

BEAR® WHEEL BALANCERS

OPERATION, INSTALLATION, AND MAINTENANCE MANUAL

BALANCER MODEL:

80-2003



THE CARTEK GROUP
6950 EAST "N" AVE
KALAMAZOO, MI 49048
PHONE: (269) 382 - 5080
FAX: (269) 382 - 5087
WWW.CARTEK.COM
SERVICE@CARTEK.COM

BEAR by **M&B**
Engineering

A DIVISION OF THE **CARTEK** GROUP

P/N: 420-01944



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SECTION 1: PRODUCT AND MANUAL OVERVIEW

GENERAL INFORMATION

TECHNICAL CHARACTERISTICS

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GENERAL INFORMATION

WARNINGS

THIS MACHINE IS DESIGNED AND CONSTRUCTED FOR THE BALANCING OF CAR, VAN, AND MOTORCYCLE WHEELS. THIS MACHINE IS DESIGNED TO OPERATE WITHIN THE LIMITS DEFINED IN THIS MANUAL AND IN ACCORDANCE WITH THE MANUFACTURER'S INSTRUCTIONS.

This manual is an integral part of this machine. Carefully study the warnings and instructions contained in this manual. This information is important for safe use and maintenance. Conserve this manual for future consultation.

This machine must be used for the purpose for which expressly designed. Any other use is considered wrong and therefore unacceptable. The manufacturer cannot be held responsible for damage resulting from improper, erroneous, or unacceptable use.



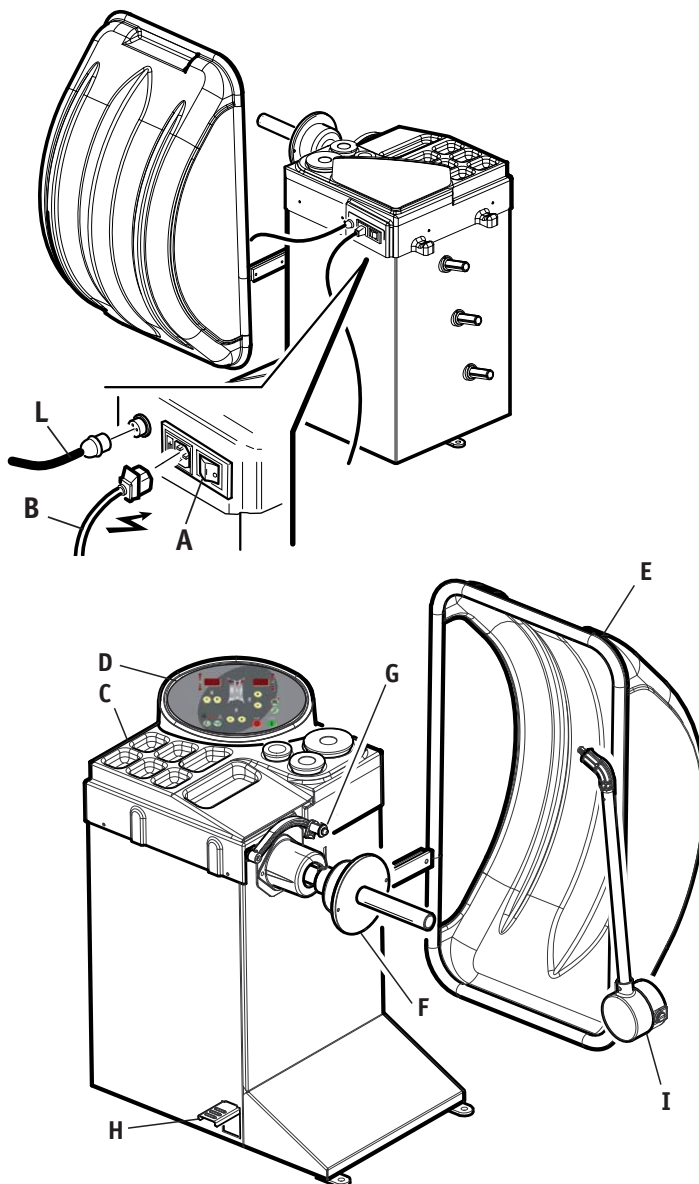
This symbol is used in the present manual to warn the operator of particular risks associated with the use of these machines.

ILLUSTRATIVE MACHINE DRAWING

indicating the main parts relevant to use

- A: MAIN SWITCH
- B: POWER SUPPLY CABLE
- C: WIGHT TRAY
- D: CONTROL PANEL
- E: WHEEL GUARD
- F: FLANGE
- G: DISTANCE MEASURING GAUGE
- H: BRAKE PEDAL
- I: WIDTH MEASURING GAUGE (80-2003)
- L: CONNECTOR WIDTH GAUGE (80-2003)

fig.1



TECHNICAL CHARACTERISTICS

- This machine is a wheel balancers with a single automatic launch and completely automatic cycle with start-up, measuring, and braking.
- Dynamic imbalance is measured and the weight position of the two correction planes are simultaneously shown on the double display.
- The machine allows simultaneous balancing of three wheels for multiple users with special keys for separation of weights and MM measurement setting for simple and rapid machine use.
- Balancing programs: Standard and Dynamic.
- 5 ALU programs.
- 3 Static programs for motorcycle or vehicle wheels that require adhesive or clipped counter weights.
- 2 special ALU programs for PAX wheels with weight separation option with static imbalance optimization program.
- Functions of self-diagnosis and self-calibration for extremely simple maintenance.
- Foot brake for locking wheel during counterweight positioning operations.
- Compact wheel guard will handle wheels up to 1120MM or 44" in diameter.
- Standard safety devices: STOP button for emergency shutdown. Wheel guard is equipped with and electronic sensor that prevents the motor from engaging while the guard is up.

RANGE OF APPLICATIONS

- This machine is designed for balancing vehicles wheels up to 155 LBS and Motorcycle wheels up to 44 LBS.
- Minimum and maximum measurements given are based on a balance in the two reference planes or to static imbalance alone. Imbalance is indicated in grams up to three decimal places. If measurement in ounces is required, conversion is easily set through control panel commands.

| MODEL | NET WEIGHT | ELECTRICAL CONFIGURATION | BALANCING SPEED | AVERAGE CYCLE SPEED |
|---------|------------|--------------------------|------------------|---------------------|
| 80-2003 | 211 LBS | 1P: 110 V / 60 HZ | 167 RPM AT 110 V | 8-10 SECONDS |
| | | 1P: 220 V / 50 HZ | 200 RPM AT 220 V | 8-10 SECONDS |

| MODEL | MAX WHEEL DIAMETER | RIM WIDTH RANGE | RIM DIAMETER RANGE | MAX WHEEL WEIGHT |
|---------|--------------------|-----------------|--------------------|------------------|
| 80-2003 | 44" | 2" - 20" | 8" - 30" | 155 LBS |

MACHINE DIMENSIONS

Max height with wheel guard up.....1270 MM
Max depth with wheel guard down.....980 MM
Width.....1035 MM

ACCESSORIES

STANDARD WHEEL BALANCER ACCESSORIES

CALIPER



85-300104

WEIGHT HAMMER



85-100152

COMPLETE FLANGE KIT
WITH 4 CONES



85-300103

OPTIONAL WHEEL BALANCER ACCESSORIES

DISTANCE SPACER &
5TH CONE



85-300107
85-300146

MOTORCYCLE
FLANGE



85-300106

REVERSE WELL
MOUNTING FLANGE



85-300116



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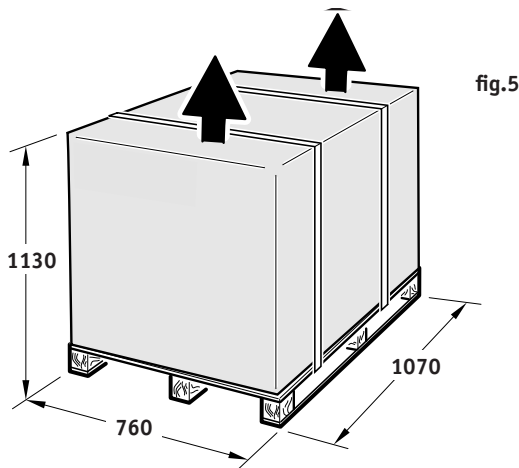
SECTION 2: INSTALLATION AND SET UP

UNPACKING

INSTALLATION AND SET UP

UNPACKING

- After removing the packaging, strapping, seals, cardboard, and the pallet (fig.5) check the machine for missing or damaged parts. In the event of a shortage or damage, do not use the machine and contact your vendor immediately.
- The packaging materials must not be left within the reach of children since they are potentially dangerous and therefore must be disposed of properly.
- The box containing the accessories provided is contained in the packaging of the machine.



LOCATION

- The wheel balancer must be located on a solid floor of concrete or similar material. Any underlying cavity could cause imprecise readings.

OVERALL DIMENSIONS (fig.6)

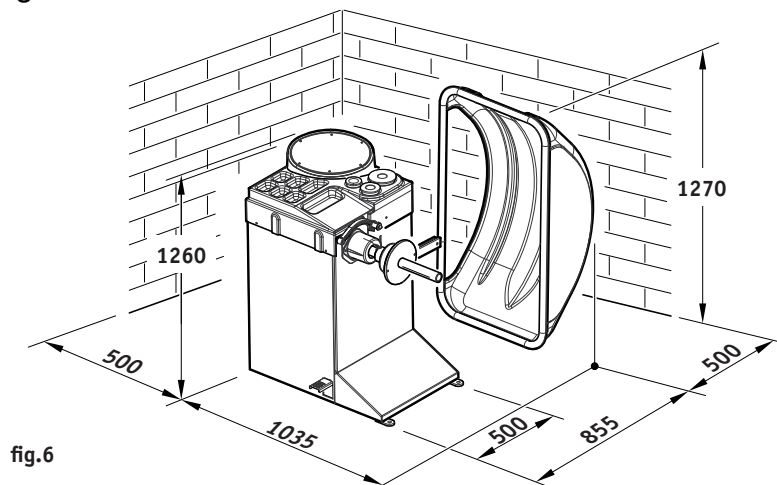
- Height 1270 MM
- Depth 855 MM
- Width 1035 MM

SAFE DISTANCE

- For safe and ergonomic use of the machine it is recommended to leave a minimum of 500 MM of working space from surrounding walls.

FIXING INSTRUCTIONS

- The machine base has 3 holes for fixing the chassis to the floor. This is essential to ensure accurate and consistent readings.

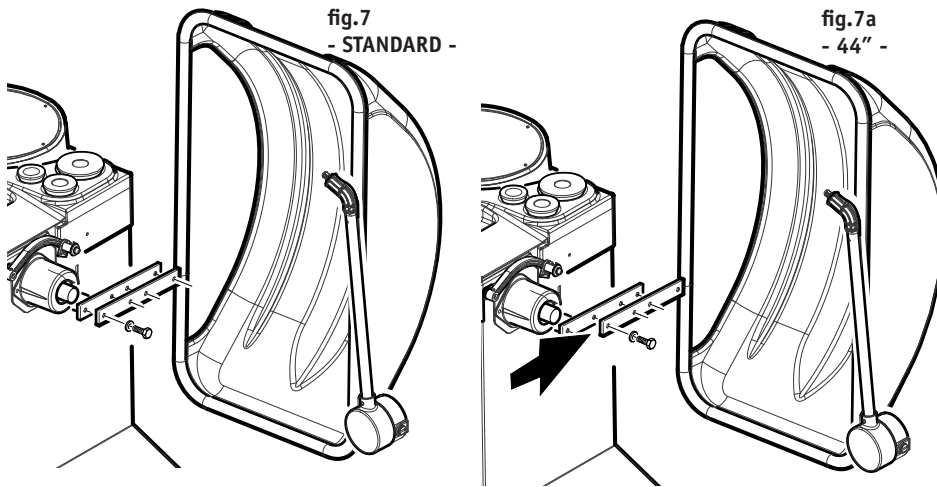


INSTALLATION AND SET UP

THE MANUFACTURER DECLINES ALL RESPONSIBILITY FOR THE FAILURE TO OBSERVE THE INSTRUCTIONS GIVEN BELOW.

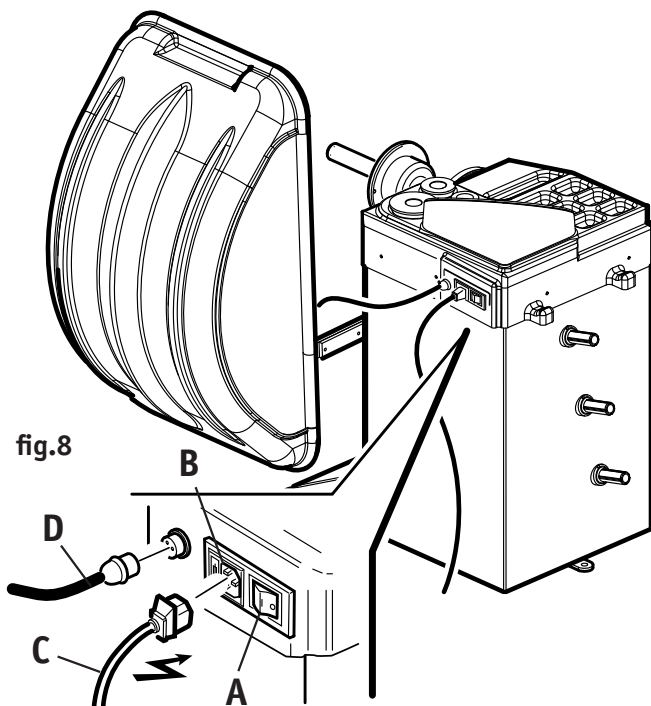
MOUNTING GUARD (fig.7)

- Mount the wheel guard on the support pin, using 3 screws and relative washers. Use a no. 6 hex key to tighten.



POWER CONNECTION (fig.8)

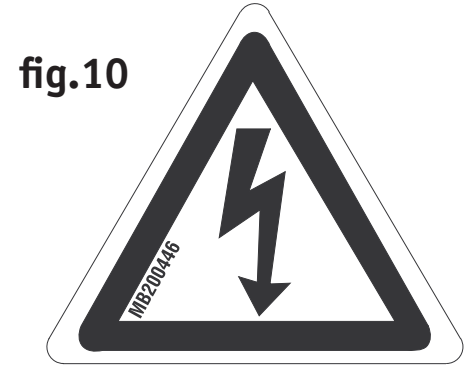
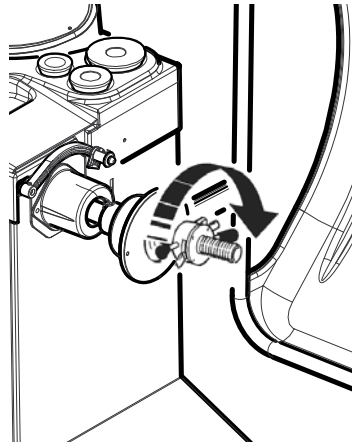
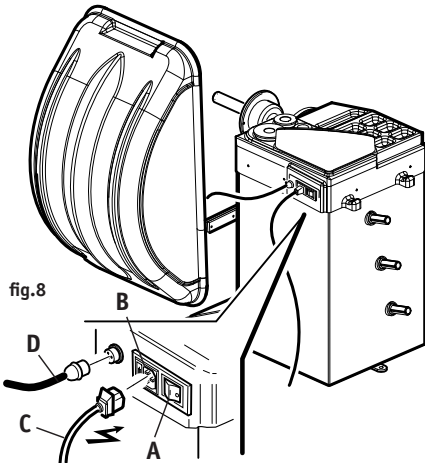
ELECTRICAL CONNECTION AND OPERATION CHECKS MUST BE CONDUCTED BY AN AUTHORIZED SERVICE TECHNICIAN. (fig.8)



- Check that voltage to the machine is the same as on the rating plate. DO NOT connect the machine if the two values are different.
- Check that the provided machine supply cable is outfitted with a CE standard plug.
- Connect supply cable (C fig.8) to connector (B fig.8) located on the back of the machine and insert the plug into the main socket.
- Check ground.
- In line supply protection of the plug and socket connection is the user's responsibility. A fuse or automatic safety switch or cut-off switch with a minimum of a 3 MM contact break in conformity with European standards can be used.
- Connect the width caliber connector (D fig.8).
- After connecting, power on the machine by turning on the main switch (A fig.8).

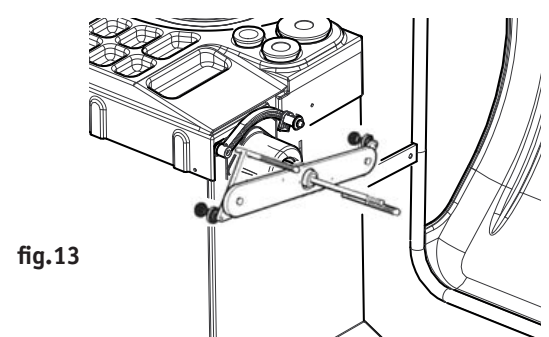
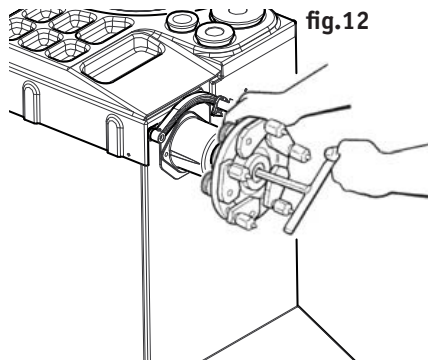
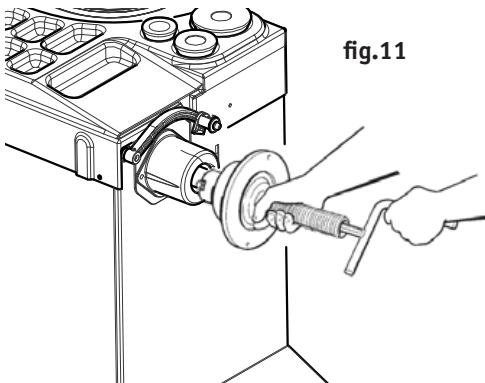
OPERATING CHECKS (fig.9)

- Press the START button with guard down. The mounted wheel should rotate in a clockwise direction if you are looking from the right side of the machine. The correct rotation direction is indicated by an arrow on the machine body. (fig.9)
- If the wheel rotates in the wrong direction, the machine will shut down immediately.
- Should a fault be observed in machine operation, turn off the main switch immediately (A fig.8) and consult the troubleshooting section in the manual.
- Always pay attention to the SAFETY WARNINGS applied as labels on the machine. (fig.10) Electrical discharge label. If this warning or any other label should deteriorate or dissapear please request replacements from BEAR's spare part listing using the relavant part number.



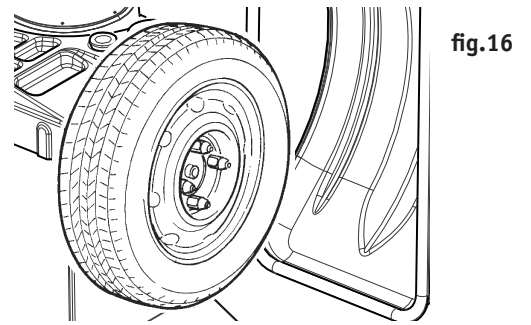
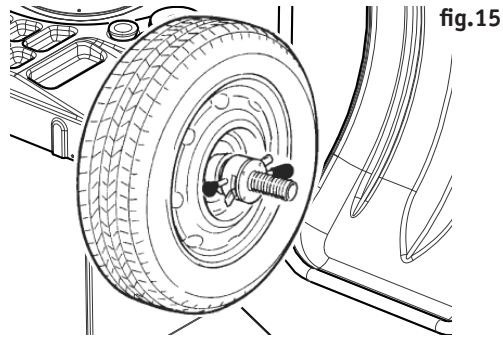
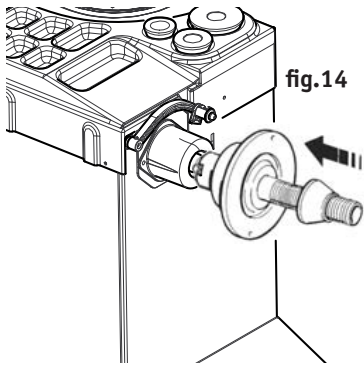
FLANGE INSTALLATION

- Before mounting the flange, clean the centering cone and the hole in the flange itself. A bad flange fitting will negatively influence the precision of the balancing operations. The illustrations show the flange fastening system.
- Fig. 11 shows the cone flange and mounting system.
- Fig. 12 shows the 3 / 4 / 5 hole universal flange mounting system.
- Fig.13 shows the motorcycle flange and mounting system.



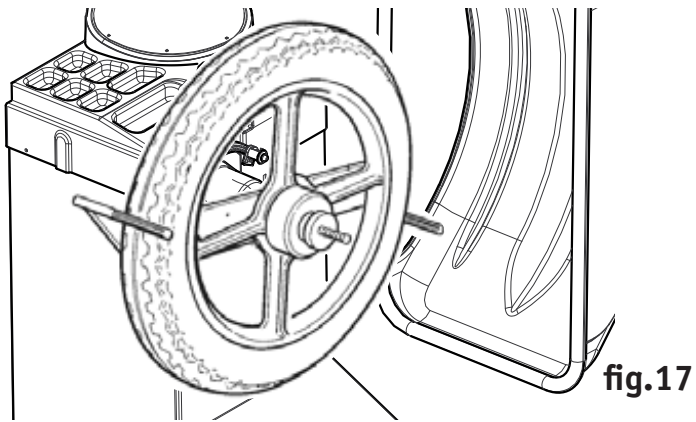
AUTOMOBILE WHEEL LOCKING

- Figures 14 and 15 show the automobile wheel locking system using the cone flange.
- Figure 16 shows the automobile wheel locking system using the 3 / 4 / 5 hole universal flange.



MOTORCYCLE WHEEL LOCKING

- Figures 17 shows the motorcycle wheel locking system using the motorcycle flange.



80-2001 and 80-2003 Turning Features On-Off

Press and hold down the **menu** button until “**TST**” is displayed.

Release and immediately push the **mm / inch** button.

Then press the **menu** button repeatedly to scroll through the choices available.

LRG is the option to activate or deactivate the outside wheel width arm attached to the hood (used only on model 80-2003)

Using the **+ / -** buttons under the right display will change the **on / off** options



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SECTION 3: OPERATION

CONFIGURING THE WHEEL BALANCER

SELECTING THE BALANCING PROGRAM

SETTING WHEEL DATA

WHEEL BALANCING

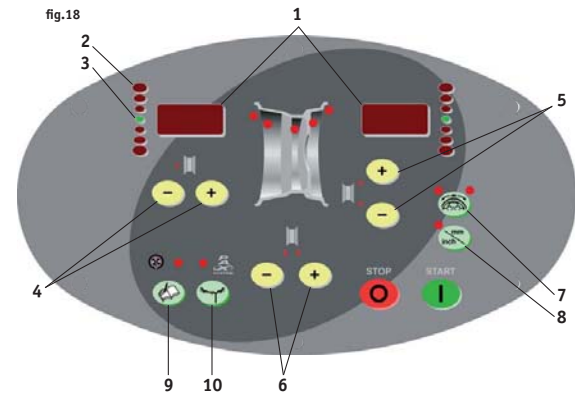
USING ALU DATA PROGRAMS

WEIGHT SEPERATION PROGRAM

OPTIMIZING WHEEL BALANCE

CONFIGURING THE WHEEL BALANCER

- The configuration functions enable the user to set the machine according to personal preferences.
- Press the MENU key (fig.18) and keep it pressed. As soon as the writing SET appears on the display release the key and the machine will enter the customization in which the following parameters can be set.



Zeroing small gram readings

- The left display shows TOL and the right display gives the present zero setting in grams. Use key 5 (fig.18) to set a new weight. The maximum settable value is 25 grams.
- Press the MENU key to go to the next parameter.

Displaying imbalance

- The left display shows RES and the right display gives the present value of imbalance resolution in grams. To set a new amount use key 5 (fig.18). Possible values are:
 - Display imbalance in fine resolution with 1 gram increments.
 - Display imbalance in standard resolution with 5 gram increments.
- Press the MENU key to go to the next parameter.

Imbalance unit of measure

- The left display shows UNB and the right display shows the present unit of measure for imbalance. To set a new amount use key 5 (fig.18). The possible settings are:
 - GRA: Display imbalance in grams.
 - OUN: Display imbalance in ounces.
- Press the MENU key to go to the next parameter.

Acoustic Signal

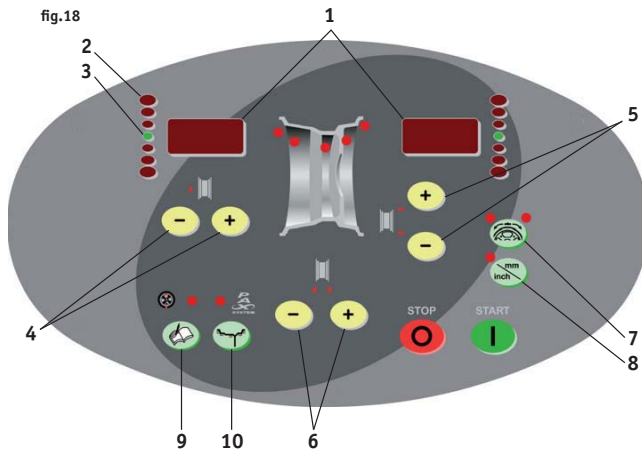
- The left display shows SND and the right display gives the the present state of activation or deactivation of the acoustic signal. To set a new value use key 5 (fig.18). Possible settings are:
 - ON: Acoustic signal on.
 - OFF: Acoustic signal off.
- Press the MENU key to go to the next parameter.

Operation with guard down

- The left display shows CAR and the right display gives the the present state of activation or deactivation of the parameter. To set a new value use key 5 (fig.18). Possible settings are:
 - ON: Start balancing with lowering of wheel guard.
 - OFF: Start balancing with lowering of wheel guard and pressing START.
- Press the MENU key to go to the next parameter.

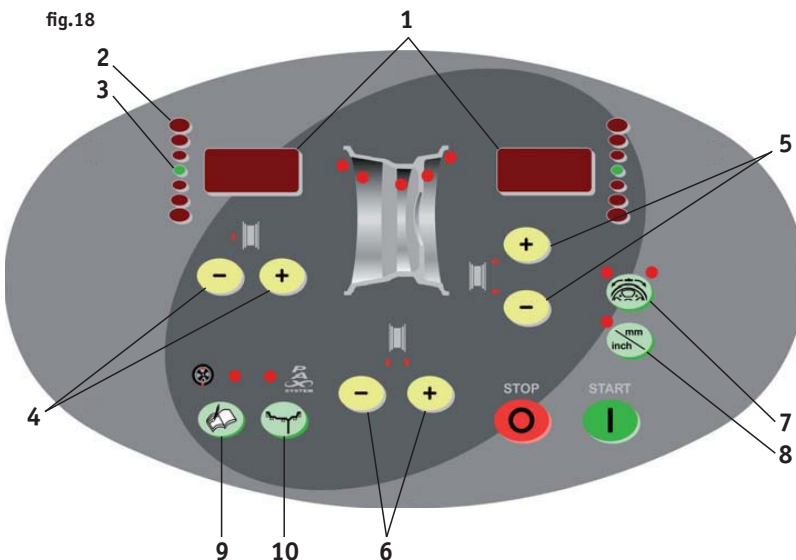
Configuration Europe / United States

- Configuration Europe: The left display shows CON and the right display shows EUR. To set a new value use key 5 (fig.18). Possible settings are:
 - TOLERANCE: 4.5 grams.
 - RESOLUTION: 5 grams.
 - Configuration United States: The left display shows CON and the right display shows USA. To set a new value use key 5 (fig.18). Possible settings are:
 - TOLERANCE: 7 grams.
 - RESOLUTION: 5 grams.
- At the end of the configuration operations, press the MENU button and the configured settings will be permanently saved and the machine will return to the balancing program. For each new parameter, the setting is programmed by pressing key 5 (fig.18) and confirmed by pressing the MENU key. If instead of confirming, the STOP key is pressed, the new parameter setting is not permanently saved and when the machine is powered off and on the original default settings will be restored.



SELECTING THE BALANCING PROGRAM

- The use of different types of counterweights for balancing various types of rims (steel or light alloy) produces differences between nominal measurements set for the wheel being balanced and the measurements of the reference planes.
- The balancer uses various balancing programs to compensate for these differences.
- Press the MODE key (fig.18) to access the various balancing programs available.
 - Standard dynamic balancing with clip weights.
 - 5 ALU programs for dynamic balancing using adhesive weights.
 - 3 static balancing programs with clip or adhesive weights.
 - 2 special ALU programs for Michelin PAX tire balancing with adhesive weights and MM measurements.
- The control panel LED's indicate the position of the weights on the rim on the basis of the pre-selected balancing program.
- On start up, the machine automatically defaults to the standard dynamic program.



CONTROL PANEL KEY PAD (fig. 18)

1. Data Display.
2. Unbalance point direction LED luminous diodes.
3. Imbalance point.
4. Rim distance setting key.
5. Rim diameter setting key.
6. Rim width setting key.
7. SPLIT key.
8. Selection Key for rim width or diameter (MM or Inches)
9. Control Functions key (MENU)
10. Balancing program selection key (MODE)

SETTING WHEEL DATA

SETTING WITH THE AUTOMATIC GAUGE

- Setting wheel data is achieved by moving the internal gauge against the rim (fig.19). Wait for the confirmation beep.
- The figures to set distance and diameter are entered automatically using the built in gauge (fig.21a).
- If the automatic gauge malfunctions or for the aluminum and light alloy programs, manual programming is possible. (discussed next)

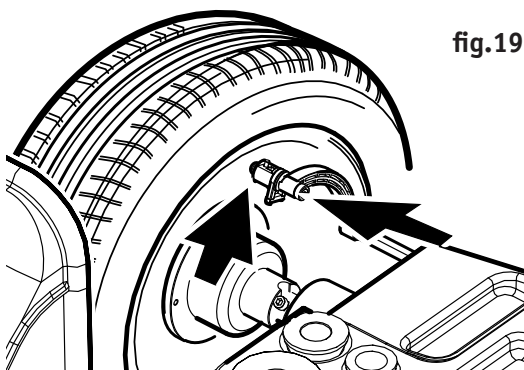
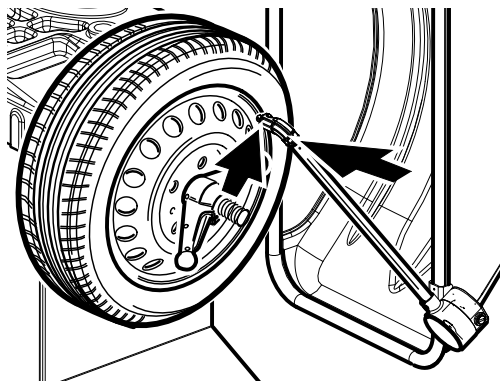


fig.19

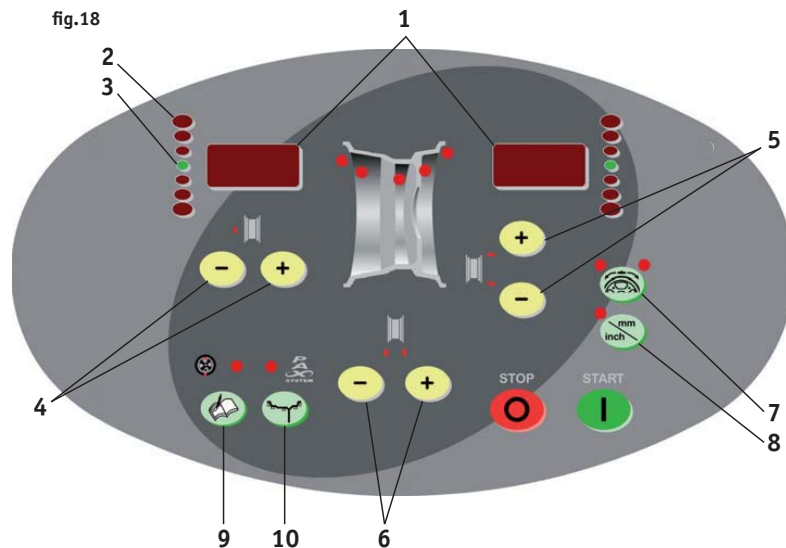
fig.21a



MANUAL SETTING OF WHEEL DATA

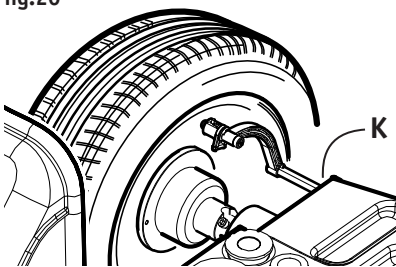
- Set the following data relating to the wheel to be balanced using the front panel:

- Width (key 6 fig.18)
- Diameter (key 5 fig.18)
- Distance (key 4 fig.18)



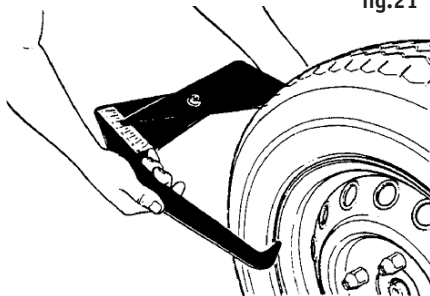
- The rim width measurement is generally etched on the rim itself, or can be obtained using the gauge supplied with the machine (fig.21).
- The rim diameter is generally etched on the rim itself, or is found on the tire.
- The rim distance is measured on the internal side of the rim with the sliding gauge installed on the machine (fig.20).
- Use the scale to read the distance to set.
- For small dimension wheels such as motorcycle wheels, only static imbalance needs to be determined.
- Using the STATIC balancing program and setting the right value for only the rim diameter (key 5 fig.18); the rim distance and width measurements can be set to any value.

fig.20



K = reading point

fig.21

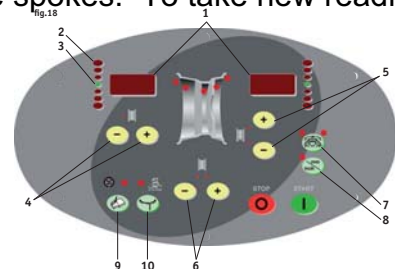


ENTERING MM MEASUREMENTS

- The preset unit of measure for rim width and diameter are inches.
- To set the unit of measure to MM press the MM/INCH key and enter the measurements in millimeters as etched on the wheel itself.
- The LED lights up to indicate that measurements have been set to MM.
- The distance is always set in MM (LED will lite up again),
- For PAX programs, the preset unit of measure for width and diameter is MM.

WHEEL BALANCING

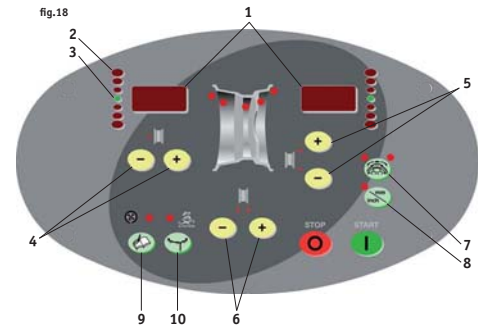
- Power main switch to activate machine.
- For a few seconds, the monitor will display the software version illustrations. On completion of start-up, the display (fig.18) will indicate 0 . 0.
- Mount the wheel on the machine, centering it using the special flange and locking it down carefully.
- To balance the wheel input the following data;
 1. Select type of wheel and balancing program for defining positioning of counterweights on the rim. See section on "Selection of Balancing Programs."
 2. Set wheel measurements. Rated width and rated diameter. See section on "Setting Wheel Data."
 3. Set the distance between the machine and the internal side of the rim. See section on "Setting Wheel Data."
- After closing the wheel safety guard, the machine will automatically start the measuring operation. Without lifting the guard, if you wish to take another measurement, press the START key.
- During the measuring operation, most of the readings are switched off except for the central section of the display.
- When measuring is completed, the wheel is braked automatically.
- The guard must not be raised before the balancing cycle is complete. The STOP key (fig. 18) will stop the machine in an emergency.
- The size and position of the imbalances on the two sides of the wheel are determined in a single measuring operation, and are separately indicated on the right and left displays. While facing the machine, the right display indicates the external unbalance and the left display indicates the internal unbalance.
- The wheel must be turned by hand until the LED (fig.18 - 3) lights up and the acoustic signal, if operative, indicates that the correct position has been reached.
- Press and hold the foot brake.
- The balancing weights can now be applied on either side of the rim in a perpendicular position to 12 o'clock on the main shaft.
- Insert the required weight for balancing into the seat of the measuring arm with the adhesive side facing up. After removing the protective film, move the arm towards the imbalance position and wait for the confirmation beep.
- Now rotate the gauge to bring the arm into contact with the rim and apply the weight. During this stage the LED relative to the selected position for the application of the weight will flash on the panel and the display will show the position of the arm in relation to the selected balancing planes.
- When the correct balancing position is reached, the display shows a symbol corresponding to the following conditions.
 - The wheel is in the correct angular position for balancing.
 - The arm is positioned on the corresponding balancing plane.
- The correct position is confirmed with a beep indicating the weight can be applied.
- NOTE: No confirmation beep is heard when the millimeter scale has been moved too little from the last position or the wheel is not in position.
- Repeat operations for external side.
- Once the counterweights have been placed correctly, re-cycle the machine to check that the wheel has been exactly balanced.
- NOTE: In the weight separation program the weight placement operations must be repeated for both weights to be fitted on the outside in the correct positions behind the spokes. To take new readings, press the MM / INCH (fig.18) key and repeat the measuring cycle.



USING ALU DATA PROGRAMS

SELECTING THE BALANCING PROGRAM

- Pressing MODE (key 10 fig.18) opens the program selection options. The ALUDATA programs are:
 3. ALU 2
 4. ALU 3
 9. PAX 2
- Select the most suitable ALUDATA program by pressing STOP.



SETTING WHEEL DATA

- When the inside gauge is brought in to position, the LED for the selected position will begin flashing on the control panel.
- Move the gauge forward to the first position selected for balancing and wait for the confirmation beep.
- From the first position without moving the gauge backwards move the gauge forward to the second position selected for balancing and wait for the confirmation beep. The LED corresponding to the chosen position will flash on the display panel.
- Retract the gauge to its neutral position. The display will automatically reconfigure to the main screen.

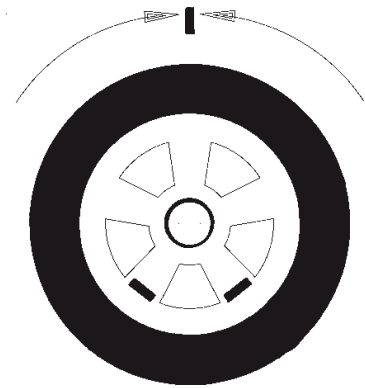
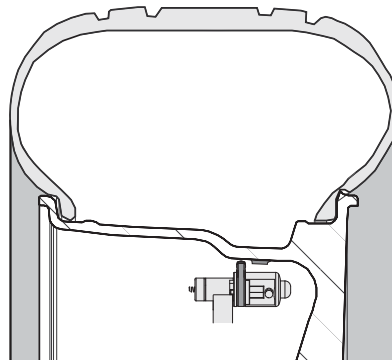
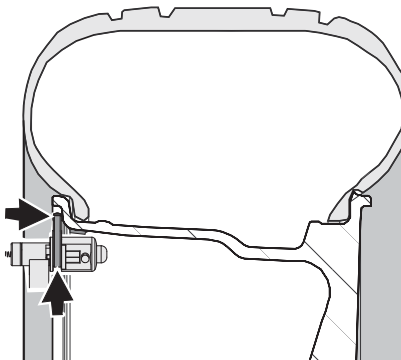
WEIGHT SEPARATION PROGRAM

- For aluminum and light alloy rims programs ALU 2 and ALU 3, the automatic measuring gauge is used to determine the rim dimensions (fig.22a and 22b).
- For the internal measurement, set the automatic gauge against the inner rim (fig.22a) and wait for the confirmation beep.
- After the first confirmation beep, continue forward from the first measurement point until the automatic gauge contacts the external side of the rim. Wait for the second confirmation beep. (fig.22b).

fig.22a

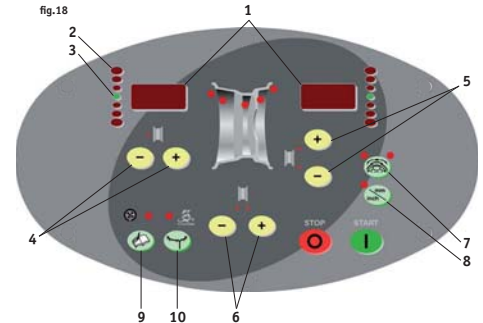
fig.22b

fig.23



- The weight separation program is used to split and hide corrective adhesive weights behind the spokes of the rim if at the end of a balancing cycle the external weight is visible. If the weight is visible it can be divided in half to be repositioned behind the two nearest spokes on either side. This procedure is as follows.
- Press SPLIT (key 7 fig.18) to access the weight separation program. The left display shows n and the right display shows the number of spokes present on the rim. Enter the number of spokes from 3-12 using key 5 (fig.18)
- The right display now shows the new set number of spokes.
- Next rotate the wheel until a spoke is at the 12 O'clock position. (fig.23).
- Press the SPLIT key. Both LEDs will lite up.

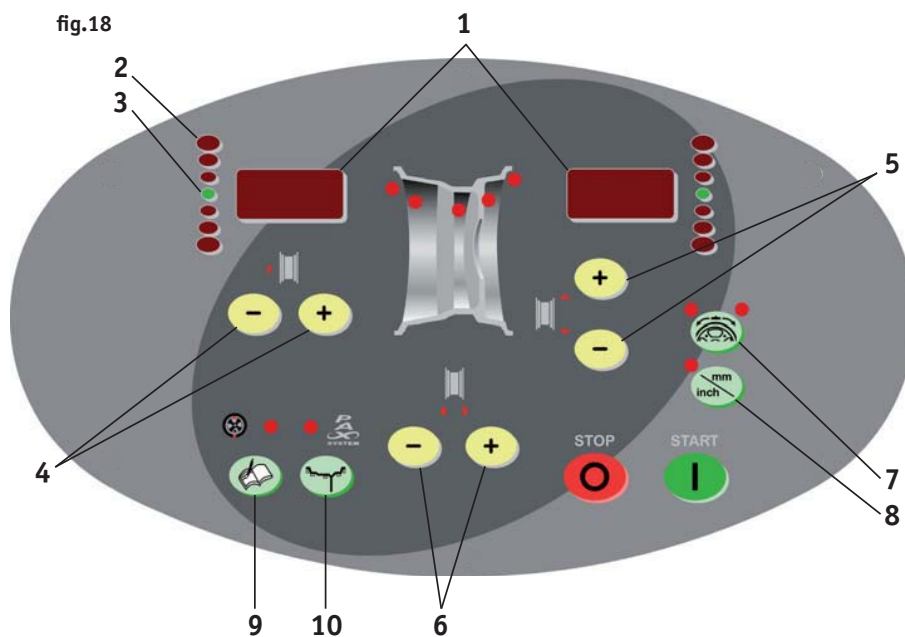
- After a few seconds, only one of the SPLIT key LEDs will be lit up indicating that the weight separation program has been activated.
- Two external weights are required for split weight balancing.
- The balancer will always display the weight which is closest to the balancing position.
- The wheel should be rotated to display both.
- Each of the two LEDs of the SPLIT key will light up when the corresponding weight is displayed.
- For fixing the adhesive counterweights use the pliers incorporated in the automatic measuring gauge.
- To return to the display showing the single weight press the SPLIT key (7-fig.18).



OPTIMIZING WHEEL BALANCE

- When an imbalance is found in a wheel greater than 50 grams, it is recommended that the wheel balance optimization program be performed.
- The overall imbalance of used tires can greatly be reduced with this program by identifying the ideal mounting position of the tire on the rim. This process is referred to as "matching."
- The optimization procedure is as follows.
- After the initial balance cycle returns an imbalance greater than 50 grams, deflate the tire and rotate it on the rim 180 degrees.
- Inflate the tire and perform a second balance cycle.
- To activate the imbalance optimization procedure, press the MENU key and release immediately. The writing OPT 1 will appear on the display.
- Press the START key to initialize the first balance cycle with the out of balance wheel. At the end of this, OPT 2 will appear on the display.
- Rotate the wheel by hand to bring the valve stem into the 12 O'clock position. Press the SPLIT key (both LEDs will light up) to memorize the wheel reference position in the first balance cycle. OPT 3 will appear on the display.
- With a piece of chalk, mark the valve stem position on the rim itself.
- Remove the rim from the flange, deflate the tire and rotate it on the rim 180 degrees. Refer to the chalk mark on the rim.
- Inflate the tire and remount the rim on the flange. Reposition the rim so that the valve is again at 12 O'clock and press the SPLIT key (both LEDs will again light up) to memorize the new position. OPT 4 will now appear on the display.
- Press the START key to launch a new balance cycle. Upon completion, the display will show OPT 5.
- To proceed with the imbalance optimization program, rotate the wheel by hand to bring the positioning LEDs onto the display into a central position and mark the tire where the weight is told to be placed.
- Remove the rim from the flange and rotate the tire on the rim until the mark on tire matches the valve stem position of the rim. Remount the wheel on the flange and again position the valve stem at the 12 O'clock position.
- Press the SPLIT key, Both LEDs will light up to memorize the new position of the rim on the flange. OPT 6 will now appear.
- Press the START key to launch the test balance cycle. At the end of this cycle, the wheel imbalance is automatically compared with the value of the minimum residual imbalance. If the difference between the two values is less than the maximum permitted tolerance, the code OPT YES will appear on the display. By pressing STOP the new value of the present static imbalance will appear on the display, confirming the results of the operation.

- If the first imbalance optimization is not satisfactory, OPT 5 will once more appear on the display. In this case it is possible to continue with the optimization procedure by repeating the operations as described from OPT 5 forward. When it is no longer possible to continue the optimization procedure OPT 5 will not appear and the procedure is complete.
- If the operation has been successfully completed the display will show OPT YES.
- If the operation has not been successful the display will show OPT ERR to indicate that the whole operation should be repeated from the beginning. At the end of the optimization operation, press STOP to return to the wheel imbalance measurement screen where the display will show the present wheel imbalance readings. By pressing the MODE key at any time during the optimization operation, the procedure is halted and the system reverts to measuring wheel imbalance.
- **WARNING:** For best possible results the above operations must be carried out with precision. When the STOP key is pressed at the end of the second cycle the following indications will appear.
 - Left Display: Value of static imbalance of the wheel
 - Right Display: Value of minimum residual imbalance possible with optimization program.
- Displaying these values is useful in deciding if it is worthwhile continuing the optimization program. For the same reason, even after the first run one can press the STOP key to show the static imbalance on the right display and thus see if a second optimization operation will be beneficial.



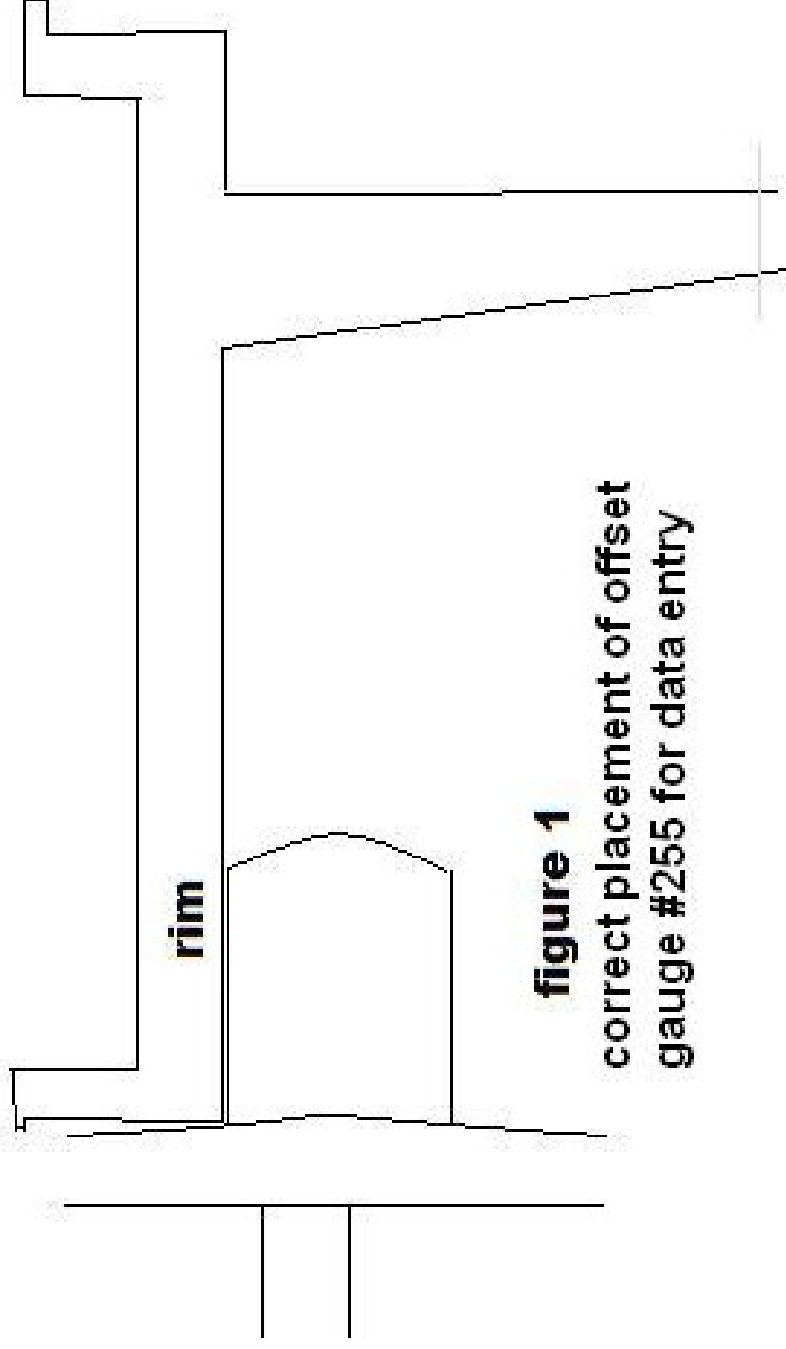


figure 1
correct placement of offset
gauge #255 for data entry

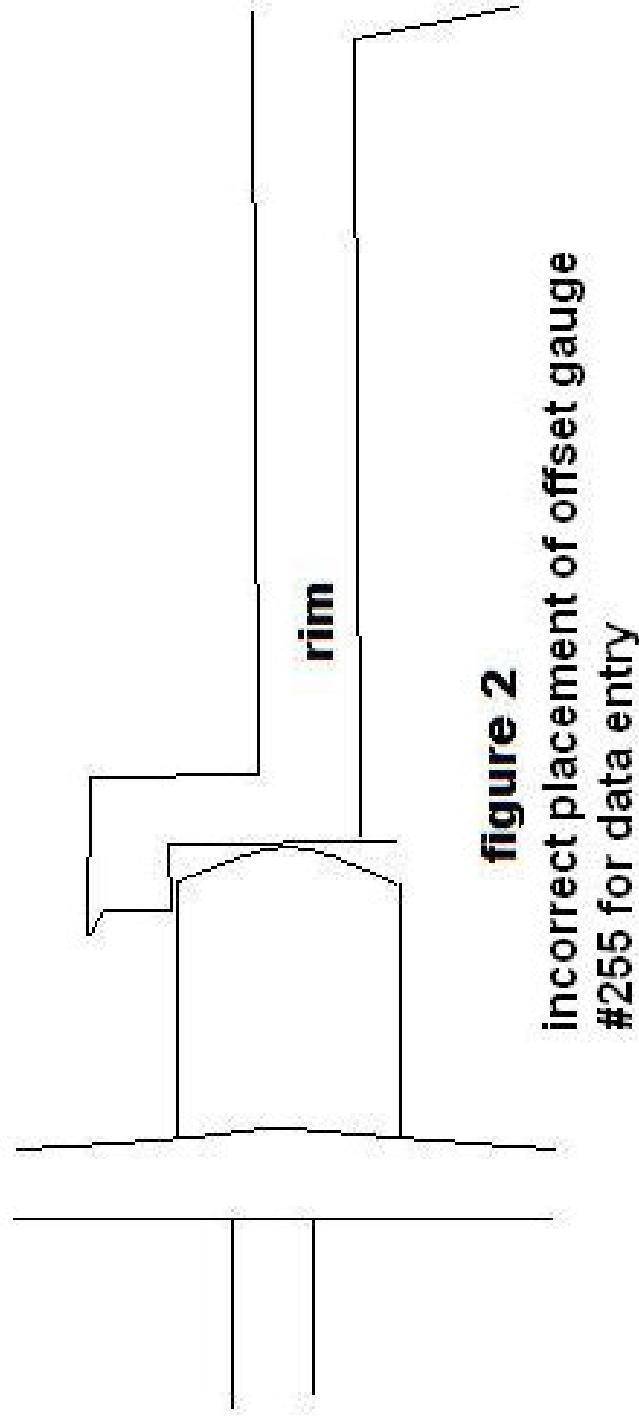


figure 2
incorrect placement of offset gauge
#255 for data entry



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SECTION 4: MAINTENANCE

ROUTINE MAINTENANCE

CALIBRATION

SELF DIAGNOSIS

ROUTINE MAINTENANCE

In order to guarantee correct and efficient operation it is essential to carry out periodic routine maintenance. Routine maintenance operations must be conducted by the user in accordance with the manufacturer's instructions given below. Before carrying out any maintenance or cleaning operations, switch off the machine using the mains switch and remove the plug from the socket.

MECHANICAL PARTS

- The flange assembly and cones must be kept clean and lightly lubricated with a non-corrosive oil, even when not in use. The quality of the balancing depends significantly on the condition of these parts.

MOVEMENT AND TRANSPORTATION

- Whenever it is necessary to move or transport the machine all necessary precautions must be taken. For the harnessing and lifting, use two 3 meter slings attached at the points indicated by fig.26.

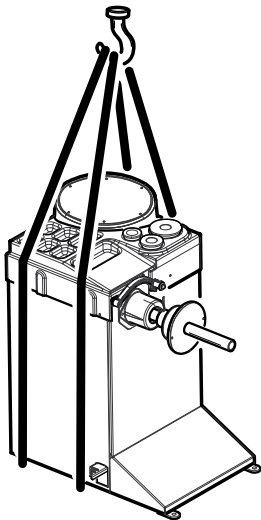
STORAGE

- Whenever the machine is to be stored temporarily and during periods in which it is not in use, remove the electrical plug from the socket. If the decision is taken to stop using the machine it should be made inoperative by detaching the electrical supply cable after removing the plug from the socket.

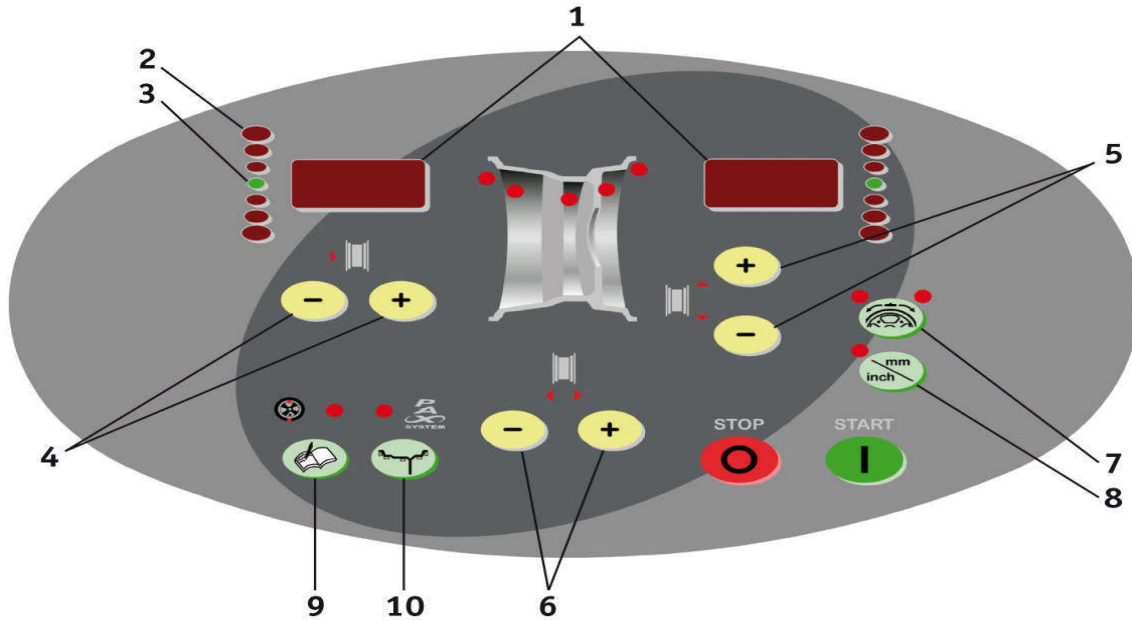
SCRAPPING

The wheel balancer is categorised as special refuse and it should therefore be divided into homogenous parts and disposed of according to the laws in force.

fig.26



WB 277 GAUGE CALIBRATION



(fig.1)

Command Panel – key

1. Data display
2. Luminous diodes for direction of imbalance point
3. Point of imbalance (LED)
4. Rim distance set-up keys
5. Rim diameter set-up keys
6. Rim width set-up keys
7. SPLIT key
8. Unit of measurement selector for rim width or diam. (mm/inch)
9. Control functions key (MENU)
10. Balancing program selection key (MODE)

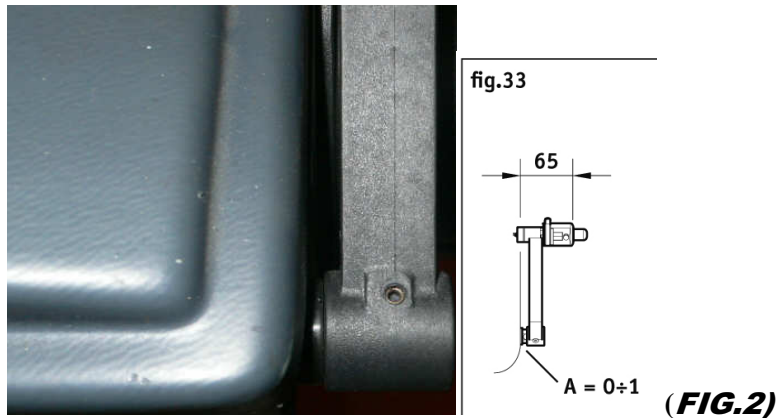
IMPORTANT: BEFORE CARRYING OUT ANY OPERATIONS, FINISH READING THE INSTRUCTIONS CAREFULLY . IF YOU MAKE ANY MISTAKES, SWITCH OFF THE MACHINE AND BEGIN AGAIN FROM THE START.

1) Hold the menu key pressed down (key 9 of FIG.1) until the display on the left shows Cal. Release the key and within 1.5 seconds press the mm/ inch key (key 8 FIG. 1).

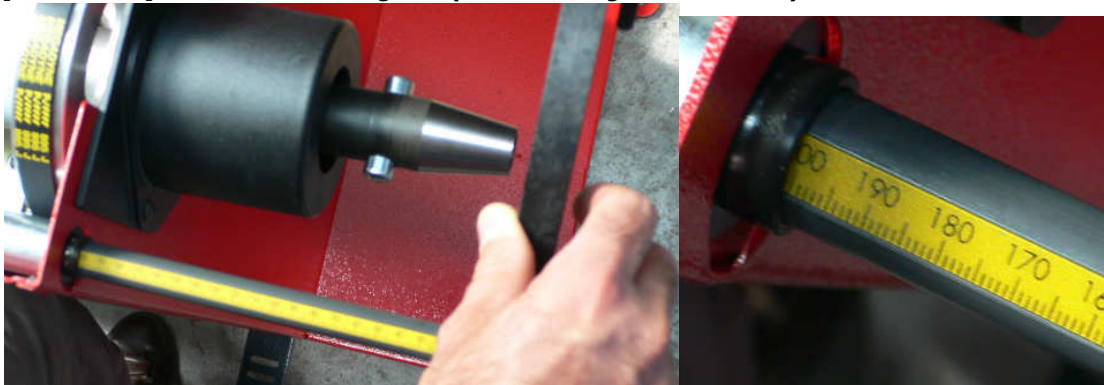
2) Press the menu key (key 9 FIG.1) twice and on the display on the left d-1 appears and on the right one 0.

3) On the yellow shaft divided into millimetres, look at the minimum value of the gauge at rest (NORMALLY THE VALUE IS 0).

4) Using the +/- keys (number 5 of FIG. 1) set the value read. Keeping the gauge in the rest position (see FIG. 2) press the + key of (fig. 1 number 4) to confirm the value. (see FIG. 2).



5) On the display on the left d-2 will appear and a value on the display on the right (normally it is pre-set at 200). Open the gauge until the measurement of 200 mm is reached (see FIG 3-4) and staying in this position press the + key of (FIG. 1 key number 4).

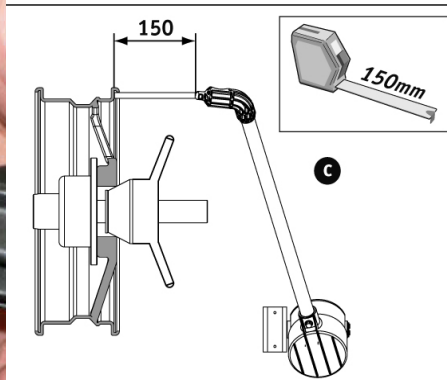


(fig. 3)

(fig. 4)

6) On the display on the left Lt1 will appear and 150 on the display on the right which is the value of the calibration spacer supplied with the machine. Mount an iron wheel, for example of 14", on the flange and secure it. Take the 150 mm spacer supplied and rest one end of the spacer on the rim. Bring the width gauge up against the other end of the spacer as shown in the figure (FIG. 5). Holding this position press the + key (number 4 of FIG. 1) to confirm. To increase or decrease the

measurement, use the +/- keys (key 5 of FIG.1). If there is no spacer, use a rule (see fig. 5).

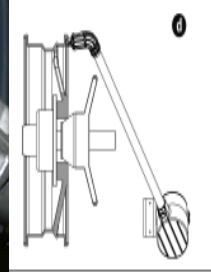


(FIG.5)

7) On the display on the left Lt2 will appear and a value on the display on the right (normally it is pre-set on the machine at 5.50). Check the width of the rim chosen for the calibration with the plastic gauge supplied (fig. 6). Using the +/- keys (number 5 fig. 1) set the value of the rim width chosen for the calibration. Put the width gauge against the rim (see fig. 6) hold it in position and press the + key (number 4 fig. 1) to confirm.



(FIG.6)



(FIG.7)

8) On the display on the left h1 will appear and a value on the display on the right (normally pre-set on the machine at 14). h1= rest the distance feeler pin on the rim as shown in the figure (FIG. 8) and holding it in this position press the + key (FIG. 1 key number 4) to confirm. To increase or decrease the value of the rim diameter chosen, use the +/- keys (FIG. 1 key number 5)

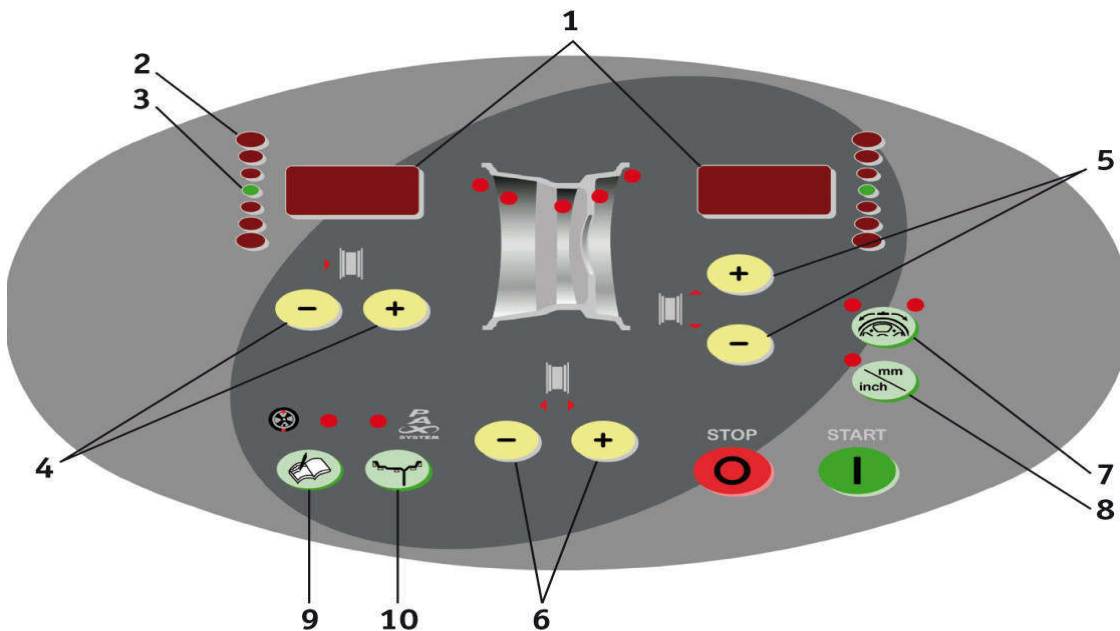


(fig. 8)

Wait for the first beep for confirmation and do not move from that position until the second bip signalling acquisition of the measurement. The value of the distance appears on the display on the left and the gauge can now be put back in the rest position.

9) The acquisition of gauge calibration has finished. To exit from the calibration, press menu (key number 9 fig. 1) and then press the STOP key (fig. 1), or switch off the machine.

WB 255-277 CALIBRATION



Command Panel – key

1. Data display
2. Luminous diodes for direction of imbalance point
3. Point of imbalance (LED)
4. Rim distance set-up keys
5. Rim diameter set-up keys
6. Rim width set-up keys
7. SPLIT key
8. Unit of measurement selector for rim width or diam. (mm/inch)
9. Control functions key (MENU)
10. Balancing program selection key (MODE)

(FIG. 1).

CALIBRATION

- 1) Press down the menu key (number 9 of FIG. 1) until the display on the left shows CAL and within 1.5 seconds press the mm/inch key (key 8 fig.1)**

- 2) The display on the left will show C-1 = flange imbalance reset. Mount the flange with cones supplied on the balancer shaft. Fix it firmly, take off the wing nut and all the cones present and carry out a run by lowering the protection cover. At the end of the run the display on the left shows C-2.**
- 3) C-2 = mount an iron wheel with tyre, if possible in good condition, on the flange. Set the wheel measurements: (distance, diameter and width) and do a run with the wheel by lowering the protection cover. At the end of the run the display on the left shows C3 and the display on the right 100.**
- 4) C-3 = set-up of the calibration weight (weight advised is the 100 g supplied) normally already pre-set-up. If you use a different weight, to change the value of the weight use the +/- keys (number 5 of FIG. 1). Apply the weight to the inside of the tyre and do a run by lowering the protection cover. At the end of the run, the display on the left shows C4 and the display on the right 100.**
- 5) C- 4 = take off the 100 g weight previously applied to the inside of the wheel and apply it to the outside of the wheel in about the same symmetric position, then do a run by lowering the protection cover. At the end of the run the display on the left shows C5.**
- 6) C-5 = adjustment of the position of the calibration weight. Turn the wheel manually to position the**

***calibration weight (100g) at 6 o'clock (see fig. 2)
using the flange shaft as a reference.
While holding the wheel in position as in (fig.2),
press the key with the two red leds lit up (key 7 of fig.
1) to confirm.***

- 7) Normally the value of the position for machines at 50 Hz goes from 20 to 35 and for machines at 60 Hz, from 30 to 45.***



(fig.2)

SELF DIAGNOSIS

Self-diagnostic functions are included to check that the balancing machine is working properly.

- Press MENU (9-fig.18) key and keep it pressed. As soon as TST appears on the display, release the key and press the MM/INCH key (8-fig.18) within 1.5 sec to enter the self-diagnosis menu, which includes the following functions (press the MENU key to scroll through the functions).

Pick-ups tension display

- To check that the pick-ups are working properly, proceed as follows:
- Before entering the self-diagnostic program, mount a test wheel on the machine and balance it.
- Apply a single test weight to the exterior side of the rim (e.g.: 100g) and initiate a balance cycle. After this stage, enter the self-diagnostic program as indicated above.
- The display reads MSR, for displaying the values detected with the last launch with the 100g weight.
- Press the distance increase button (4-fig.18). The right display will show in sequence the internal and external pick-up read-out values (values 0 to 999) and the phase difference (in °) between the two pick-ups.
- By checking the values detected, the internal pick-up tension value must always be lower than the external pick-up tension value. The phase difference must be $180^\circ \pm 1^\circ$.

Do not forget to press the MENU key to pass to another function.

Shaft angular position display

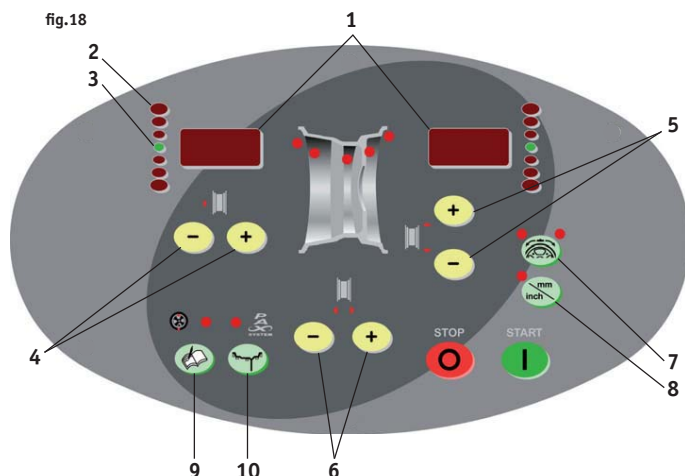
- ENC appears on the display.
- When rotating the shaft the right display value varies continuously from 0 to 255.

Shaft speed check

- SP appears on the display.
- Press the START key with lowered guard to check that the normal machine speed in rpms is:
167±5rpm at 50Hz
200±5rpm at 60Hz

Reading signals

- To access use menu key (4-fig.18)
- The left display sequences
An0, An1, An2, An3 and An4 for pickup amplifying signals.
- An5 shows the distance potentiometer tension value.
- An6 shows the diameter potentiometer tension values from 0 to 999.



Reading wheel guard microswitch input

- INP on the left display; the right display shows on if the guard is down and OFF if the guard is up.

Launch counter

- CNT appears on the display.
- To display the number of launches press the increase distance key (4-fig.18).
- The right display will show in sequence the total number of partial launches from the last time the machine was turned on.

Test display

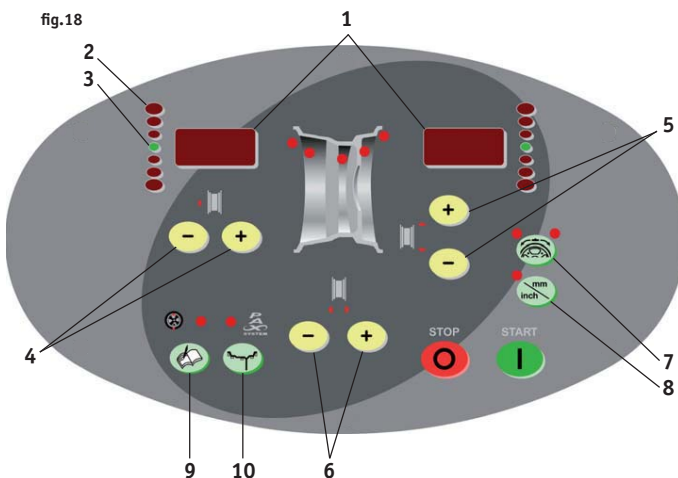
- LED is displayed. To test LED scroll the MENU using key (4-fig.18).

Self-calibration data display

- TAR appears on the display.
- To scroll the MENU use key (4-fig.18).

Temporary balancing of a wheel

- REL appears on the display.
- Relative balancing tests can be run on a wheel without actually balancing it using counterweights.
- Mount the test wheel and initiate balance cycle. When complete, the display will show the true imbalance of the wheel and automatically record the data and will do the same for all the subsequent measurements. The imbalance readings for all subsequent measurements after this function are not real but rather only relative to the initial unbalance of the test wheel. The function cannot be saved and the recorded data is discarded when the machine is switched off, or by returning to the function itself and deactivating it by pressing the reduce diameter key (5-fig.18).
- The right display shows ON if the function is activated and OFF if deactivated.





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SECTION 5: TROUBLESHOOTING

TROUBLESHOOTING GUIDE

SPECIFIC PROBLEMS AND REMEDIES

NOTE: **Error code 24** (not listed in the following charts) indicates a "frequency out of range" problem which means a re-calibration is required.

False error code 1: version 2.07 software may sometimes indicate a false error code 1 indicating that calibration data has been lost when in actuality it has not. Pushing the "STOP" button will allow the user to continue past this error code. Sometimes a re-calibration seems to correct, otherwise updating to software Ver 2.08 will correct this condition.

| DISPLAY | MALFUNCTION | CAUSES | POSSIBLE SOLUTION |
|-------------------------|--|--|---|
| Displays do not come on | The machine is not powered up | <ol style="list-style-type: none"> Unit is unplugged. Fuse blown in the breaker box Control panel fuse blown. | <ol style="list-style-type: none"> Check that positive/negative and neutral are connected to balancer. Reset breaker. Replace fuses on control panel (blown fuses indicate fault in electronic part). |
| Err 1 | Err 1 appears on power-up | <ol style="list-style-type: none"> The card has lost the calibration data and factory configuration settings. One or more calibration or setting phases have not been carried out. | <ol style="list-style-type: none"> Repeat all calibration and balancer configuration stages. Perform missing programming or setting operations. |
| Err 2 | During the measuring cycle the Err 2 message appears | The guard has been raised before completion of measurements. | <ol style="list-style-type: none"> Wait for end of measuring launch before raising guard. |
| Err 3 | During the measuring cycle the Err 3 message appears. | <ol style="list-style-type: none"> On start-up (using START key or lowering guard) the wheel was rotating backwards Motor winding inverted. | <ol style="list-style-type: none"> Ascertain that the wheel is stopped before start-up and avoid rotating wheel backwards at START. |
| Err 4 | The motor does not turn when START is pressed or after about 20 sec. | <ol style="list-style-type: none"> The motor cannot reach the revolutions needed for effective balancing. Electronic card malfunctioning. Electrical supply malfunctioning. | <ol style="list-style-type: none"> Check for correct motor connection. Check for low voltage at source. Replace electronic card. Replace electrical source. |
| Err 5 | At end of second calibrating cycle Err 5 appears on the display. | <ol style="list-style-type: none"> Calibration weight has not been applied on the wheel. The pick-ups have not been connected. | <ol style="list-style-type: none"> Repeat calibration from beginning and apply the calibration weight as instructed in the calibration procedure. Check pick-up connections. |
| Err 6 | Message Err 6 appears when pressing the START key | <ol style="list-style-type: none"> The guard has not been lowered Guard microswitch broken | <ol style="list-style-type: none"> Lower guard with wheel mounted. Replace microswitch. |
| Err 7 | At end of second calibration run Err 7 appears on the display | Phase difference between the 2 pick-ups is too large | <ol style="list-style-type: none"> Check that the calibration weight has been correctly applied. Check that machine is located on solid even floor with no vibration. Check the sensor and electronic card connections. (replace if necessary) Replace pick-ups. (replace if necessary) If after replacing pick-ups the problem is not solved, replace the card. |
| Err 8 | At end of second calibration run Err 8 appears on the display. | The left pick-up has not been correctly connected, is defective, or the cable is disconnected. | <ol style="list-style-type: none"> Check left pick-up connection and replace if necessary. |
| Err 9 | At end of second calibration run with Err 9 appears on the display. | The right pick-up has not been correctly connected, is defective, or the cable is disconnected. | <ol style="list-style-type: none"> Check right pick-up connection and replace if necessary. |
| Err 10 | During launch Err 10 appears on the display. | <ol style="list-style-type: none"> Position sensors in optoelectronics are defective. The motor will not turn. | <ol style="list-style-type: none"> <ol style="list-style-type: none"> Check optoelectronic card connection. Check that the optoelectronic card is protected from daylight and cover if necessary. If the defect persists replace the optoelectronic card. Check electrical components. |

| DISPLAY | MALFUNCTION | CAUSES | POSSIBLE SOLUTIONS |
|---------|---|--|---|
| Err 11 | During launch Err 11 appears on the display. | 1. Passage through zero sensor defective in optoelectronics. 2. The motor will not turn. | 1. a) Check optoelectronic card connection. b) Check that the optoelectronic card is protected from daylight and cover if necessary. c) If the defect persists replace the optoelectronic card. 2. Check electrical components. |
| Err 17 | At end of launch Err 17 appears on display. | Weight necessary for balancing the wheel is above 250 grams. | Check that the wheel is correctly fixed on the flange. Find the external position, apply a 100 gram weight and initiate a balance cycle. |
| Err 18 | Err 18 appears on display. | Wheel data not set. | Set the wheel data before starting the measuring cycle. |
| Err 20 | During measuring cycle Err 20 appears on display: the wheel speed has gone below the minimum for measurability. | 1. Brake pedal operated during the measurement. 2. Motor rotation speed irregular. | 1. Avoid pressing the brake pedal when the motor is operating. 2. Beware of knocking the machine during the measuring cycle. Check for low voltage. |
| Err 21 | During measuring cycle Err 21 appears on display: possible electrical fault. | The electronic card has found a condition of danger connected to a high wheel speed during an inactive machine phase (the shaft rotates at high speed without the operator having pressed the START command); the electric power is deactivated. | Switch off the machine, lower the guard and switch the machine back on without moving the wheel, if the error persists, check (and replace if necessary) the electric or electronic part (control panel or encoder card). |
| Err 22 | During the launch Err 22 appears on display. | Some fault in the optoelectronic signals. | a) Check that the optoelectronic card is protected from daylight and cover if necessary. b) If the defect persists check and if necessary replace the optoelectronic card. c) Check and if necessary replace the control panel electronic card. |
| Err 23 | When the START button is pressed the display reads Err23 | The gauge for measuring distance is not in the neutral position. | a) Check that the gauge is in the neutral position. b) Check the AS analogue figure (approx. 200). c) Repeat the gauge calibration procedure. |
| EEE EEE | EEE EEE appears on the display | 1. Two keys pressed simultaneously. 2. Keyboard defective. | 1. Press one key at a time. 2. Check and if necessary replace the control panel electronic card. |



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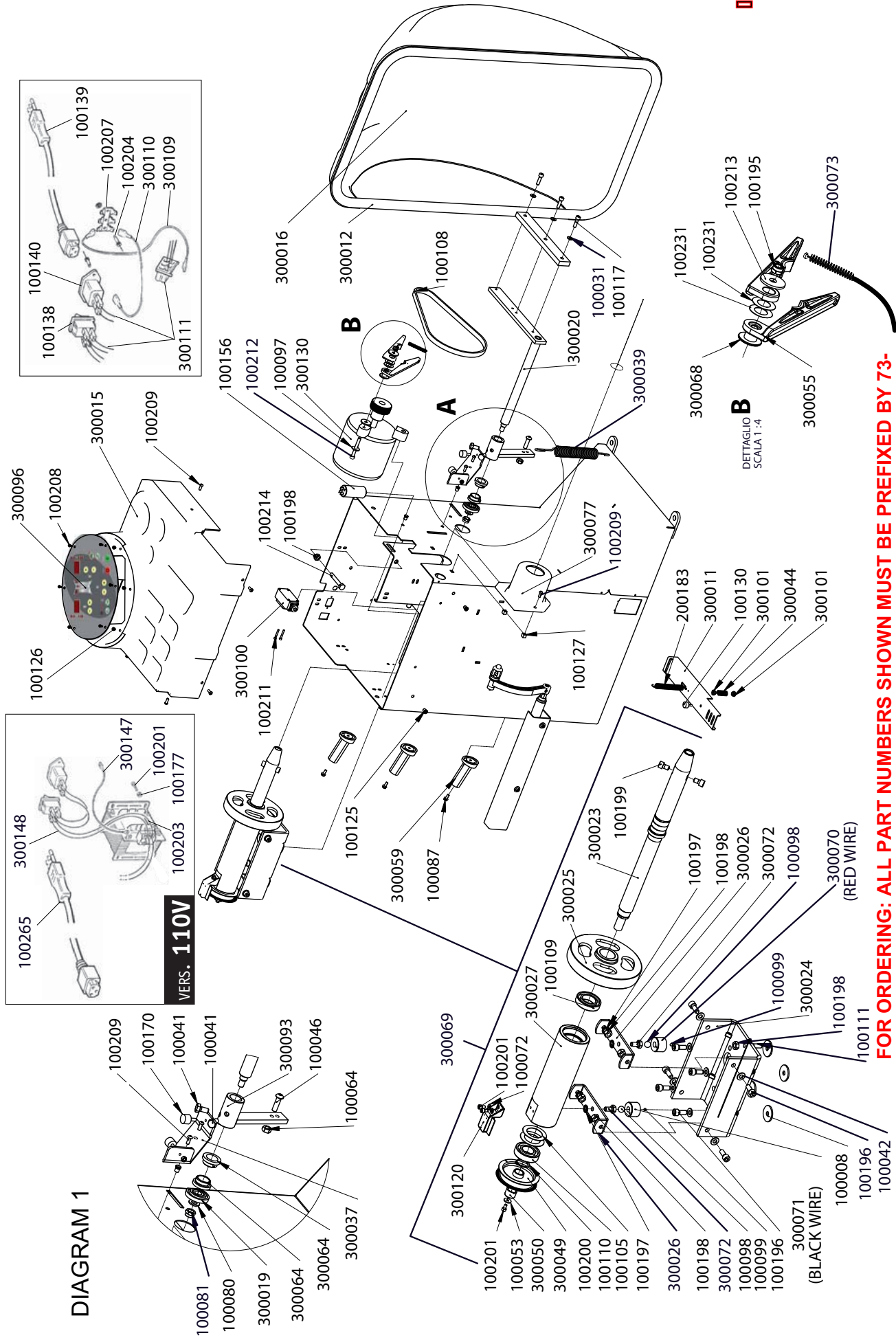
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SECTION 6: SPARE PARTS

PARTS DIAGRAM

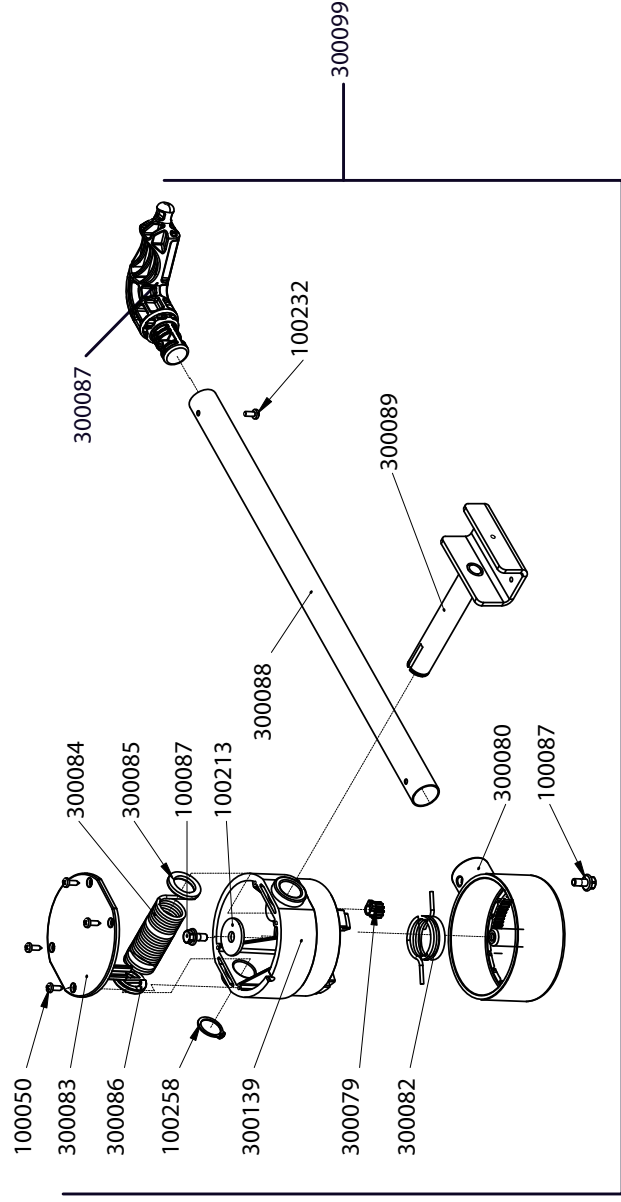
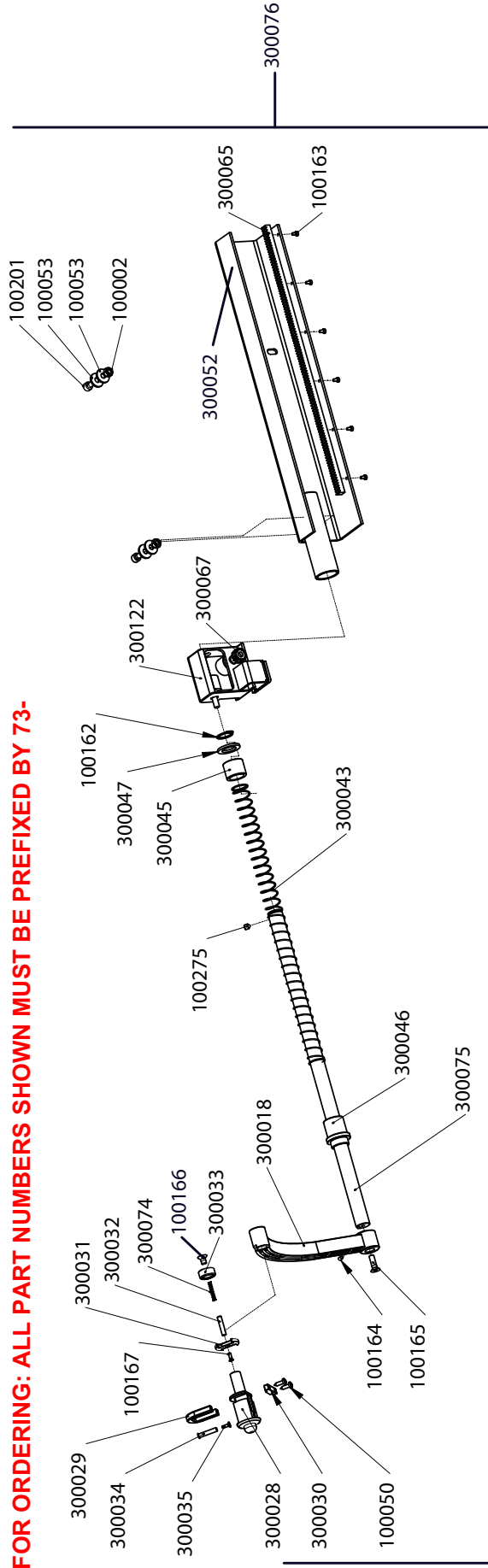
PARTS DESCRIPTIONS

DIAGRAM 1



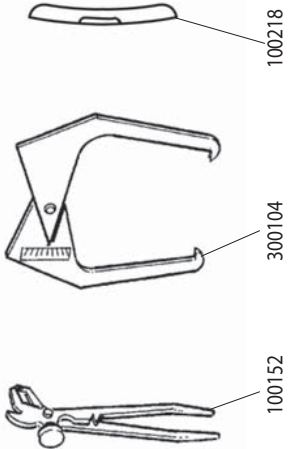
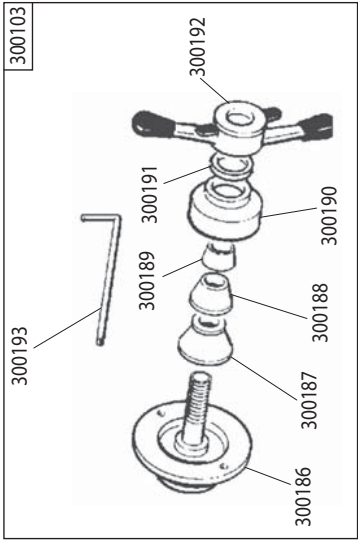
FOR ORDERING: ALL PART NUMBERS SHOWN MUST BE PREFIXED BY 73-

FOR ORDERING: ALL PART NUMBERS SHOWN MUST BE PREFIXED BY 73-

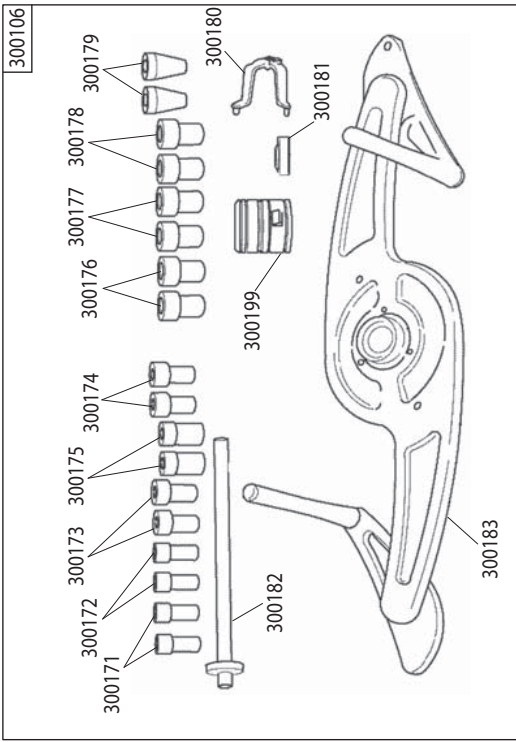
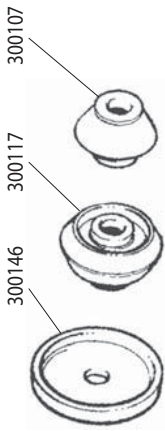
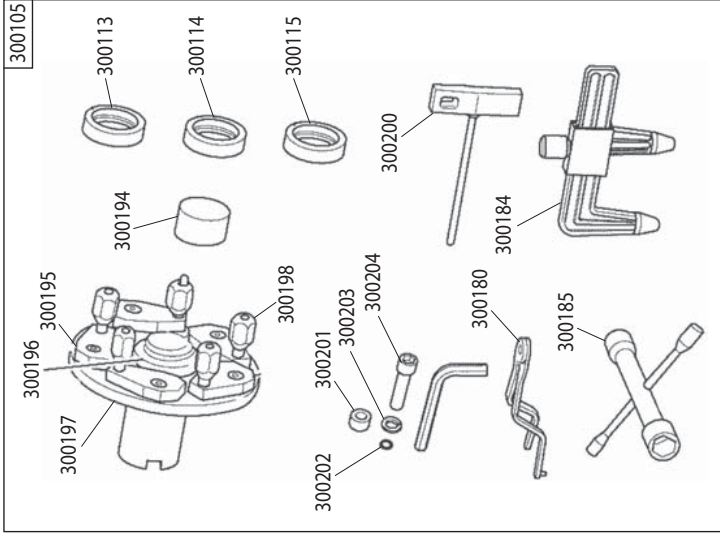


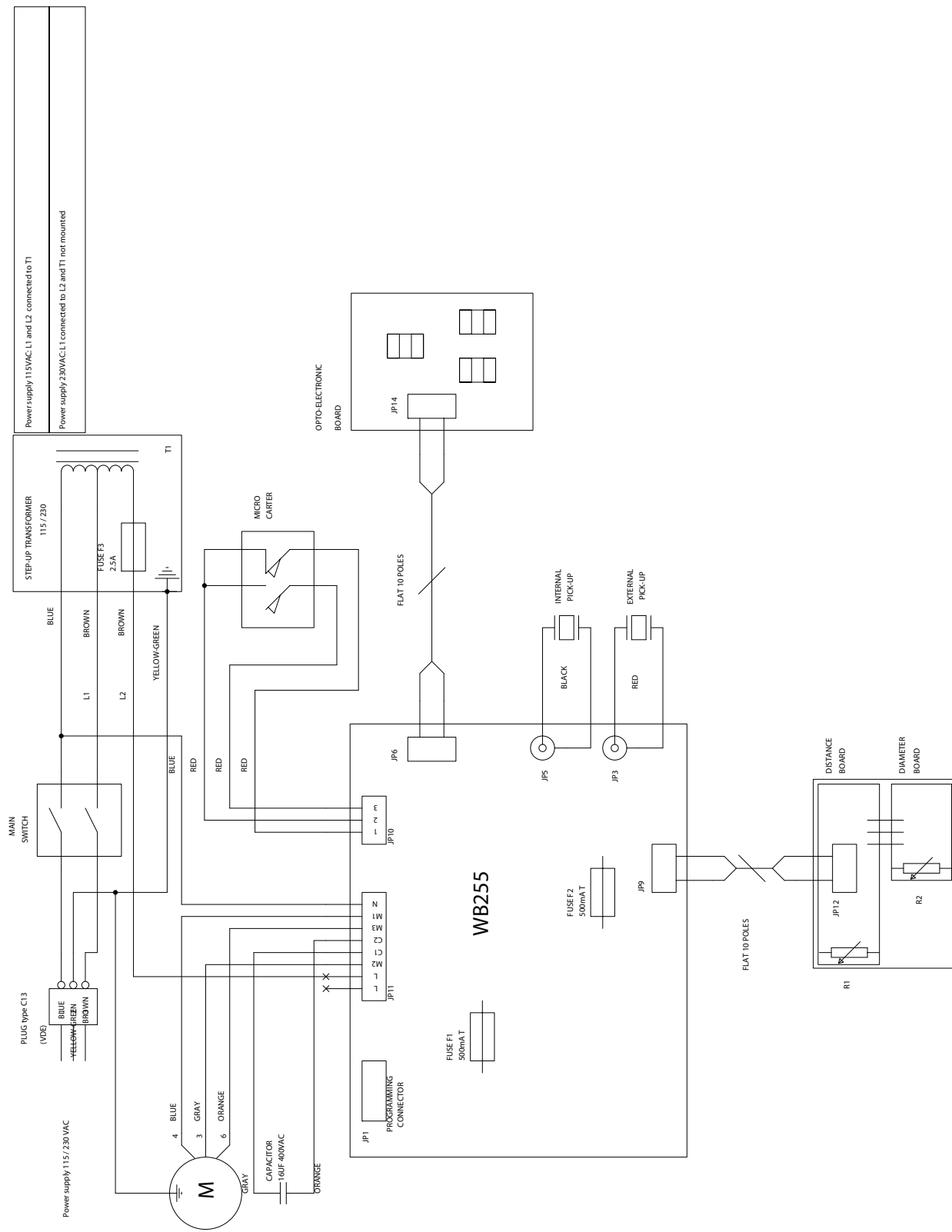
FOR ORDERING: ALL PART NUMBERS SHOWN MUST BE PREFIXED BY 73-

STANDARD



OPTIONAL





| PREFIX | PART NUMBER | DESCRIPTION |
|--------|----------------|-------------|
|--------|----------------|-------------|

| | | |
|-----|--------|--|
| 73- | 100002 | NUT 5588 |
| 73- | 100003 | REVERSER |
| 73- | 100004 | SINGLE PHASE INVERTER |
| 73- | 100005 | THREE PHASE INVERTER |
| 73- | 100006 | FLAT WASHER 8,5X32X2,5 |
| 73- | 100008 | WASHER 10,5X40X3 |
| 73- | 100010 | OR GASKET 16X8X4 |
| 73- | 100012 | OR RING 3300 |
| 73- | 100013 | GASKET DEM 80 |
| 73- | 100014 | GASKET DEM 237 |
| 73- | 100015 | GASKET UM- 34 |
| 73- | 100016 | OR RING 184X180X2 |
| 73- | 100017 | GASKET |
| 73- | 100018 | BI-DIRECTIONAL COUPLER |
| 73- | 100019 | STEEL GUIDE RING D.20 |
| 73- | 100020 | GASKET DE 725 |
| 73- | 100021 | WASHER FOR PEDAL COCK |
| 73- | 100023 | OR GASKET 4100 |
| 73- | 100025 | 10X30SCREW UNI 5739 |
| 73- | 100026 | NUT M8 5588 |
| 73- | 100027 | 8X25 SCREW |
| 73- | 100028 | NUT M8 5589 |
| 73- | 100029 | HEADLESS SCREW |
| 73- | 100030 | 16X1,5 LOCKNUT |
| 73- | 100031 | CHANFERED WASHER UNI 6592 |
| 73- | 100032 | 1/8 6X4 JOINT |
| 73- | 100033 | LOCK NUT M14 |
| 73- | 100034 | TOOTHED WASHER SIZE 14 |
| 73- | 100035 | "L" SHAPED CONN. 8X6 1/8 |
| 73- | 100036 | SPHERE BEARING 6004-2Z (20X42X12) |
| 73- | 100037 | SEEGER UNI7435-D12 |
| 73- | 100038 | CHANFERED WASHER UNI 6592 |
| 73- | 100040 | FLAT WASHER UNI 6592-17x30 (16) ZINC. WHITE |
| 73- | 100041 | SCREW TE M10x20 UNI 5739 8.8 ZINC. WHITE |
| 73- | 100042 | LEVEL WASHER UNI 6592-10.5x21 (10) ZINC. WHITE |
| 73- | 100043 | SEEGER UNI7435-D8 |
| 73- | 100045 | SCREW TSPEI M16x40 UNI 5933 BRT |
| 73- | 100046 | SCREW TBEI M10x35 ISO 7380 ZNT BIANCO |
| 73- | 100047 | BLOK NUT M10 UNI 7474 ZINC. WHITE |
| 73- | 100048 | SCREW TE M10x110 UNI 5737 BRT |
| 73- | 100049 | 1,5 X 30 COTTER PIN UNI 1336 |
| 73- | 100050 | SELF THREADED NUT 3,9X13 |
| 73- | 100051 | COUNTER HEAD SCREW 6X8 |
| 73- | 100052 | 6X10 SCREW UNI 5739 |
| 73- | 100053 | CHANFERED WASHER UNI 6593 |
| 73- | 100054 | M 6X25 SCREW |
| 73- | 100055 | STRAIGHT SHAPED CONNECTION CONICAL 8x6 1/8 |

| | | |
|-----|--------|--|
| 73- | 100056 | "T" SHAPED CENTRAL CONNECTION MALE CONICAL 1/8 6x8 |
| 73- | 100057 | PLASTIC SILENCER 1/4 |
| 73- | 100058 | SPRING COTTER 4X14 UNI 6873 |
| 73- | 100059 | SCREW TCEI M8x45 UNI 5931 BRT |
| 73- | 100060 | "L" SHAPED CONN. 6X4 1/8 |
| 73- | 100061 | QUICK ANGLE CONNECTION CONICAL 6x4 1/8 |
| 73- | 100062 | SCREW TCEI M8X20 UNI 5931 BRT |
| 73- | 100063 | SCREW TSPEI M5x16 UNI 5933 BRT |
| 73- | 100064 | NUT 6S M10 UNI 5588 BRT |
| 73- | 100064 | NUT 6S M10 UNI 5588 BRT |
| 73- | 100065 | SCREW TE M14x45 UNI 5739 BRT |
| 73- | 100066 | FLAT WASHER UNI 6592 15x28 ZINC. WHITE |
| 73- | 100067 | NUT 6S M14 UNI 5588 BRT |
| 73- | 100068 | FLAT WASHER UNI 6593 5.5X15X1.5 ZNT BIANCO |
| 73- | 100069 | SCREW TCEI UNI 5931 M5X10 BRT |
| 73- | 100070 | SCREW TE M8x30 UNI 5739 BRT |
| 73- | 100071 | NUT 6S M8 UNI 5588 BRT |
| 73- | 100072 | FLAT WASHER UNI 6592-6.4x12.5x1.6 (6) ZINC. WHITE |
| 73- | 100073 | SELF THREADED SCREW 4.8X13 UNI 6954 ZINC. WHITE |
| 73- | 100074 | SCREW TCEI UNI 5931 M5X14 BRT |
| 73- | 100075 | GROWER WASHER SIZE 5 |
| 73- | 100076 | SLOTTER SCREW 3X10 |
| 73- | 100077 | TOOTHED WASHER SIZE 3 |
| 73- | 100078 | CHAMFERED WASHER SIZE 16 UNI 6592 |
| 73- | 100079 | SEEGER D16 |
| 73- | 100080 | FLAT WASHER 13X24X2,5 |
| 73- | 100081 | LOCKNUT M12 |
| 73- | 100082 | CORRUGATED SPRING WASHER DIN 137/B12 |
| 73- | 100083 | INTERNAL RING D22 |
| 73- | 100084 | INNER HEX.HEAD UNI 5931 |
| 73- | 100085 | QUICK ROTATING CONN. 6X4 1/8 |
| 73- | 100086 | NUT M12 UNI 5589 |
| 73- | 100087 | SELF THREADED NUT 6,3X13 |
| 73- | 100090 | NUT 6S M4 UNI 5588 ZINC. WHITE |
| 73- | 100091 | FLAT WASHER UNI 6592 4.3x9 ZINC. WHITE |
| 73- | 100092 | 12X100 INNER HEX. HEAD |
| 73- | 100093 | 1" HOSE CONN. ELBOW |
| 73- | 100094 | HEX. GEAR |
| 73- | 100095 | HOSE JUNCTION 3/4 X 20 |
| 73- | 100096 | HEX.OT CAP M.Z. 1" |
| 73- | 100097 | FLAT WASHER UNI 6593 9X24X2 ZINC WHITE |
| 73- | 100098 | ANTISHOCK SPHERE SIZE 15 |
| 73- | 100099 | ANTISHOCK SPHERE SIZE 6 |
| 73- | 100105 | BUCKET WASHER FOR BEARING DIN 2093 |
| 73- | 100108 | POLY BELTI V 895 J8 |
| 73- | 100109 | BALL BEARING SKF 6007-2Z |
| 73- | 100110 | BALL BEARING SKF 6206-2Z |

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| 73- | 100111 | SCREW UNI 5929 STEI M10X25 BLUED CUP |
| 73- | 100116 | MONITOR LCD WB630 |
| 73- | 100117 | SCREW M8X30 |
| 73- | 100118 | SCREW M6X20 |
| 73- | 100120 | SCREW M8X10 |
| 73- | 100121 | SCREW M10X150 |
| 73- | 100122 | SCREW M6X10 |
| 73- | 100123 | SCREW M8X20 |
| 73- | 100124 | 6X6X25 TAB |
| 73- | 100125 | M6 ALLUMINUM RIVET FTT-L |
| 73- | 100126 | M4 ALLUMINUM RIVET FTT-L |
| 73- | 100127 | CAGE NUTM6 ZINC. YELLOW |
| 73- | 100128 | CARVING SCREW M4X16 (BRASS) |
| 73- | 100129 | NUT M4 BRASS |
| 73- | 100131 | LOCKING CONTROL HANDLE |
| 73- | 100132 | QUICK ANGLE CONNECTION 8x6 1/4 |
| 73- | 100135 | PROTECTION CUPS PA262 |
| 73- | 100136 | NYLON CABLE PRESS PG 11 |
| 73- | 100137 | NUT FOR FAIRLEAD PG11 |
| 73- | 100138 | SWICHT |
| 73- | 100139 | CORD.3x0.75 H05VVF L=2MT NERO SCHUKO 90°+CEE DIR. |
| 73- | 100140 | PLUG 6.3 P/N 0166-CW |
| 73- | 100141 | QUICK ANGLE CONNECTION M. GIR. CIL.1/4 |
| 73- | 100143 | MALE FEMALE EXTENTION 1/4 L=27 |
| 73- | 100144 | ADJUSTABLE RING 1/4 |
| 73- | 100145 | DOUBLE HOLES SCREW 1/4 |
| 73- | 100146 | CONIC NIPPLE 1/4-3/8 |
| 73- | 100147 | 1/4 A WAY DISTRIBUTION BLOCK |
| 73- | 100148 | 1/4 ZE0063101 SAFETY VALVE |
| 73- | 100149 | WATER DISCHARGE COCK 1/4 |
| 73- | 100152 | COUNTER WEIGHT PLIERS |
| 73- | 100156 | CONDENSER |
| 73- | 100161 | RING 2031 7.66x1.78 NBR |
| 73- | 100162 | SEEGER UNI 7435-D18 |
| 73- | 100163 | CARVING SCREW TC UNI 6107 M3X6 ZINC. WHITE |
| 73- | 100164 | SCREW M4X8 FLAT TIP |
| 73- | 100165 | SCREW TSPEI UNI 5933 M6X20 BRT |
| 73- | 100166 | SCREW TSPEI UNI 5933 M6X10 BRT |
| 73- | 100167 | SCREW TSPEI UNI 5933 M3X10 BRT |
| 73- | 100169 | MANOMETER 0-10BAR E PSI R1/4-ISO7 |
| 73- | 100170 | CYLINDRICAL BUMPER D.20 |
| 73- | 100172 | RING OR4150 37,69x3.53 NBR 70 |
| 73- | 100176 | SREW TCEI UNI 5931 M6X40 BRT |
| 73- | 100177 | LOW LOCKING NUT M6 UNI 7474 ZINC. WHITE |
| 73- | 100178 | RUBBER LIMIT SWITCH EXTERNAL D. 21 |
| 73- | 100179 | SCREW TE M6X16 UNI 5739 BRT |
| 73- | 100184 | ANGLE CONNECTION M. 8x6 1/4 |

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| 73- | 100185 | TUBE FASTENER 22X31 |
| 73- | 100186 | QUICK COUPLING 6X8 1/4 |
| 73- | 100191 | INFLATION COMPLETE HOSE |
| 73- | 100192 | 3/4 ANGLE |
| 73- | 100193 | CHAMFERED WASHER |
| 73- | 100194 | HIGH BLOK NUT 7473 |
| 73- | 100195 | LOW LOCKNUT M8 UNI 7474 |
| 73- | 100196 | SCREW TCEI UNI 5931 M10X25 ZINC. WHITE |
| 73- | 100197 | 10 KNURLED WASHER |
| 73- | 100198 | NUT 6S M10 UNI 5588 ZINC. WHITE |
| 73- | 100199 | SREW TCEI UNI 5931 M10X16 ZINC. WHITE |
| 73- | 100200 | SEEGER UNI 7435-D30 |
| 73- | 100201 | SCREW TCEI UNI 5931 M6X12 BRT |
| 73- | 100204 | ALUMINIUM RIVET 4X16 |
| 73- | 100205 | SCREW STEI UNI 5925 M6X10 PUNTA CILINDRICA BRT |
| 73- | 100206 | SCREW TCEI UNI 5931 M8X35 BRT |
| 73- | 100208 | SCREW TBEI CON FLANGIA M4X16 BRT |
| 73- | 100209 | SCREW TBEI CON FLANGIA M6X16 BRT |
| 73- | 100211 | SCREW TCEI UNI 5931 M4X30 BRT |
| 73- | 100212 | SCREW TCEI UNI 5931 M8X65 BRT |
| 73- | 100213 | FLAT WASHER 32x9x2,6 ZINC. WHITE |
| 73- | 100214 | SCREW TE M10x70 UNI 5739 ZINC. WHITEO |
| 73- | 100215 | EXTERNAL NOTCHED WASHER DIN 6798 D.4 BRT |
| 73- | 100218 | 100g WEIGHT |
| 73- | 100219 | SCREW TC TORX 3x20 1452 . ZINC. WHITE |
| 73- | 100223 | NUT 6S M4 UNI 5588 BRT |
| 73- | 100227 | FLAT WASHER UNI6592-15x28 (14) ZNT BIANCO |
| 73- | 100228 | SCREW TE M14x30 UNI 5739 BRT |
| 73- | 100231 | CUP SPRING 31,5x16,5x0,8 |
| 73- | 100232 | SCREW T.CROSS 4,2x9,5 T1/2T ZINC. BLAK (16947) |
| 73- | 100233 | WASHER CONTACT 14 ZNT GIALLO |
| 73- | 100240 | SCREW TCEI UNI 5931 M4X40 BRT |
| 73- | 100245 | LOW LOCKING NUT M20x1.5 UNI 7474 ZINC. WHITE |
| 73- | 100246 | SCREW TE M20x130 UNI 5737 BRT |
| 73- | 100247 | COTTER UNI 8833-A4 ZINC. YELLOW |
| 73- | 100248 | BOTTOM GROUP 3/2 NC T.4 RED |
| 73- | 100249 | PASSED SIDE CONNECTION TUBE 8x6 |
| 73- | 100250 | CUP 1/8" |
| 73- | 100251 | QUICK T CONNECTION F/F/F TUBO 8x6 |
| 73- | 100254 | QUICK ROTATING CONNECTION 8X6 1/8 |
| 73- | 100255 | QUICK ROTATING CONNECTION 4X2,5 1/8 |
| 73- | 100258 | SEEGER UNI 7435-D20 |
| 73- | 100259 | FLAT TIP SCREW STEI UNI 5923 M10X50 |
| 73- | 100260 | FLAT TIP SCREW UNI 5923 M10X25 |
| 73- | 100270 | FLAT WASHER UNI 6592 23x39 (22) ZINC. WHITE |
| 73- | 100271 | SCREW TE M22x30 UNI 5739 BRT |
| 73- | 100275 | SCREW STEI UNI 5927 M6X5 P.CONICA BRT |

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| 73- | 100296 | TAB UNI 6604 12X8X40 |
| 73- | 100308 | GROWER WASHER UNI 1751 D. 6 |
| 73- | 200104 | BEAD BREAKER CYLINDER PISTON |
| 73- | 200105 | BEAD BREAKER CYLINDER FRONT FLANGE |
| 73- | 200106 | REAR HEAD D.80 ALLUMINIUM |
| 73- | 200107 | FRONT HEAD D.80 ALLUMINIUM |
| 73- | 200108 | GASKET FIXING RING D.18 |
| 73- | 200109 | BEAD BREAKER REAR FLANGE |
| 73- | 200110 | BEAD BREAKER PISTON-RING |
| 73- | 200111 | BEAD BREAKER TIE ROD |
| 73- | 200112 | RACING BEAD BREAKER CYLINDER BAR |
| 73- | 200113 | CYLINDER CHAMBER D.80 SELF CENTERING PLATE 20" |
| 73- | 200114 | CYLINDER PISTON D.80 |
| 73- | 200115 | CYLINDER TIE ROD D.80 SELF CENTERING PLATE 20" |
| 73- | 200116 | CYLINDER ROD D.80 SELF CENTERING PLATE 20" |
| 73- | 200117 | CYLINDER D.80 20" |
| 73- | 200118 | INVERTER CUP |
| 73- | 200119 | INVERTER BODY |
| 73- | 200120 | LOCKING ROLL HOLDER |
| 73- | 200121 | BEAD BREAKER ANTI REVERSE RING |
| 73- | 200122 | BEAD BREAKER CYLINDER BAR |
| 73- | 200124 | OR SPACER |
| 73- | 200125 | GUIDE PIN WASHER |
| 73- | 200127 | SPRING PUSH CUP |
| 73- | 200128 | TURNING COLLECTOR COMPLETE GROUP |
| 73- | 200129 | SLOW RELEASE LOCKING ROLL |
| 73- | 200130 | TOWER TAB |
| 73- | 200131 | LOCKING CYLINDER PISTON |
| 73- | 200132 | GUIDE BUSH |
| 73- | 200133 | ANTI REVERSE RING |
| 73- | 200134 | LOCKING CYLINDER NYLON CHAMBER |
| 73- | 200135 | CYLINDER CUP |
| 73- | 200153 | SELF CENTERING CYLINDER SUPPORT |
| 73- | 200162 | FRONT BEAD BREAKER SUPPORT |
| 73- | 200163 | TOWER ROLL |
| 73- | 200164 | SPECIAL SREW FOR TOWER |
| 73- | 200166 | INVERTER LEVER |
| 73- | 200167 | INVERTER PROTECTION CAP |
| 73- | 200169 | PEDAL INVERTER SPRING |
| 73- | 200170 | SPRING FULCRUM TUBE |
| 73- | 200171 | REGISTER BAR |
| 73- | 200172 | INVERTER CONTROL FORK |
| 73- | 200173 | INVERTER BAR |
| 73- | 200174 | INVERTER REGISTER SPACER |
| 73- | 200175 | LEVEL GUIDE WASHER |
| 73- | 200176 | BAR FIXING PIN |
| 73- | 200177 | INVERTER PEDAL |

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| 73- | 200180 | FIXING TUBE PLATE |
| 73- | 200181 | PEDAL |
| 73- | 200182 | COCK BAR FORK |
| 73- | 200183 | PEDAL RETURN SPRING |
| 73- | 200184 | COCK ROD FORK |
| 73- | 200185 | TRIGGER RETURN SPRING |
| 73- | 200186 | COCK ROD |
| 73- | 200187 | PEDAL BODY |
| 73- | 200191 | INVERTER PEDAL SPACER |
| 73- | 200193 | PLASTIC ANTISHOCK RING |
| 73- | 200194 | SPRING PRESSURE CAP |
| 73- | 200195 | TILTING POLE CONTROL PEDAL |
| 73- | 200196 | SELF CENTERING CONTROL PEDAL |
| 73- | 200197 | PEDALE COMANDO STALLONATORE |
| 73- | 200203 | LOCKING SYSTEM |
| 73- | 200204 | PEDAL AXIS |
| 73- | 200205 | PEDAL SPACER |
| 73- | 200209 | LOCKING CONTROL HANDLE |
| 73- | 200210 | BEAD BREAKER TOOL |
| 73- | 200215 | KIT PROTEZIONE PER PALETTA STALLONATORE |
| 73- | 200216-016 | NYLON PROTECTION FOR BEAD BREAKER TOOL KIT |
| 73- | 200221 | ADJUSTER FOR BEAD BREAKER |
| 73- | 200225 | STOP PLUG FOR BEAD BREAKER SLIP OFF |
| 73- | 200227 | FIXING PIN FOR BEAD BREAKER CYLINDER |
| 73- | 200228-016 | FIXED BEAD BREAKER ARM GREY RAL 7016 |
| 73- | 200234 | NYLON WASHER 52x20 |
| 73- | 200235 | HANDLE PIN TOOL |
| 73- | 200236 | INFLATOR TUBELESS TANK WITH FIXING PLATE |
| 73- | 200242 | WEDGE CAP |
| 73- | 200243 | VERTICAL LOCKING CYLINDERS |
| 73- | 200244 | UNIVERSAL LOCKING CYLINDER CHAMBER |
| 73- | 200248-006 | SLIDE SLIDE 28" ZINC. YELLOW |
| 73- | 200249 | REGISTER FORK |
| 73- | 200250 | FORK PISTON |
| 73- | 200251 | LOCKING CLAMP SPRING |
| 73- | 200254 | WEDGE |
| 73- | 200256 | HORIZONTAL STOPPER |
| 73- | 200261 | PIN FOR BACK SPRING CONNECTION |
| 73- | 200262 | RATCHET TOOL SPACER |
| 73- | 200263 | PIN ADAPTOR FOR INVERTER BOARD FROM 5 TO 6 |
| 73- | 200264 | PEDAL SPACER - TWO PEDALS |
| 73- | 200265 | INVERTER GROUP SPACER |
| 73- | 200266 | SLIDING ROLL |
| 73- | 200268 | UPPER FULCRUM PIN FOR BEAD BREAKER CYLINDER |
| 73- | 200269 | CONTROL CLAMP ROD BUSH |
| 73- | 200270 | CYLINDERS FULCRUM PIN D.80 |
| 73- | 200271 | TOWER |

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| 73- | 200272 | MOUNTING HEAD PROTECTION |
| 73- | 200273 | CYLINDER TIP POLE CHAMBER |
| 73- | 200274 | OVERTURNING POLE CYLINDER FORK ZINC.WHITE |
| 73- | 200275 | OVERTURNING POLE CYLINDER STEM |
| 73- | 200276 | OVERTURNING POLE CYLINDER |
| 73- | 200277-015 | TYRE CHANGER TC522-528 BOX RED RAL 3000 B. |
| 73- | 200277-023 | TYRE CHANGER TC522-528 BOX BLU RAL 5015 B. |
| 73- | 200300-015 | TYRE CHANGER TC322 BOX RED RAL 3000 B. |
| 73- | 200300-023 | TYRE CHANGER TC322 BOX BLU RAL 5015 B. |
| 73- | 200304 | BEAD BREAKER SUPPORTER |
| 73- | 200307-006 | SLIDE 28" IT ZINC. YELLOW |
| 73- | 200308-016 | TYRE CHANGER POLE TC522-528 |
| 73- | 200318-016 | SLIDING ARM TC522-528 GREY RAL 7016 BUCC. |
| 73- | 200322 | LOCKING CYLINDER SUPPORT |
| 73- | 200327 | POLE FULCRUM PIN |
| 73- | 200328-016 | TYRE CHANGER TC322 POLE |
| 73- | 200335 | VERTICAL BAR FOR TYRE CHANGER TC522-528 |
| 73- | 200336-016 | ARM FOR TYRE CHANGER TC322 GREY RAL 7016 B. |
| 73- | 200342 | NORMAL BEAD BREAKER CYLINDER |
| 73- | 200343 | RACING BEAD BREAKER CYLINDER |
| 73- | 200344 | CYLINDER TIE ROD FOR TECNOHELP |
| 73- | 200346 | TYRE CHANGER FOOT |
| 73- | 200348-016 | BEARING STUCTURE TECNOHELP GREY RAL 7016 |
| 73- | 200348-015 | BEARING STUCTURE TECNOHELP RED RAL 3000 |
| 73- | 200349 | TECNOHELP CYLINDER |
| 73- | 200350-016 | TECNOHELP SLIDING GREY RAL 7016 B. |
| 73- | 200351-016 | TECNOHELP THIRD ARM GREY RAL 7016 B. |
| 73- | 200352 | ROLL HOLDER PANEL |
| 73- | 200354 | PUSH WHEEL CONE |
| 73- | 200355 | THIRD ARM GUIDE PANEL |
| 73- | 200357 | THIRD ARM SQUARE FIXED PIN |
| 73- | 200358 | VERTICAL GUIDE BAR WITH ANTI ROTATION CARBON NITRIDING |
| 73- | 200359-016 | TECNOHELP FRONT PROTECTION GREY RAL 7016 B. |
| 73- | 200360-016 | TECNOHELP REAR PROTECTION GREY RAL 7016 B. |
| 73- | 200361 | THIRD ARM HORIZONTAL LOCKING SUPPORT |
| 73- | 200362 | TECNOHELP ROLL |
| 73- | 200371 | FIXING PIN WITH PRESSING WHEEL |
| 73- | 200393 | MOTOR SUPPORT |
| 73- | 200394 | FIXING PIN FOR TECHNOHELP ZINC.WHITE |
| 73- | 200395-003 | REVERSAL BAR SPRING |
| 73- | 200396 | TURNING JOINT PIN FOR RACING VERSION |
| 73- | 200398 | REVERSAL REAR PISTON SPRING |
| 73- | 200399 | SPRING FOR SLOW RELEASE LOCKING |
| 73- | 200400 | RACING ADAPTOR SPRING |
| 73- | 200401 | BEAD BREAKER ARM FULCRUM PIN |
| 73- | 200402 | TURNING JOINT PIN |
| 73- | 200403 | AUXILIARY DEVICE CYLINDER STEM |

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| 73- | 200404 | AUXILIARY DEVICE CYLINDER CHAMBER |
| 73- | 200406 | VERTICAL STEM LOCKING PROTECTION |
| 73- | 200407 | HOLDER CASE FOR TYRE CHANGERS BOX |
| 73- | 200408-016 | TECNOHELP CENTRAL PROTECTION GREY RAL 7016 B. |
| 73- | 200409 | CAR TYRE CHANGER PEDAL PROTECTION |
| 73- | 200410-016 | CAR TYRE CHANGERS SIDE DOOR GREY RAL 7016 |
| 73- | 200414 | SQUARE SELF CENTERING PLATE 20" |
| 73- | 200418 | VERTICAL LOCKING REGISTER SREW |
| 73- | 200419 | TYRE CHANGER FULCRUM SCREW - FLAG ARM |
| 73- | 200420 | IT COCK BAR |
| 73- | 200421-016 | SIDE DOOR FOR CART IT TYRE CHANGER GREY RAL 7016 |
| 73- | 200422 | AUXILIARY DEVICE CONTROL BOX |
| 73- | 200423 | SPECIAL SCREW |
| 73- | 200424 | THREE PHASE INVERTER GROUP |
| 73- | 200425 | REDUCER WITH SHAFT CONICITY 1:5 |
| 73- | 200426 | VERTICAL BAR LOCKING PLATE ZINC. WHITE |
| 73- | 200427 | VERTICAL BAR LOCKING PLATE |
| 73- | 200428-016 | LOCKING HORIZONTAL CYLINDER PROTECTION GREY RAL 7016 |
| 73- | 200429 | TOWER STIFFENING WASHER |
| 73- | 200430 | TOWER GROUP |
| 73- | 200431 | TOWER STIFFENING PLATE |
| 73- | 200432 | TIE ROD |
| 73- | 200433-016 | IT PEDAL PROTECTION GREY RAL 7016 B. |
| 73- | 200437 | LEVELLING WASHER 30X17X0.3 |
| 73- | 200438 | IT PEDAL GROUP |
| 73- | 200440 | SELF CENTERING CONTROL PLATE GROUP |
| 73- | 200441 | LEVELLING WASHER 45x20x0.3 |
| 73- | 200442 | TYRE CHANGER TC322 VERTICAL STEM |
| 73- | 200458 | IT MANOMETER SUPPORT GREY RAL 7016 B. |
| 73- | 200464-006 | 20" SLIDE ZINC. YELLOW |
| 73- | 200465-006 | 20" SLIDE WITH SUPPORT ZINC. YELLOW |
| 73- | 200466-006 | IT 20" SLIDE ZINC. YELLOW |
| 73- | 200467-006 | IT 20" SLIDE WITH SUPPORT ZINC. YELLOW |
| 73- | 200470-016 | HELP FIRST ARM GREY RAL 7016 B. |
| 73- | 200471 | HELP SECOND ARM |
| 73- | 200485 | AUTOMATIC TYRE CHANGER PEDAL GROUP |
| 73- | 200486 | TILTING POLE COCK |
| 73- | 200487 | SELF CENTERING CONTROL COCK |
| 73- | 200488 | BEAD BREAKER CONTROL COCK |
| 73- | 200489-006 | DRIVING SLIDE 20" WITH SUPPORT ZIC.YELLOW |
| 73- | 200492 | REVERSAL LOCKING SPRING |
| 73- | 200493 | VERTICAL STEM LOCKING CYLINDER GROUP |
| 73- | 200497 | BLOWER VALVE FROM 1" |
| 73- | 200502 | GONFIATUBLESS BLOWER VALVE SUPPORT |
| 73- | 200503 | REGULATOR PIN FOR HELP THRUST BEARING ZINC.WHITE |
| 73- | 200504 | HELP SLIDING |
| 73- | 200507 | ARM REGULATOR HANDWHEEL |

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| 73- | 200510-016 | TECNOHELP FOOT GREY RAL 7016 B. |
| 73- | 200511 | COLLECTOR SUPPORT |
| 73- | 200512 | IT TURNING COLLECTOR |
| 73- | 200514 | BEAD BREAKER ARM RETURN SPRING |
| 73- | 200516 | RACING BEAD BREAKER CYLINDER ADAPTOR |
| 73- | 200517 | RACING BEAD BREAKER CYLINDER STEM PLUG |
| 73- | 200535 | TOWER LOCKING VALVE GROUP |
| 73- | 200536 | SLIDING LOCKING FRONT LEVER |
| 73- | 200537 | SLIDING LOCKING REAR LEVER |
| 73- | 200540 | TERMINAL BOARD 4 POLE 3 OUTPUT CABLE 3PH |
| 73- | 200541 | TERMINAL BOARD 4 POLE 3 OUTPUT CABLE 1PH |
| 73- | 200547 | REDUCER PULLEY A120 |
| 73- | 200551 | STEM REGULATOR HANDLE |
| 73- | 200554 | REDUCER WITH SHAFT CONICITY 1:5 IT VERSION |
| 73- | 200555 | IT CONTROL PEDAL |
| 73- | 200560 | TIPPING POLE RUBBER PROTECTION |
| 73- | 200561 | TIPPING POLE SHOCK ABSORBER |
| 73- | 200562 | SCREW TE M10x180 BRT |
| 73- | 200563 | UNDERSIDE OF 6"8"10" SCOOTER ADAPTOR ZINC.WHITE |
| 73- | 200564 | MOTORCYCLE ADAPTOR UNDERSIDE |
| 73- | 200571 | SCOOTER ADAPTOR - 6"/8"/10" WEDGE |
| 73- | 200572 | RACING BEAD BREAKER RUBBER WASHER |
| 73- | 200573 | BELT TIGHTENER RUBBER WASHER |
| 73- | 200574 | IT PEDAL FULCRUM PIN |
| 73- | 200578 | TC522-528 HORIZONTAL LOCKING CYLINDER GROUP |
| 73- | 200583 | TOOL PROTECTION FIXING |
| 73- | 200584 | MR 1/4" 039 4R T 3.5 B+VAL+RAC. AUT. |
| 73- | 200585 | FR+BUI+L 1/4" 040 12 R + CONNECTION |
| 73- | 200586 | F+L 1/4" 042 07 PE +MR+V |
| 73- | 200588 | CLOSING SLOT BOX FOR PEDALS (TWO PEDALS) |
| 73- | 200589 | SLIDE GUARD KIT |
| 73- | 200599 | TECNOHELP REGULATOR ROUND |
| 73- | 200600 | HELPER THRUST BUFFER |
| 73- | 200601 | IT PEDAL POLYURETHANE SPRING |
| 73- | 200602 | IT PEDAL COCK |
| 73- | 200603 | BLOWING VALVE GROUP |
| 73- | 200604 | MOTORCYCLE ADAPTORS KIT |
| 73- | 200605 | NYLON PROTECTION FOR BEAD BREAKER TOOL |
| 73- | 200606 | SCOOTER ADAPTORS KIT |
| 73- | 200607 | RUBBER TUBE A 20 BAR 19X30 L=680 BLOWING VALVE BOTTLE |
| 73- | 200608 | RUBBER TUBE 20 BAR 19X30 L=510 BLOWING VALVE COMMUTATOR |
| 73- | 200609 | IT BOTTLE GROUP |
| 73- | 200610 | INFLATING MANOMETER GROUP |
| 73- | 200614 | RILSAN TUBE 6X4 L=75 |
| 73- | 200619 | 1 PHASE INVERTER GROUP |
| 73- | 200639 | COMMUTATOR GROUP + 3 PHASE INVERTER |
| 73- | 200651 | PEDAL TC322 IT ZINC. WHITE VERSION |

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| 73- | 200667 | TECNOHELP PASS SIDE CORNER ZINC.WHITE |
| 73- | 200668 | ANTIROLL PANEL LOCK |
| 73- | 200678 | 5/3 CLOSED CENTRES 1/8" WITH CONNECTORS |
| 73- | 200682-006 | 28" SLIDE ZINC. YELLOW |
| 73- | 200693 | BRASS VALVE + BOTTOM VALVE FOR AIR OUTLET (INFL.MANOMETER) |
| 73- | 200866 | TECNOHELP BRASS BLADE |
| 73- | 200875 | SLIDE GUARD |
| 73- | 200881 | GASKET KIT FOR CYLINDER D.80 |
| 73- | 200882 | GASKET KIT FOR BEAD BREAKER CYLINDER |
| 73- | 200884 | TURNING COLLECTOR GASKET KIT |
| 73- | 200885 | INVERTER CONTROL GROUP |
| 73- | 200902 | JACKET GROUP + BEAD BREAKER CYLINDER CHAMBER |
| 73- | 300001-015 | CAR WHEEL BALANCER BOX RED RAL 3000 B. |
| 73- | 300001-023 | CAR WHEEL BALANCER BOX BLU RAL 5015 B. |
| 73- | 300011-016 | CAR WHEEL BALANCER BRAKE PEDAL GREY RAL 7016 B. |
| 73- | 300012-016 | WHEEL PROTECTION SUPPORT GREY RAL 7016 B. |
| 73- | 300015 | WB255 WEIGHTS HOLDER CARTER |
| 73- | 300016 | CAR WHEEL BALANCER WHEEL PROTECTION CARTER |
| 73- | 300017 | VIDEO WHEEL BALANCER WEIGHTS HOLDER CARTER |
| 73- | 300018 | GAUGE MEASURING STEM |
| 73- | 300019 | CAR WHEEL BALANCER ACTIVATION MICRO CAM |
| 73- | 300020 | PROTECTION FULCRUM PIN |
| 73- | 300023 | OSCILLANTING GROUP SHAFT |
| 73- | 300024 | OSCILLANTING GROUP SUPPORT |
| 73- | 300025 | OSCILLANTING GROUP PULLEY |
| 73- | 300026 | OSCILLANTING GROUP CLAMP |
| 73- | 300027 | OSCILLANTING GROUP TUBE |
| 73- | 300028 | FEELER PIN PART |
| 73- | 300029 | FEELER PIN FLOATING PART |
| 73- | 300030 | FLOATING PART LOCK |
| 73- | 300031 | FEELER PIN LOCKING WEIGHT |
| 73- | 300032 | FEELER PIN DRIVING PIN ZINC. WHITE |
| 73- | 300033 | FEELER PIN CLOSER |
| 73- | 300034 | ADHESIVE WEIGHT EJECTOR UPPER PART |
| 73- | 300035 | ADHESIVE WEIGHT EJECTOR LOWER PART |
| 73- | 300037-016 | WHEEL PROTECTION STOPPER CAR WHEEL BALANCER GREY RAL 7016 |
| 73- | 300039 | WHEEL PROTECTIONCARTER SPRING |
| 73- | 300043 | FRONT GAUGE REVERSAL SPRING |
| 73- | 300044 | BRAKE END RUN SPRING |
| 73- | 300045 | REAR GAUGE BUSH |
| 73- | 300046 | FRONT GAUGE BUSH |
| 73- | 300047 | GAUGE WASHER |
| 73- | 300049 | OPTOELECTRONIC READING DISC |
| 73- | 300050 | LOCKING DISC |
| 73- | 300052 | FRONT GAUGE SUPPORT |
| 73- | 300055-011 | WHEEL BALANCER BRAKE SHOE WITH BRAKE LINING |
| 73- | 300059 | CONES SUPPORT |

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| 73- | 300064 | GUIDE PIN BUSH |
| 73- | 300065 | FRONT GAUGE RACK |
| 73- | 300067 | FRONT GAUGE GEAR |
| 73- | 300068 | BRAKE SHOE BUSH ZINC.WHITE |
| 73- | 300069 | CAR WHEEL BALANCER OSCILLANTING GROUP |
| 73- | 300070 | FRONT PICK UP GROUP |
| 73- | 300071 | REAR PICK UP GROUP |
| 73- | 300072 | SCREW WITH NOTCH FOR PICK UP |
| 73- | 300073 | MECHANICAL BRAKE REVERSAL SPRING |
| 73- | 300074 | POSITIONING WEIGHTS PLIER SPRING |
| 73- | 300075 | ASTA CALIBRO ANTERIORE |
| 73- | 300076 | FRONT GAUGE BAR |
| 73- | 300077 | OSCILLANTING GROUP PIN COVER |
| 73- | 300079 | REAR GAUGE GEAR |
| 73- | 300080 | REAR GAUGE UPPER PART |
| 73- | 300082 | REAR GAUGE UPPER SPRING |
| 73- | 300083 | REAR GAUGE COVER |
| 73- | 300084 | REAR GAUGE LOWER SPRING |
| 73- | 300085 | DRIVING WASHER LEVEL SPRING |
| 73- | 300086 | DRIVING WASHER SHAPED SPRING |
| 73- | 300087 | REAR GAUGE FEELER PIN |
| 73- | 300088 | REAR GAUGE BAR |
| 73- | 300089 | TONDO DI FULCRO CALIBRO POSTERIORE |
| 73- | 300093 | WHEEL PROTECTION BALANCING SPRING PULL |
| 73- | 300096 | WB255 COMPLETE PANEL |
| 73- | 300097 | VIDEO WB630 ELECTRIC BOARD |
| 73- | 300098 | VIDEO WB630 ACTION CENTER |
| 73- | 300099 | WIDTH GAUGE GROUP |
| 73- | 300100 | WB630-255 MICRO WITH CABLE |
| 73- | 300101 | BRAKE PEDAL SPRING GUIDE |
| 73- | 300103 | CONES COMPLE FLANGE |
| 73- | 300104 | DIAMETER/WIDTH GAUGE |
| 73- | 300105 | UNIVERSAL HOLE FLANGE 3-4-5 HAWEKA |
| 73- | 300106 | QUICK MOTORCYCLE FLANGE |
| 73- | 300107 | 4RD CONES |
| 73- | 300117 | 5RD CONES |
| 73- | 300120 | OPTOELECTRONIC GROUP SUPPORT |
| 73- | 300122 | WIDTH INPUT GROUP |
| 73- | 300130 | WHEEL BALANCER MOTOR WITH PULLEY |
| 73- | 300139 | WIDTH GAUGE |
| 73- | 300146 | UNIVERSAL SPACER |
| 73- | 300180 | HOLDER WHEEL PIN FIXING KEY |
| 73- | 300182 | MOTORCYCLE SHAFT 14mm Cod. HAWEKA 870 997 140 |
| 73- | 300184 | CALIPER FOR PCD IN NYLON COD.HAWEKA 490008000 |
| 73- | 300185 | HEXAGONAL TUBE KEY 19 / 22 |
| 73- | 300187 | CONES D. 75-110 |
| 73- | 300188 | CONES D. 54-80 |

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| 73- | 300189 | CONES D. 42-65 |
| 73- | 300190 | CONCAVE SLEEVE |
| 73- | 300191 | STOPPER RING IN NYLON |
| 73- | 300192 | QUICK FIXING LOCKNUT |
| 73- | 300193 | HEXAGONAL "L" KEY 14 |
| 73- | 300198 | CONICAL NUT M10X1.25 |