

### <u>5210 Operators Manual</u>

Rev: 211



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### <u>Warranty</u>

This warranty will cover parts, labor and mileage up to 6 months for any mechanical machine part that fails due to manufacturing.

Excluded from the warranty are all normal wear and consumable items. (bead-breaking bumpers, hoses and all plastic accessories)

Any machine damage incurred during shipping is not the responsibility of the manufacturer or seller. (Any damage incurred during shipping is the responsibility of the Freight Company)

Any damaged or injury caused by operator error, misuse, lack of maintenance or faulty utilities (electrical or air supply) is not the responsibility of the manufacturer or seller.

For all of your service and parts needs please contact Wheel Products by McCourt at 1-800-232-2190

#### Introduction:

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

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

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



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



WARNING: Dangerous or unsafe procedures that can cause serious iniury or death



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



Read these instructions carefully before using the machine. Keep this manual and the illustrated materials supplied with the equipment in a folder near the place of operation so as to allow the machine operators to consult the documentation at any time. The manual is only to be considered valid for the machine serial number and model stated on the attached nameplate. The instructions and information described in this manual must always be complied with: the operator will be held responsible for any operation not specially described and authorized in this manual.

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

#### Installation:



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



All regulations in force concerning safety at work must be complied with when choosing the installation position. In particular, the machine must only be installed and operated in protected environments where there is no risk of exposure to water or liquids. IMPORTANT: for the correct and safe operation of the machine, the lighting level in the place of operation should be at least 300 lux.

Environmental operating conditions must comply with the following requirements:

Relative humidity ranging from 30% to 80% (without condensation);
Temperatures ranging from 23° to +122°F.



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



The machine must not be operated in potentially explosive atmospheres

#### Safety Regulations



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

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

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

#### The Following Conditions are Essentia

- Read and understand the information and instructions described in this manual;

- Have a thorough knowledge of the features and characteristics of the machine;

- Keep unauthorized persons well clear of the working area;

- Make sure that the machine has been installed in compliance with all relevant standards and regulations in force;

- Make sure that all machine operators are suitably trained, that they are capable of using the machine correctly and safely and that they are adequately supervised during work;

- Do not touch power lines or the inside of electric motors or any other electrical equipment before making sure they have been powered off; - read this booklet carefully and learn how to use the machine correctly and safely;

- Always keep this user manual in a place where it can be readily consulted and do not fail to refer to it.



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

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

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





**Read Operations Manual** 



Wear Protective Glasses

Power off the Electrical Source of the Machine during Maintenance



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



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



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







#### Installation & Operation

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

#### 2.1Protective Cover Installation: 2.2Main Shaft Installation



This manual must be grounded with reliable earth wire.

#### 2.3 Electrical Connection and Earthing

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

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

This machine must be fitted with 13Amps fuse.

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



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

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

• It is recommended the machine is installed with a 30ma circuit breaker and voltage stabilizer in area where supply voltage cannot be guaranteed;

• To prevent the unauthorized use of the machine it is recommended to disconnect the machine from the power supply



Ground wire is necessary for the correct operation. Do not use these as a ground source (air pipes, water pipes, telephone line and other unsuitable objects.)

#### 3.0 Technical Features

#### 3.1 FEATURES

• It must be ensured the machine is grounded correctly to earth. If not, contact your local distributor.

• Low noise, wear resistant bearing for high precision

• Computerized wheel balancer with dynamic, static multiple ALU modes and ALU mode for motorcycle

• Self-calibration and automatic trouble diagnosis

#### 3.2 Main Technical Specification

- rated voltage (selectable) 60HZ
- power 250W
- Average balancing time 7S (20KG wheel)
- Accuracy + 2g
- Noise < 69dB
- Rim Diameter 10"-24"
- Maximum wheel weight 154 lbs (70KG)
- Rim width 1.5" 20"
- Net Weight 246 lbs (112KG)
- Max wheel diameter 39inch (1000mm)
- working environment temperature 32°F -
- 122°F (0°C to +50°C), relative humidity: 30% --80% (no condensation);

#### 4.0 Transportation & Installation

#### 4.1 Transportation

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

• Store environment: RH20%-95% temperature - 14°F to +140°F (10°C to +60°C)

• When transporting or using the machine do nc lift or impact the shaft as it will cause permanen damage.





Transport the machine in the accordance of the figure above.

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

When moving the balancer to the desired working area, lift it as shown in of figure 4.





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

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

#### 4.2 Installation

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

#### 5.0 Safety Precautions

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

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

**5.1.3** In the event of an emergency, you should press the "STOP" button immediately. To prevent injury, the protective cover should be used at all times.

**5.1.4** Before balancing, operators should check all the tires and wheels for possible defects. Do not balance the tires and wheels with any defects.

**5.1.5** Do not attempt to balance the wheel if it has any defects.

#### General Conditions of Use

The wheel balancers described in this manual must only be used to measure the amount and position of wheel imbalances, within the limits specified in the technical data section. Furthermore, models equipped with motors must be used with a wheel guard.

# A WARNING

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

# **A** CAUTION

Do not spin a tire without using the wing nut.

**A** WARNING

Wheel guard plays the role of prevention and safety.



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

# **A** WARNING

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

# A WARNING

Learn the function and location of all the controls.



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



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

#### NAMEPLATE



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

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





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





#### **Display Button Function**

Home = Used to confirm internal program selection.

Weight = Used to show exact weight value.

<u>**C**</u> = Used to change display reading from ounces to grams or change the measured rim width or

diameter to mm or inch reading.

<u>**Dis + =**</u> Used to increase the measured distance reading.

<u>Dis – =</u>Used to decrease the measured distance reading.

<u>Br + =</u> used to increase the measured rim width reading.

<u>Br – =</u> Used to decrease the measured rim width reading.

Dia + = Used to increase the tire diameter reading.

Dia – = Used to decrease the tire diameter reading.

**<u>STA/Dyn =</u>** Used to put the machine in Automotive or Motorcycle Static mode.

**MOT =** Used to put the machine in the dynamic motorcycle mode.

<u>Alum 1 =</u> Used to put the machine in the Alum 1 mode.

<u>Alum 2 =</u> Used to put the machine in the Alum 2 mode.

<u>Alum 3 =</u> Used to put the machine in the Alum 3 mode.

Note: When all program button lights are off the machine is in the Dynamic mode.

**<u>Stop =</u>** Used to exit internal programs and stop the tire rotation.

<u>Start =</u> Used to start the tire rotation spin when the hood is closed or when the hood is open if the hood switch is turned off via internal programming.

**Note:** The Home, Dis + / Dis –, and the Stop buttons are used for internal program entry or adjustments.

### <u>Entering Wheel Data</u>

When entering the wheel data, the following three parameters must be input:

1. Wheel Distance – Pull the distance arm that is located on the front right corner of the machine out and touch it to the edge of the rim. Input the largest number that can be read on the scale by pressing either the DIS+ or DIS- buttons.



2. Rim Width – Measure the rim width with the rim calipers. Input the measured number by pressing either BR+ or Br- buttons.



**3. Tire Diameter** – Read the tire diameter off of the side of the tire. Input the tire diameter by pressing either the Dia+ or Dia- button.



### <u>Balancing Modes</u>

- <u>Dynamic Mode (Dyn)</u> use 2 clip-on weights, one on each side of the rim to balance the tire. Note: in all cases 2 weight are not needed to balance the tire.
- <u>Static Mode (STA)</u> use 1 clip-on or tape on weight to balance the tire. Note: This type of balance does not correct the dynamic imbalance of the tire.
- <u>Motorcycle Mode (MOT)</u> used in conjunction with the motorcycle adapter, to balance the tire using 2 weights.
   Note: If using only 1 weight in the center of the wheel, use the Static mode.
- <u>Aluminum 1 Mode (Alum 1)</u> use 1 tape weight on the inside of the rim and 1 tape weight on the front face side of the rim.
- <u>Aluminum 2 Mode (Alum 2)</u> use 2 tape weights on the inside of the rim.
- <u>Aluminum 3 Mode (Alum 3)</u> use 1 clip-on weight on the back side of the rim and 1 tape weight on the inside of the rim.

### <u>Correct Weight Positioning</u>

• Indicates -- clip-on weight



1 clip-on weight on the inside edge of the rim and 1 clip-on weight on the outside edge of the rim Indicates -- tape weight



1 clip-on weight on the inside edge of the rim or 1 clip-on weight on the outside edge of the rim or for best results 1 tape weight on the inside of the rim in the center.

# "For Wheels with Deep Dish Faces"





1 tape weight on the inside of the rim and 1 tape weight on the front face side of the rim.

# "For Standard Alloy Wheels"



2 tape weights on the inside of the rim.



1 clip-on weight on the inside edge of the rim and 1 tape weight on the inside of the rim.

### <u>Dynamic Balance</u>

- Press the STA/Dyn button until all the program lights are off. Note: This puts the machine in the dynamic mode. Enter the wheel data for the tire you are balancing.
- Close the hood and let the tire spin.
- When the tire stops open the hood.
- Slowly rotate the tire by hand until the imbalance weight reading is shown in the left or right display windows and the display lights are all lit up.
- Apply the weight amount shown in the display window that has all the lights lit up at the 12 o'clock position on the rim.
- Slowly rotate the tire by hand until the opposite display window has all the lights lit up.
- Apply the weight amount shown in the display window at the 12 o'clock position on the rim.
- Close the hood and let the tire spin.
- When the tire stops open the hood.
- Both display windows should show 0.00
- If this is not true then remove the wheel weight from the side of the rim that is not 0.00 and repeat steps 3 11.

### <u>Static Balance</u>

Note: This type of balance does not correct the dynamic imbalance of the tire.

- Enter the wheel data in the dynamic mode.
- Press the STA/Dyn button to enter the static mode.
- Close the hood and let the tire spin.
- When the tire stops open the hood.
- Slowly rotate the tire until the right display window shows the imbalance reading and all the right side display lights are lit up.
- Apply the weight amount shown in the display window at the 12 o'clock position on the rim.
- Note: The weight can be placed on the left side of the rim, right side of the rim or for best results use a tape weight and place it inside the rim in the center at 12 o'clock.
- Close the hood and let the tire spin.
- When the tire stops open the hood.
- The right display window should show 0.00
- If this is not true then remove the wheel weight and repeat steps 3 9.

### <u>Alum 1 Balance</u>

Note: To use this balancing mode, the tape weights must be placed on the front face side of the rim and one on the inside edge of the rim.

- 1. Enter the wheel data in the dynamic mode.
- 2. Press the Alum 1 button.
- 3. Close the hood and let the tire spin.
- 4. When the tire stops open the hood.
- 5. Slowly rotate the tire by hand until the imbalance weight reading is shown in the left or right display window and the display lights are all lit up.
- 6. Apply the weight amount shown in that display window at the 12 o'clock position on the rim.
- 7. Slowly rotate the tire by hand until the opposite display window has all the lights lit up.
- 8. Apply the weight amount shown in that display window at the 12 o'clock position on the rim.
- 9. Close the hood and let the tire spin.
- 10. When the tire stops open the hood.
- 11. Both display windows should show 0.00
- 12. If this is not true then remove the wheel weight from the side of the rim that is not 0.00 and repeat steps 3 11.

Note: In some cases it may be necessary to add a second weight to either side of the rim to balance the tire to 0.00

### <u>Alum 2 Balance</u>

Note: To use this balancing mode, 2 tape weights must be placed on the inside of the rim.

- 1. Enter the wheel data in the dynamic mode.
- 2. Press the Alum 2 button.
- 3. Close the hood and let the tire spin.
- 4. When the tire stops open the hood.
- 5. Slowly rotate the tire by hand until the imbalance weight reading is shown in the left or right display window and the display lights are all lit up.
- 6. Apply the weight amount shown in the display window at the 12 o'clock position on the rim.
- 7. Slowly rotate the tire by hand until the opposite display window has all the lights lit up.
- 8. Apply the weight amount shown in that display window at the 12 o'clock position on the rim.
- 9. Close the hood and let the tire spin.
- 10. When the tire stops open the hood.
- 11. Both display windows should show 0.00
- 12. If this is not true then remove the wheel weight from the side of the rim that is not 0.00 and repeat steps 3 11.

Note: In some cases it may be necessary to add a second weight to either side of the rim to balance the tire to 0.00

### <u>Alum 3 Balance</u>

Note: To use this balancing mode, one clip-on weight must be placed on the back side of the rim and one tape weight on the inside of the rim.

- 1. Enter the wheel data in the dynamic mode.
- 2. Press the Alum 3 button.
- 3. Close the hood and let the tire spin.
- 4. When the tire stops open the hood.
- 5. Slowly rotate the tire by hand until the imbalance weight reading is shown in the left or right display window and the display lights are all lit up.
- 6. Apply the weight amount shown in the display window at the 12 o'clock position on the rim.
- 7. Slowly rotate the tire by hand until the opposite display window has all the lights lit up.
- 8. Apply the weight amount shown in that display window at the 12 o'clock position on the rim.
- 9. Close the hood and let the tire spin.
- 10. When the tire stops open the hood.
- 11. Both display windows should show 0.00
- 12. If this is not true then remove the wheel weight from the side of the rim that is not 0.00 and repeat steps 3 11.

Note: In some cases it may be necessary to add a second weight to either side of the rim to balance the tire to 0.00

### <u>Internal Programs</u>

Note: These programs require more than one button to be pressed to enter them.

- 1. "In tes" -- Machine calibration Calibrates the machine.
- 2. Encoder read-out Shows the encoder wheel function.
- 3. "P" Prevents the hood switch function from being changed.
- 4. "SP" Turns the hood switch on or off.
- 5. "APP" Changes the machine weight round-off.
- 6. "biP" Turns the machine beeper on or off.

### <u>"In tes" -- Machine Calibration</u>

Note: You must use a balanced steel 14 inch tire and rim and the calibration weight to do the machine calibration properly.

- 1. Press the "home" button once.
- 2. The display will show "P"
- 3. Press the "Dis +" button once.
- 4. The display will show "Set Up"
- 5. Press the "home" button once
- 6. The display will show "In tes"
- 7. Press the "Dis +" button once
- 8. The display will show "Cal and Cal"
- 9. Press the "home" button once
- 10. The display will show "Add 0.00"
- 11. Close the hood and let the tire spin.
- 12. When the tire stops open the hood.
- 13. Slowly rotate the tire by hand until the right display window shows "Add 3.50" and all of the display lights are lit up.
- 14. Hold the tire in this position and hammer the 3.50 ounce calibration weight onto the right side of the rim at the 12 o'clock position.
- 15. Close the hood and let the tire spin.
- 16. When the tire stops open the hood.
- 17. The machine will beep 3 times and show "SAU and DAT"
- 18. The machine calibration is now completed.

### Encoder Read Out

Note: This program allows you to see a live reading of the weight position read out. (Also lets you make sure it is working properly). The correct read out should be between 0-127.

- 1. Press the "home" button once.
- 2. Press the "Dis +" button once.
- 3. Press the "home" button twice.
- 4. The display will show a number between 0 and 127.
- 5. If the shaft is rotated the number on the screen will count showing you that the position encoder is working.

### <u>"P" – Hood Switch Lock Out</u>

Note: This function prevents the "SP" function from being changed.

If the "P" setting is set to "ON" the hood switch function can be changed. If the "P" setting is set to "OFF" the hood switch function can not be changed.

Press the "home" button once.

- 1. The display will show "P"
- 2. Press the "home" button again to see the "P" setting.
- 3. The display will either show "ON" or "OFF"
- 4. To change the "P" setting press either the "Dis +" or "Dis –" button once.
- 5. The display will change from "ON" to "OFF" or "OFF" to "ON" depending on which setting it is set to.
- 6. Press the "home" button once to confirm your choice.
- 7. Press the "stop" button to exit.

"SP" – Hood switch ON or OFF

Note: This function allows the hood switch to be electronically bypassed.

If the "SP" setting is set to "ON" the hood switch is not bypassed and the hood must be closed to spin the tire.

If the "SP" setting is set to "OFF" the hood switch is bypassed and the "start" button must be pressed to spin the tire.

- 1. Press the "home" button once
- 2. Press the "Dis +" button 4 times.
- 3. The display will show "SP"
- 4. Press the "home" button to show the hood switch setting either "ON" or "OFF"
- 5. Press the "Dis +" button to change the hood switch setting from either "ON" to "OFF" or "OFF" to "ON"
- 6. Press the "home" button to confirm your choice.
- 7. Press the "stop" button to exit.

### <u> "APP" – Machine Weight Round Off</u>

Note: This function changes the machine weight round off.

- 1. Press the "home" button once.
- 2. Press the "Dis +" button 3 times.
- 3. The display will show "APP"
- 4. Press the "home" button once.
- 5. The display will show either 5 or 1 if in grams mode or .25 or 0.1 if in ounces mode.
- 6. Press the "Dis +" button to change the setting.
- 7. Press the "home" button once to confirm your choice.
- 8. Press the "stop" button to exit.

### <u> "biP" – Machine Beeper Switch</u>

Note: This function turns the machine beeper "ON" or "OFF"

If the "biP" setting is "ON" the machine will beep when each button is pressed. If the "biP" setting is "OFF" the machine will not beep when each button is pressed.

- 1. Press the "home" button once
- 2. Press the "Dis +" button twice.
- 3. The display will show "biP"
- 4. Press the "home" button once.
- 5. The display will show either "ON" or "OFF"
- 6. Press the "Dis +" button once to change the beeper setting.
- 7. Press the "home" button once to confirm your choice.
- 8. Press the "stop" button to exit.

### <u>Machine Calibration</u>

Note: You must use a balanced steel 14 inch tire and rim and the calibration weight to do the machine calibration properly.

- 1. Press the "home" button once.
- 2. The display will show "P"
- 3. Press the "Dis +" button once.
- 4. The display will show "Set Up"
- 5. Press the "home" button once
- 6. The display will show "In tes"
- 7. Press the "Dis +" button once
- 8. The display will show "Cal and Cal"
- 9. Press the "home" button once
- 10. The display will show "Add 0.00"
- 11. Close the hood and let the tire spin.
- 12. When the tire stops open the hood.
- 13. Slowly rotate the tire by hand until the right display window shows "Add 3.50" and all of the display lights are lit up.
- 14. Hold the tire in this position and hammer the 3.50-ounce calibration weight onto the right side of the rim at the 12 o'clock position.
- 15. Close the hood and let the tire spin.
- 16. When the tire stops open the hood.
- 17. The machine will beep 3 times and show "SAU and DAT"
- 18. The machine calibration is now complete.

### Fine-tune Calibration

Note: Only use this calibration if the "machine calibration" procedures do not correct calibration issues.

Note: You must use a balanced 14 inch steel tire and rim when performing this procedure.

- 1. Mount the tire onto the machine.
- 2. Enter the wheel data.
- 3. Press the "home" button once.
- 4. The display will show "P"
- 5. Press the "Dis +" button once.
- 6. The display will show "Set UP"
- 7. Press the "home" button once.
- 8. The display will show "In tes"
- 9. Press the "home" button once.
- 10. The display will show "POS " and a number between 0 and 127.
- 11. Slowly rotate the tire by hand until the right display shows 110.
- 12. Press the "weight" button once.
- 13. Slowly rotate the tire by hand until the right display shows 120.
- 14. Press the "weight" button once.
- 15. The display will show "Add and 0.00"
- 16. Close the hood and let the tire spin.
- 17. When the tire stops open the hood.
- 18. The display will show "Add and 3.50"
- 19. Slowly rotate the tire by hand until the right display window shows 3.50 and all the right display lights are lit up.
- 20. Hold the tire in this position and hammer the 3.50 ounce calibration weight onto the right side of the rim at the 12 o'clock position.
- 21. Close the hood and let the tire spin.
- 22. When the tire stops open the hood.
- 23. The Display will show "3.50 and Add"
- 24. Remove the 3.50 ounce calibration weight from the rim.
- 25. Slowly rotate the tire by hand until the left display window shows 3.50 and all the lift display lights are lit up.
- 26. Hold the tire in this position and hammer the 3.50 ounce calibration weight on to the left side of the rim at the 12 o'clock position.
- 27. Close the hood and let the tire spin.
- 28. When the tire stops, open the hood.
- 29. The display will show "SAU and DAT"
- 30. The "fine-tune" calibration in now complete.

## <u>Encoder Wheel and Vibration Pick-up</u> <u>Function Test</u>

Note: This program lets you verify that the Encoder Wheel and the Vibration Pick-ups are functioning correctly.

Note: You must remove the top weight tray and the right side panel to perform this test.

- 1. Press the "home" button once.
- 2. The display will show "P"
- 3. Press the "Dis +" button once.
- 4. The display will show "Set up"
- 5. Press the "home" button once.
- 6. The display will show "In and tes"
- 7. Press and hold both the "Dis +" and "Dis –" buttons at the same time and then press the "home" button once.
- 8. The display will show "Cal and Cal"
- 9. Press the "Dis +" button once.
- 10. The display will show "In and tes"
- 11. Press the "home" button once.
- 12. The display will show "Pos" and a number between 0 and 127.
- 13. Slowly rotate the tire shaft clockwise and the number in the right display should count up.
- 14. Slowly rotate the tire shaft counter clockwise and the number in the right display should count down.
- 15. If this is correct the encoder wheel is ok.
- 16. If this is not correct there is a problem with the encoder wheel, which may require service to repair it.
- 17. Press the "home" button once.
- 18. The display will show "STA" and a 3 digit number in the right display.
- 19. Push on the "Shaft pickup" that is mounted vertical and the number in the right display will increase.
- 20. Release your hand from the "Shaft pickup" and the number in the right display will decrease.
- 21. If this is correct the "Shaft pickup" is installed correctly.
- 22. If this is not correct the "Shaft pickup" is not installed correctly and may require service to repair it.
- 23. Press the "home" button once.
- 24. The display will show "dYN" and a 3 digit number in the right display.
- 25. Push on the "Shaft pickup" that is mounted parallel to the main shaft with your hand and the number in the right display will increase.
- 26. Release your hand and the number in the right display will decrease.
- 27. If this is correct the "Shaft pickup" is installed correctly.
- 28. If this is not correct the "Shaft pickup" in not installed correctly and may require service to repair it.

#### Flange Disk Positioning (Optional)



Front coning is the most common method. It is a simple and quick operation. It is mainly used for steel rims and aluminum alloy rims with very slight center hole bevels.

Main shaft  $\longrightarrow$  Wheel (direction of the rim installation surface is inside)  $\longrightarrow$  cone  $\rightarrow$  quick nut.

When the wheel is beveled on the backside, adopt this method to guarantee the accurate centering of the rim on the main shaft. It is suitable, especially with Alloy wheels.



Main Shaft  $\longrightarrow$  spring  $\longrightarrow$  suitable cone Wheel  $\longrightarrow$  bowl  $\longrightarrow$  quick nut.



Suitable for larger wheels Main shaft → flange disk (fixed on the main shaft) → wheel → cone → quick nut



The Choice of the cone should be matched to the rim center hole and pay attention to its direction or it will cause inaccurate mounting.

Input Value



### Error Indication

DISPLAY	CAUSE	SOLUTION	
ERR OPN	Protecting Cover not lowered down	Lower down the Protective Cover	
ERR SP	Rotation speed not enough	Check the motor and belt	
ERR OFF	Stop the error	Press the start key or raise up the	
		protective cover	
ERR FAC	Factory set-up fault	Correct factory set-up	
ERR USR	Customer set-up fault	Set-up fault	

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



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

## <u>General Troubleshooting</u>

DESCRIPTION	CAUSE		SOLUTI	ON
Start the machine, but there is	1. Check t	he circuit of 110V is	1.	Check and connect the
no display	normal	or not.		external power source.
	2. Power	board fault	2.	Change the power board.
	3. The cat	le between the	3.	Check the plug cable.
	power	board and the	4.	Change the computer
	compu	er is loose		board.
	4. Compu	ter Board fault.		
Display is normal, but the start	1. Contac	t switch not good.	1.	Open the housing of the
button and input push button	2. Machin	e breakdown.		machine and plug in and
are not working.				tighten the contact.
			2.	Start the machine again.
Display is normal but not braking	1. The cat	le between the	1.	Plug in and tighten the
after start.	power	board and computer		cable between the
	loose.			computer and power
	2. Power	board fault.		board.
	3. Compu	ter board fault.	2.	Change the power board.
			3.	Change the computer
				board.
Balance is not accurate and	1. Sensor	lead connect or	1.	Connect again.
difficult to reach "000"	contact	not good.	2.	Connect the memory value
	2. Memor	y value lost.		according to the manual.
Each spn, the change of the	1. There a	re foreign bodies on	1.	Change the wheel.
value will not exceed 5g	the rim	or the assemble	2.	Dry, & recalibrate the
	surface	in the rim center		sensor.
	deform	ation.	3.	Fix anchor bolt.
	2. Sensor	damp or quick nut		
	not tigł	ntly clamped.		
	3. The ext	ernal power voltage		
	or the a	ir pressure is not		
	enough	. The flange dick not		
	locked.			
Each spin, the range of the value	1. There a	re foreign bodies on	1.	Change the wheel
will be 20-90g	the wh	eel or the unbalance	2.	Check the sensor and
	of the v	vheel value too big.		wiring
	2. Sensor	is damaged.	3.	Check the power source
	3. Externa	l power source		assembly stabilizer.
	voltage	is too low.		
Balance is not accurate and	1. Sensor	damp or damaged.	1.	Calibrate again, dry and
difficult to reach "000"	2. Program	n chore.		then self calibration
			-	change.
			2.	Selt-calibration again.
When second demount, the	1. Wheel	internal hole irregular.	1.	Change the wheel.
error will exceed 10g	2. Flange	disk assemble not	2.	Check the assembly surface
	properl	у.		and try again.

### **Standard Accessories of the Wheel Balancer**



Caliper

DK-W-1



MJ-I



#### CONTENT LIST OF ACCESSORIES SUPPLIED WITH DWB953 WHEEL BALANCER

Weight Pliers	1 off
(Br)eadth Measuring Scale	1 off
Centering Cone	4 off
Quick Nut	1 off
Threaded Shaft	1 off
M10X160 Screw	1 off
Calibration Weight	1 off
Rowl	1 off

#### <u>Maintenance</u>

Warning! The Manufacturer declines all responsibility in the event of claims from the use of non-original spare parts or accessories.



Warning!

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

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



Keep the work area clean. Opened for the test, so insert a screwdriver and check the sound produced. As the bearing acts as a clamping support, it is not easy to change or take out the grease. In addition, the rotation speed is not high for the machine, so it is not necessary to change the grease. If you notice an incorrect working or a noisy bearing, replace the bearing. If the customer confirms that the bearing has not been replaced just Never use compressed air and/or jets of water to remove dirt or residues from the machine. Take all possible measures to prevent dust from building up or rising during cleaning operations. Keep the wheel balancer shaft, the securing ring nut, the centering cones and flange clean. These components can be cleaned using a brush previously dripped in environmentally friendly solvents. Handle cones and flanges carefully so as to avoid

#### USING THE GREASE Greasing the Wheel Balancer

The only rotating parts of the wheel balancer are the motor and the balancing shaft, so the bearing of these components must be checked periodically by the operator and greased. If the machine is used frequently (more than two hours per day), check the bearing every year; if the machine is not used so often, the check can be made every two years. The bearing cannot be Wheel balancer Mobil grease XHP NLGI degree Type of thickener Color, appearance Penetration on the processed item 25°, ASTM D 217, mm/10 Dropping point, °C, ASTM D 2265 Viscosity oil base, ASTM D 445, cSt @ 40°C (104°F) Change of penetration consistency, ASMT D 1831 (established upon the rolling of the greases), mm/10 4 spheres test, impression diam., ASTM D 2266, mm 4 spheres test, welding load, ASTM D 2509, kg Test Timken OK load, ASTM D 2509, lb Stability of oxidization bomb method, ASTM D 942, pressure drop at 100 hours, kPa Corrosion prevention, ASTM D 1743 Emcor rust, IP 220, wash away with acid water Corrosion on Copper, ASTM D 4048 Resistance to water spray, ASTM D4049, % spray Wash away with water, ASMT D 1264, loss (weight %)

#### SCRAPPING

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

If the machines have the crossed-out bin symbol on their data plate the following disposal procedure must be applied.

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

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

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

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

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

Contact your local distributor to obtain information on the collection procedures at the end of the life of your product. When purchasing this product, your distributor will also inform you of the possibility to return another end-of-life piece of equipment free of charge as long as it is of equivalent type and had the same functions as the purchased product.

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

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

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

#### FIREFIGHTING MEANS TO BE USED

Consult the following table to choose the most suitable fire extinguisher. Dry materials Water YES Foam YES Powder YES\*

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

YES

Flammable Liquids: Water NO

CO2

NU
YES
YES
YES

Appendix 1

LAYOUT OF THE POWER SUPPLY CARD Drawing for Power Supply Connection of Wheel Balancer



### <u>Appendix 2</u>

Wiring Diagram

