

# WHEEL BALANCER

## STANDARD OPERATING PROCEDURES DOCUMENT

### Scope and Responsibilities

This standard operating procedure (SOP) applies to all personnel who operate and instruct on the safe operation and use the wheel balancer. In a school setting this includes,

- **Administrators/Teachers:** Ensure operators are trained and the SOP is followed
- **Students/Teachers/Operators:** Follow the owner/operators manual, industry recommendations, this SOP, guarding is in place, and wear the appropriate personal protective equipment (PPE)

## SAFETY IS A PRIORITY !

DO NOT use this machine unless you have received instruction in its safe use and operation and have been given permission by your teacher.

To ensure the safe and efficient operation of the wheel balancer, this machine requires:



Safety glasses must be worn at all times in work areas.



Hearing protection may be required for certain operations.



Closed toe / CSA approved footwear must be worn at all times in work areas.



Close fitting / protective clothing must be worn.



Rings and jewellery must not be worn.



Long and loose hair must be contained.

### Personal Protective Equipment (PPE)

- CSA-approved safety glasses or face shield
- Proper attire, close-fitting clothing and/or protective shop coat
- Closed-toed footwear (CSA Safety footwear is required on Co-Op placements in industry)
- Hearing protection is advised in larger shops and high-noise environments

### Pre-Operational Checks

- **Always refer to the manufacturer's manual**
- Perform visual inspection of equipment prior to use, including any electrical cords for damaged prongs, cracked insulation, exposed wire, etc. (Damaged equipment must be locked out)
- Repair or replace worn or malfunctioning equipment immediately
- Ensure the work area is clean and free of obstructions, trip hazards and other materials
- Confirm all guards are in place and the hood safety interlock is functional
- Inspect cones and adapters for wear or cracks
- Remove debris from tire and rim and clean the machine spindle and mounting surfaces
- Verify calibration status (run self-check if needed)
- Ensure the display / control panel are responsive and noting any unusual noises during startup
- Confirm emergency stop button and foot brake (if equipped) are working

## Operational Steps

### 1. Preparation

- Make sure you have been authorized to use this wheel balancer - you have received training, passed the test, have demonstrated the safe use of this wheel balancer and have a safety passport signed
- You are “shop ready” – trained, proper clothing, wearing required PPE, etc.
- Perform a visual inspection to confirm the wheel balancer is suitable for operation
- Refer to the manufacturer’s operating guidelines to properly prepare and use the wheel balancer machine.
- Inspect the wheel and tire for damage and ensure the rim is clean of debris.
- Select the correct cone or adapter.
- Clean the wheel hub and mounting surfaces
- Never override or defeat a safety device

### 2. Starting the Machine

- Power on the unit
- Wait for the system to initialize and complete self-test
- Enter wheel weight position manually according to the operator’s manual

### 3. Balancing Operation

- Raise hood and mount the wheel assembly securely with correct adaptors, cones, hub nut and pressure cup
- Enter wheel dimensions manually or use automatic features (depending on model)
- Lower the hood to begin spin cycle or manually select Run/Spin
- Stand out of the plane of rotation
- Wait for the machine to calculate imbalance
- Follow on-screen prompts to apply weights (clip-on or adhesive)
- Rotate wheel assembly to correct location to install wheel weights and hold in place by depressing foot brake (if equipped)
- Re-spin to verify balance

### 4. Shutting Down the Machine

- Once the wheel is balanced and completely stops spinning, raise the hood/shield, loosen the hub nut and pressure cup and remove the wheel carefully
- Remove and replace the adaptors and cones to their storage position
- Power off the wheel balancer
- Clean the work area and return any tools to their proper storage location

## Post-Operational Checks

- Remove any debris and inspect the wheel balancer for wear or damage
- Inspect adaptors, cones, hub nut and pressure cup and accessories for wear
- Wipe down the control panel and display
- Store weights and tools properly
- Power off and unplug if not in use
- Report any issues or maintenance needs to the supervisor/instructor

## Common Problems of Operation

- Machine does not power up
- Wheel slippage or looseness due to improper mounting
- Inaccurate readings from uncalibrated sensors and measuring devices
- Display errors or fault codes on the control panel

## Safety Precautions

- Keep hands and body parts away from the wheel assembly and pressure cup during operation
- Keep guards in place and in working order. Never operate with hood open/in up position
- Wear personal protective equipment (P.P.E) such as CSA approved safety glasses, safety goggles, and face shields, CSA-approved footwear, and proper clothing
- Wear protective hair covering to contain long hair
- Wear proper apparel. Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewellery that may get caught in moving and spinning parts
- Check for damaged parts before the use of the tool. Components, parts, accessories, or guards that are damaged should be properly repaired or replaced. (Damaged and malfunctioning equipment must be locked out)
- Never leave the wheel balancer unattended while it is running
- Keep work area clean and well lit
- Lift with your legs (not your back) and maintain a stable non-slip footing at all times
- Follow manufacture instructions for periodic service and maintenance (i.e.: lubricating and changing accessories)
- Use recommended accessories. Consult the owner's manual for recommended accessories
- Only operate the wheel balancer after you have received instruction and permission from the teacher
- Be aware of the positions of the on/off switches and emergency STOP button
- Consider the placement of the wheel balancer in the shop so that bystanders are not walking by the user and coincidentally creating a hazard

## Common Injuries Sustained

- Finger pinching during wheel mounting
- Eye injuries from flying debris
- Back strain from improper lifting
- Foot injuries from dropped wheels
- Cuts, lacerations, abrasions from exposed belts on tires or sharp gouges on rim

## Maintenance

- Always refer to the manufacturer's manual
- Cleanliness and maintenance of adaptors, cones, hub nut and pressure cup is critical to ensuring proper wheel balancing
- Disconnect from power and lock out tag out when servicing or repairing machinery
- Regularly check and repair or replace damaged or worn equipment immediately
- Clean and lubricate the machine as required
- Keep a maintenance log for the machine

## Work Zones

- Typically, 1 meter (3 feet) in front and 1 meter (3 feet) to the right of the machine
- Consider marking the floor designating operator work zone(s) or area (i.e.: yellow paint or tape)
- Only the operator shall be in the work zone while the machine is in use

**Additional Information** can be found at,

Ontario Council for Technology Education [SAFEdocs](#) and [ToolSAFE Videos: OCTE](#)

Canadian Center for Health and Safety [Mechanic Safety](#)

Coats [Common Tire Balancing Mistakes and How to Avoid Them](#)

Pitstop-Pro [Wheel Balancer Guide: Eliminate Vibration & Choose the Right Machine — Pitstop Pro](#)