be connected to a mains 110V, 60HZ, SINGLE PHASE.

To complete the electric connection, apply the plug provided for in the user's country to the machine power supply cable.



**ALL THE OPERATIONS REQUIRED TO MAKE THE ELECTRICAL CONNECTION AND ANY WORK (HOWEVER SLIGHT) ON THE ELECTRICAL PARTS MUST BE CARRIED OUT BY QUALIFIED PERSONNEL.**

Electrical cables must be sized according to the electrical power absorbed by the machine. The user must:

- check that the supply voltage corresponds to the voltage indicated on the nameplate of the machine.
- check the condition of wires and the presence of the ground conductor.
- check that the machine is connected to its own electrical connection, fitted with a proper automatically shutting off device against over current, with 30 mA trip sensitivity (circuit breaker).
- connect the power supply cable to the plug with the utmost care, in accordance with applicable regulations.



**WHEN THE MACHINE IS OFF AND UNUSED FOR LONG PERIODS, IT IS NECESSARY TO DISCONNECT THE POWER SUPPLY PLUG TO PREVENT USE BY UNAUTHORIZED PERSONNEL.**



**IF THE CONNECTION TO THE ELECTRICAL LINE OCCURS DIRECTLY THROUGH THE GENERAL ELECTRICAL PANEL, WITHOUT THE USE OF ANY PLUG, IT IS NECESSARY TO SET UP A KEY SWITCH TO RESTRICT THE MACHINE USE EXCLUSIVELY TO QUALIFIED PERSONNEL.**



**IN CASE OF OPERATIONS ON LINES, MOTOR INTERNAL PARTS OR ANY ELECTRIC EQUIPMENT, IT IS NECESSARY TO CUT OFF POWER FIRST.**



**DO NOT REMOVE DAMAGE AND MAKE HAZARD, WARNING, INSTRUCTION AND CAUTION STICKERS ILLEGIBLE. REMOVED OR DAMAGED STICKERS CAN BE FOUND AT THE NEAREST DEALER OF THE MANUFACTURER.**



**ANY DAMAGE RESULTING FROM FAILURE TO COMPLY WITH THE ABOVE INSTRUCTIONS WILL NOT BE CHARGED TO THE MANUFACTURER AND MAY INVALIDATE THE WARRANTY.**

## 7. INSTALLATION

To install the machine, you need an area calculated on the basis of the information provided in FIG. 004.

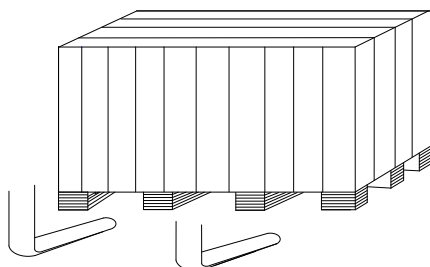


FIG. 001

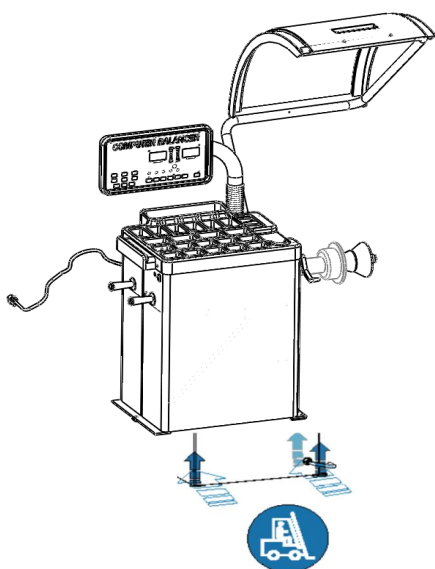


FIG. 002

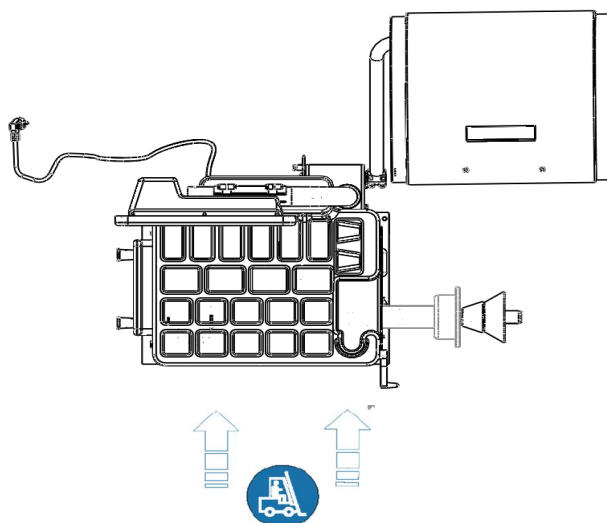


FIG. 003

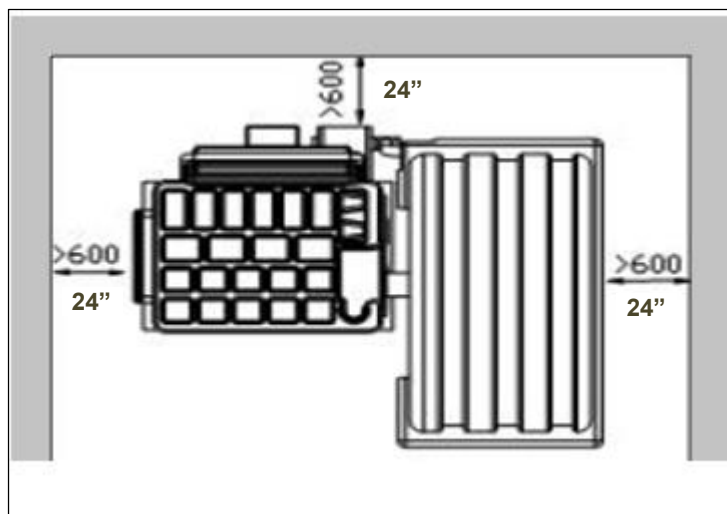


FIG. 004

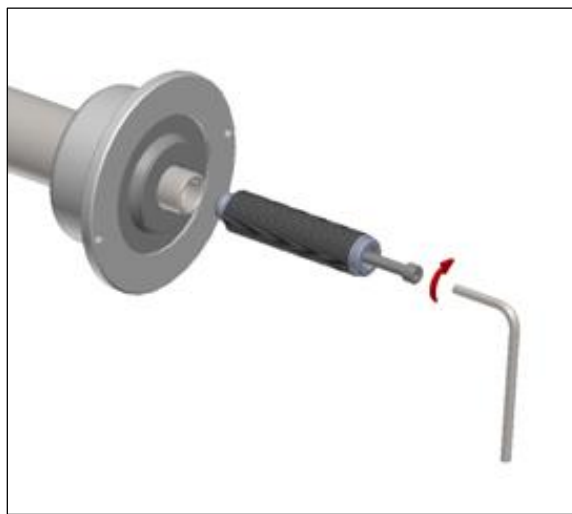


FIG. 005

## Threaded shaft Installation:

Before installation, use ethyl alcohol and compressed air to clean up the center hole of the shaft and connect part. Use spanner and screw to fix the thread shaft on the balance shaft (FIG. 005)

From the working position, the user must be able to view the machine and the surrounding area.



**THE INSTALLATION AREA MUST BE KEPT CLEAR OF ANY DANGEROUS OBJECTS.**



**UNAUTHORIZED PERSONNEL MUST NOT STAND IN THE WORKING AND INSTALLATION AREAS.**



**THE MACHINE MUST BE PLACED ON A HORIZONTAL, PREFERABLY CEMENTED OR TILED SURFACE.**



**AVOID BREAKABLE AND ROUGH SURFACES.**



**THE SURFACE MUST WITHSTAND THE LOADS TRANSMITTED IN THE OPERATIONAL PHASE.**



**THE MACHINE MUST BE SECURED TO THE GROUND WITH SCREWS AND EXPANSION PLUGS, ACCORDING TO THE FOLLOWING INSTRUCTIONS.**



**THE MACHINE MAY BE ONLY USED IN PLACES THAT DO NOT POSE ANY EXPLOSION OR FIRE HAZARDS.**

## 8. USE SUSPENSION

Should the machine not be used for long periods, disconnect the power supply, and protect all parts that could be damaged by dust.

Grease all parts that could be damaged in case of oxidation. In this specific case, protect the shaft and flange.

## 9. ENVIRONMENTAL INFORMATION



**THE DISPOSAL PROCEDURE DESCRIBED BELOW ONLY APPLIES TO MACHINES WITH THE SYMBOL OF THE CROSSED-OUT WHEELIE BIN ON THEIR DATA PLATES.**



The crossed-out wheeled 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. This product may contain substances that can be hazardous to the environment and to human health if it is not disposed of properly. We are therefore providing you with the information below in order to prevent these substances from being released into the environment, and to improve the use of natural resources. Electrical and electronic equipment must never be disposed of in the usual municipal waste but must be separately collected for proper treatment.

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

At the end of the product service life, contact your supplier for information about disposal procedures.

When you purchase this product, your supplier will also inform you that you may return another worn-out appliance to him free of charge, provided it is of the same type and has performed the same functions as the product just purchased.

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.

We also ask you to adopt other environmentally friendly measures: recycle the internal and external packaging that the product comes in, and suitably dispose of used batteries (only if contained in the product).

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

## **10. ORDINARY MAINTENANCE**

To ensure the efficiency and proper operation of the machine, it is essential to follow the manufacturer's instructions by performing periodic cleaning and routine maintenance.



**CLEANING AND ORDINARY MAINTENANCE MUST BE PERFORMED BY AUTHORIZED PERSONNEL IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS PROVIDED BELOW.**

Always keep the flanges clean (do not lubricate them). In addition, during handling, be very careful not to damage them. To clean the machine, especially the weight tray, use a soft cloth moistened with ethyl alcohol.



**BEFORE PERFORMING ANY OPERATION, DISCONNECT THE POWER SUPPLY CABLE FROM THE SOCKET.**



**DO NOT BLOW COMPRESSED AIR TO CLEAN THE MACHINE.  
DO NOT USE WATER OR OTHER LIQUIDS TO CLEAN THE MACHINE.**



## 11. CONFIGURATION

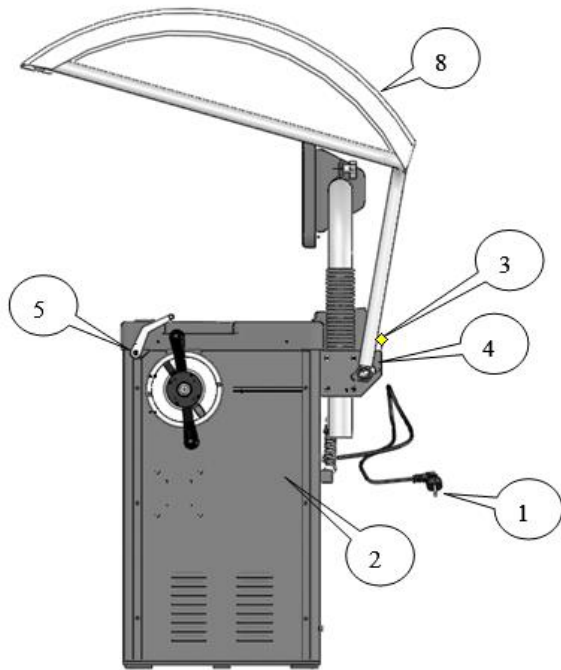


FIG. 006

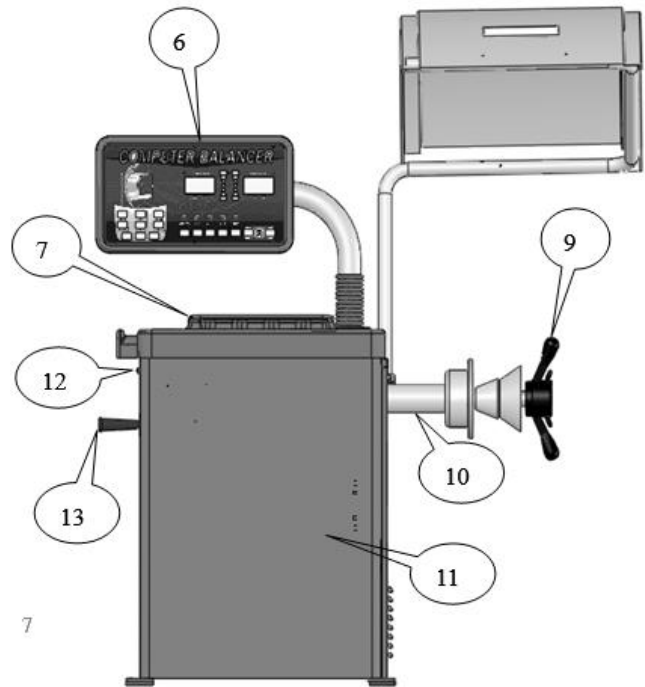


FIG. 007

- 1- Power Cable & Plug
- 2- Side Panel
- 3- Hood Return Spring
- 4- Magnetic Hood Switch
- 5- Scale
- 6- Control Panel
- 7- Weight Tray
- 8- Hood
- 9- Quick Nut
- 10- Balance Shaft
- 11- Body
- 12- Power Switch
- 13. Cone Storage Handle

## 12. DISPLAY PANEL & CONTROL PANEL

The machine control panel is shown in FIG.007. The control panel allows the operator to give commands and enter or edit data. The same control panel displays the machine balancing results and messages.

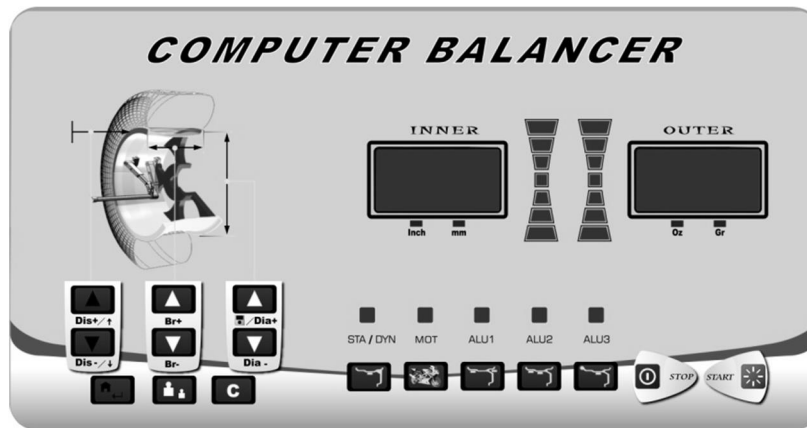


FIG.008



**Dis+ / ↑**



**Dis- / ↓**

1. In the state of parameter input, it is the distance from wheel to balancer input key. You can change the Distance set value by pressing the up/down key.



**Br+**



**Br-**

2. Br value input key you can change the Br set value by pressing the up/down key.



**/ Dia+**



**Dia -**

3. In the state of parameter input, it is the diameter input key. You can change the Diameter set value by pressing the up/down key.



4. High accuracy balance key: When the display displays [000], press this key the display will display an unbalance value less than 0.25 Oz.



5. Unit conversion key can convert the unit of the unbalanced value and size.



6. Balancing mode selection keys.



7. Function key & confirm key.



8. Emergency Stop Key.



9. Start Key.

INNER

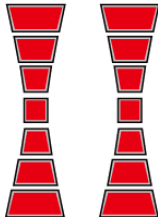


10. Inner unbalance value and parameter of the tire display.

OUTER



11. Outside imbalance value and tire parameter display.



12. Unbalance position indicator.



STA / DYN



MOT



ALU1



ALU2



ALU3

13. Balancing modes display lamps

### 13. MOUNT THE WHEEL

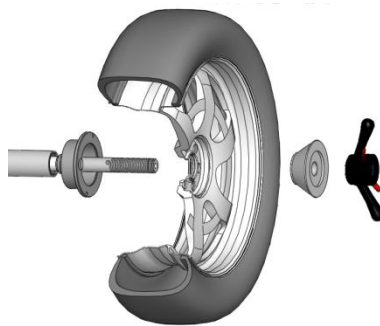
Preparation before balancing, check and clean the dust and mud and if there are foreign bodies, such as metal and stone, clipped on the surface of the tire. Also check the air pressure of the tire is according with the specified value. Check if there are deformation on the rim positioning surface and installation hole.

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

The installation methods of the wheel, positive positioning, negative positioning & flange disk when handling the middle and big sizes of tires. You can select the methods according to the different conditions.

#### 13.1 Small Car Wheel Positive Position

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 → cone → quick nut

#### 13.2 Wheel Negative Position

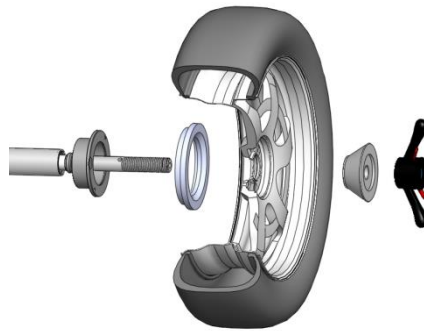
When there is deformation of the outside of the wheel, adopt this method to positioning to guarantee the accurate positioning of the steel rim inner hole on main shaft. It is suitable to the steel rim, especially the thick ALU



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

### 13.3 Flange Disk Positioning (Optional)

Suitable to the tire assemble with large rim center hole



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

**NOTE:** 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.

## 14. INPUT MACHINE THREE PARAMETERS

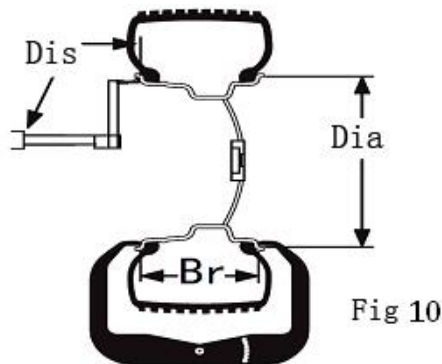


Fig 10

### 14.1 Input DIS (Distance) Value



Pull the scale to the inner position to add the weight and press the key **Dis+ / ↑** **Dis- / ↓** to input the DIS value into the display. At this moment, the display will show [DIS]: [XXX], and the default system is mm.

### 14.2 Input Br (RIM Breadth) Value



Use the Br measurement caliper to measure the Br of the rim, press the key **Br+ / ↑** **Br- / ↓** to input the Br value into the display. At this moment, the display will display [Br.]: [XXX], and the default system is inch.

### 14.3 Input the DIA (Diameter) Value



After confirming the rim diameter, press the key **DIA+ / ↑** **DIA- / ↓** to input the rim diameter into the display. At this moment, the display will display [Dia]: [XXX], and the default system is mm.

## 15. UNIT CONVERSION BUTTON:



① The 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



② The unit conversion of the DIA 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



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



③ The unit conversion from gram to ounce:

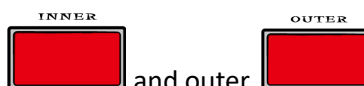
Normally, the unit of the unbalance value is gram (g). If you want to make the ounce (Oz) to be the unit, you can execute the g/Oz conversion. The unit of the displayed unbalance value is gram (g). The way to realize the unit conversion from gram to ounce is to press



## 16. START BUTTON

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 hood which can be set by the program.

## 17. DISPLAY IMBALANCE 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. Rotate the wheel, when the left side positioning lamp is all lite, at this moment, the highest position is the inner unbalance position and when the right-side positioning lamp is all light, at this moment, the highest position is the outer unbalance position. Add the corresponding weight at the unbalance point and start test again until the balance of the tire.








1. When start the machine, use hand to pull the wheel to help it start rotation, especially to the relative bigger tire, to prolong the working life of the motor.
2. Check if there are any mistakes on the dimension. Check if the balance methods meet the configuration of the rim and select the balancer most easily to balance.
3. Check if the quick lock nut tight or not.
4. When the balance ends, remove the tire. Pay attention to handle it with gentle and avoid knocking the main shaft.
5. When clipping the weight. Use the hammer to clip the weight on the rim without too much force. Do not knock the main shaft hard to avoid damaging the sensor. The position to add the Weight should be free from the grease and should be dry.

## 18 RESIDUAL IMBALANCE VALUE DISPLAY

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

## 19. BALANCE MODE SELECTIONS

Press the corresponding      key to choose the balance mode. If all the lights do not light up, it is in dynamic mode.



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



**STATIC**— stick the weight in center

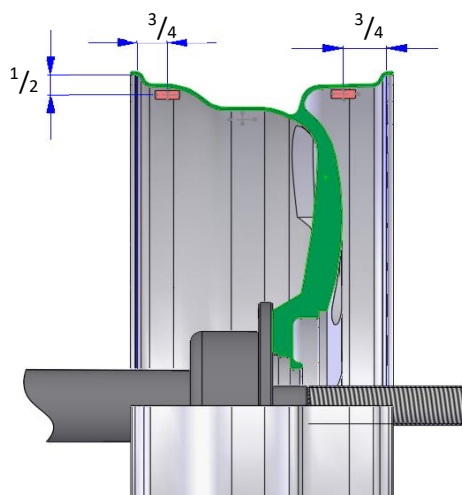


**MOT**— optional for balancing the motorcycle

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



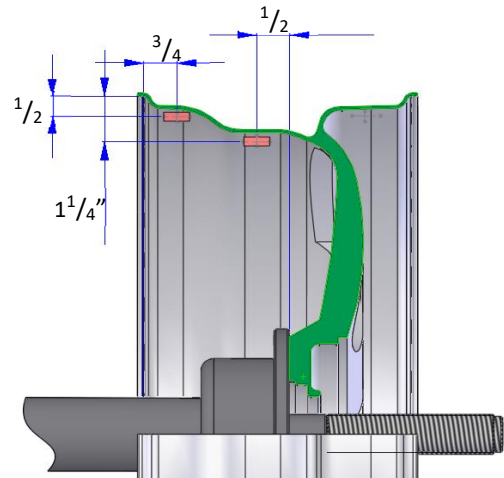
**ALU1**— to balance the light aluminum alloy rim.  
Adopt stick the weight on the shoulders of the rim.



ALU1



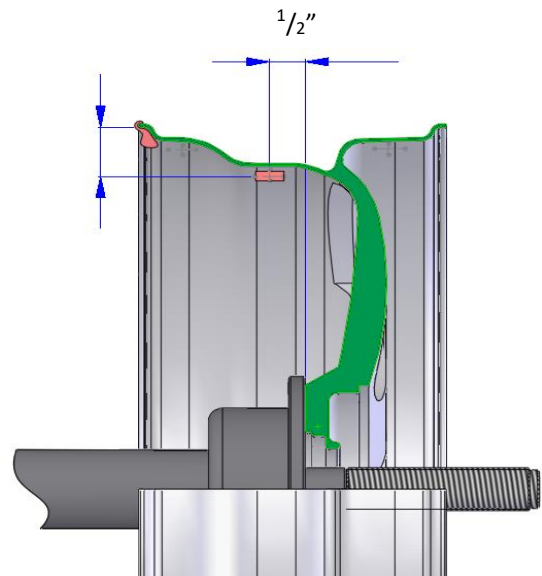
**ALU2**— for ALU rim, hidden weight inside



**ALU2**



**ALU3**— clip the weight inside and the position to add weight outside is same to ALU2.



**ALU3**

## 20. PROGRAM FUNCTION INTRODUCTIONS

### ➤ Change from .1 Oz to .25 Oz (Ounce / Oz)

- Press House Key
- Press DIS - twice
- Press House Key
- Left Right
- APP .1 Oz
- Want .25 Oz
- Press DIS +
- Left Right
- APP .25 Oz
- Press House Key
- Press DIA +



➤ **Change from 1g to 5g (Gram / g)**

- Press House Key
- Press DIS – twice
- Press House Key
- Left Right
- APP 1g
- Want 5g
- Press DIS +
- Left Right
- APP 5g
- Press House Key
- Press DIA +

## **21. FACTORY SETTINGS**

➤ **Turn machine on**




➤ **Press the following sequence of buttons to do a Factory Reset**




- Press House Key
- Press DIS +
- “Setup” appears
- Press House 2 Times
- Below appears
- Left Right
- “POS” “###”
- Rotate shaft until “111” appears in right window
- Hit C
- Rotate shaft until “55” appears in right window
- Hit C
- Rotate shaft until “111” appears in right window
- Hit C
- Below appears
- Left Right
- “COD” “Set”
- Hit House Key
- Below appears
- Left Right
- “###” “###”
- Hit DIS + until “46” appears in the left window
- Hit House Key
- Below appears
- Left Right
- “B-A” “###”
- Pull Distance Gauge out and put to Flange – note distance on distance gauge
- The number on the right must match the number noted on distance gauge
- Change the number on the right by pressing DIS + or DIS –


- Hit House Key
- Below appears
- Left Right
- “EL1” “###”
- Use DIS + or DIS – to change the number on the right to 007
- Hit House Key
- Hit House Key
- Until the reset is completed with a series of beeps
- Turn the machine off and back on

## 22. FACTORY CALIBRATION


Below you would find the detailed instructions:

Press “Home button” one time , and it displays “[ P]”, press “DIS + button” one time  , and you will see “[ SET ]-[ UP ]”


Press “Home button” two times , and it displays [POS—XXX], pull the wheel by hand ( clock-wise or anti-clock-wise) slowly. When it displays [POS]—[110] press ‘Fine button’ one time , then continue to pull the wheel slowly until it displays [POS]— [120] Press “Fine button” one time .

The screen displays [ADD]- [ 0], press  or lower down the hood to start rotation of the machine.

When machine stops rotation, it displays [ADD]— [100], at this moment, please pull the wheel until the outer indicating lights are all illuminating, clamp 100g/3.5 Oz calibration standard weight on the outside rim at 12 o’clock position. Press

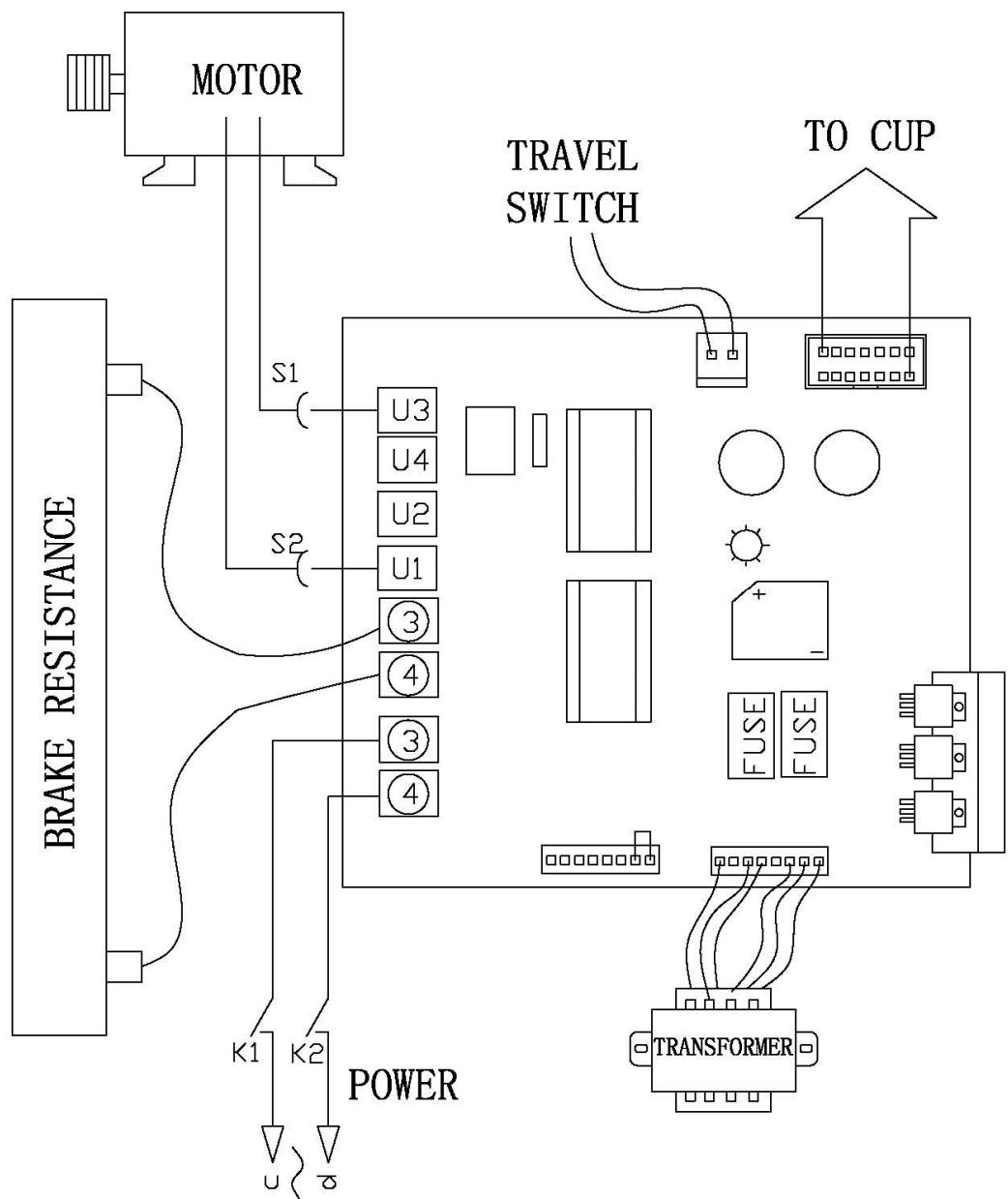
 or lower down the hood to start rotation of the machine.

When the machine stops, it displays “100—ADD “, at this moment please remove that 100g/3.5 Oz standard weight from the outside rim edge firstly, then pull the wheel by hand until the inner indicating lights are all illuminating, clamp

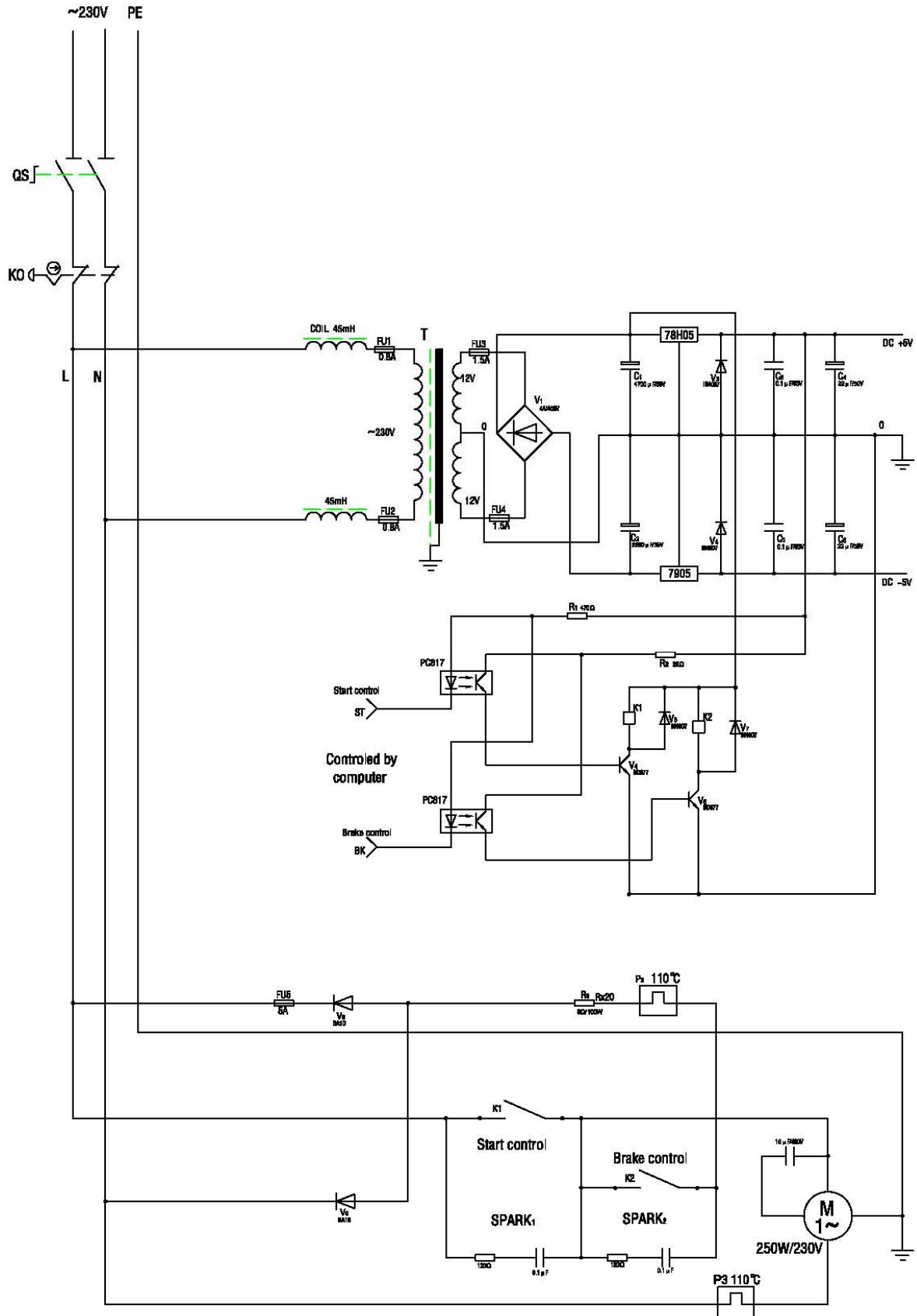
that 100g / 3.5 Oz standard weight on the inside rim at 12 o’clock position, press  or lower down the hood to start the rotation again. When it stops, you will hear 3 times beeps indication and the Factory Calibration is over.

23. APPENDIX

23.1 Appendix 1 - Layout of the Power Supply Card



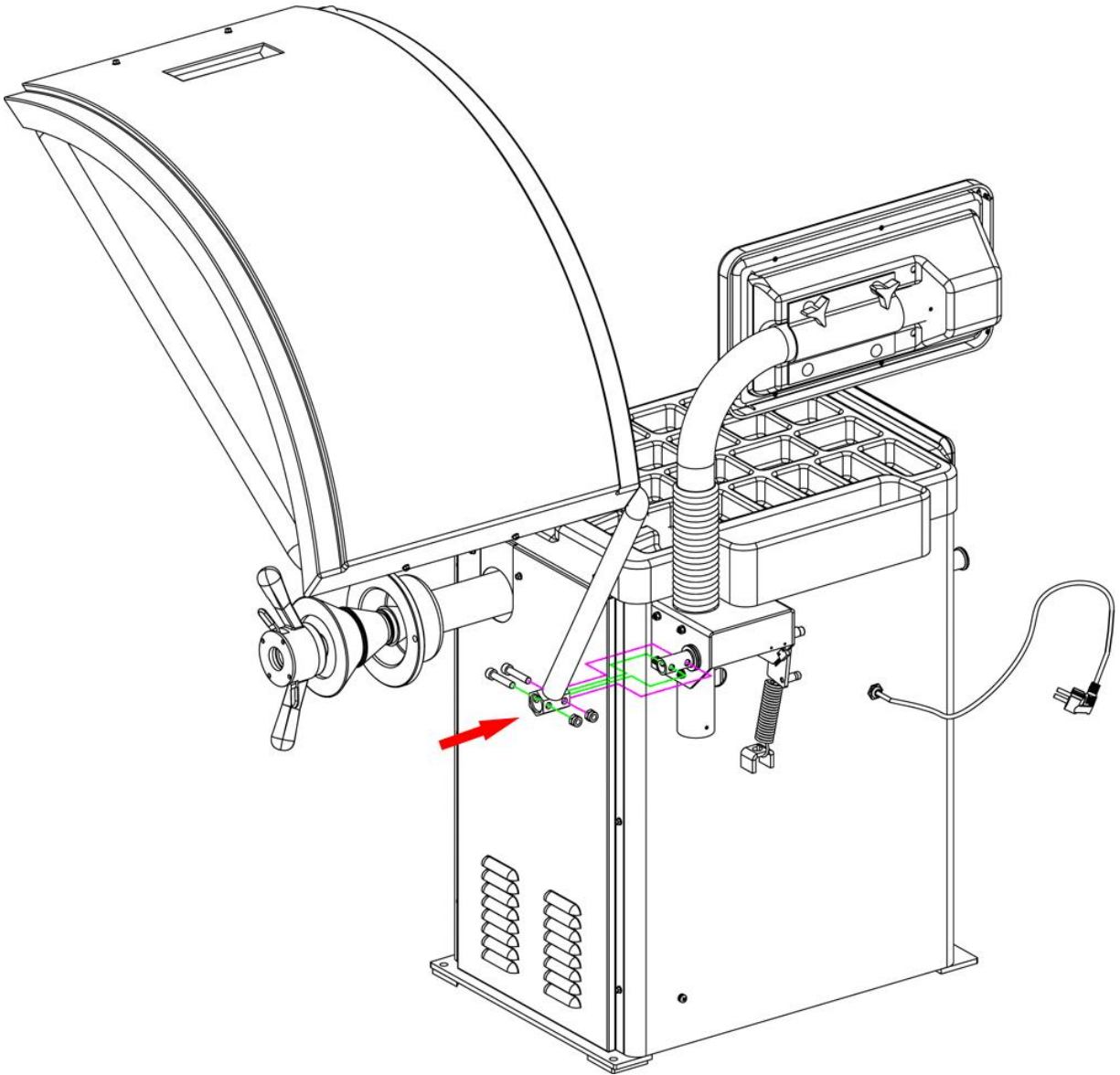
## 23.2 Appendix 2 - Wiring Diagram



### 23.3 Appendix 3 - Protective Hood Cover Installation

**NOTE:**

**DOES NOT APPLY FOR WB-953-B MODEL (WITH NO HOOD)**



Use the provided Bolts & Nuts to attached Hood Assembly to Wheel Balancer as shown in the above diagram.

## 24. FIRE PROTECTION EQUIPMENT TO BE USED

	Dry Materials	Flammable Liquids	Electrical Equipment
Hydraulic	YES	NO	NO
Foam	YES	YES	NO
Powder	YES*	YES	YES
CO <sub>2</sub>	YES*	YES	YES

**YES\*:** Can be used in the absence of more appropriate means or for small fires.



The information in the table above is general and can be used as a rough guide. For the responsibility for the use of each type of extinguisher, refer to the manufacturer.

## 25. ERROR INDICATION

DISPLAY	CAUSE	SOLUTION
ERR OPN	protective cover not lower down	Lower down the protective cover or change the setting and disable the hood function
ERR SP	rotation speed not enough photocell coupler cannot collect signal	Check power board; Check the encoder board. Check the motor and belt. Check the computer board
ERR OFF	error of stop	Press the start key or rise up the protective cover
ERR FAC	factory set-up fault	Correct factory set-up
ERR USR	customer set-up fault	Customer set-up
ERR REU	Reverse rotates is not correct	Troubleshooting of encoder board, power board.

# **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.

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