

# Clarke® **METALWORKER**



**BENCH GRINDER WITH WIRE BRUSH  
WHEEL, LIGHT AND WHEEL DRESSER**

**MODEL NO: CBG6250LW**

PART NO: 6500526

**OPERATION & MAINTENANCE  
INSTRUCTIONS**



**ORIGINAL INSTRUCTIONS**

LS0820 - ISS 6

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## INTRODUCTION

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Thank you for purchasing this CLARKE Bench Grinder with wire brush wheel, light and wheel dresser.

Before attempting to use this product, please read this manual thoroughly and follow the instructions carefully. In doing so you will ensure the safety of yourself and that of others around you, and you can look forward to your purchase giving you long and satisfactory service.

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## GUARANTEE

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This product is guaranteed against faulty manufacture for a period of 12 months from the date of purchase. Please keep your receipt which will be required as proof of purchase.

This guarantee is invalid if the product is found to have been abused or tampered with in any way, or not used for the purpose for which it was intended.

Faulty goods should be returned to their place of purchase, no product can be returned to us without prior permission.

This guarantee does not effect your statutory rights.

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## SPECIFICATIONS

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Model Number	CBG6250LW
Part Number	6500526
Rated Voltage	230V~50Hz
Rated Input	150 W (S1)
No Load Speed	2980 RPM (+/- 5%)
Sound Pressure Level LpA	84 db
Sound Power Level LWA	97 db
Uncertainty Factor K	3
Weight	9.1 kg
Abrasive wheels supplied	Wire Brush Wheel & Fine Grinding Wheel (60 Grit)
Grinding Wheel dimensions	Diameter (150mm) Thickness (20 mm) Bore (12.7 mm)
Wire Wheel dimensions	Diameter (150mm) Thickness (13.5 mm) Bore (12.7 mm)

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# POWER TOOL SAFETY WARNINGS

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## 1) WORK AREA

1. **Keep the work area clean and well lit.** Cluttered and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep children and bystanders away while operating a power tool.** Distractions can cause you to lose control.

## 2) ELECTRICAL SAFETY

1. **Power tool plugs must match the outlet. Never modify the plug in any way. Do not use adapter plugs with earthed (grounded) power tools.** Unmodified plugs and matching outlets will reduce the risk of electric shock.
2. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
3. **Do not abuse the cable. Never use it for carrying, pulling or unplugging the power tool. Keep the cable away from heat, oil, sharp edges or moving parts.** Damaged or entangled cables increase the risk of electric shock.
4. **When operating a power tool outdoors, use an extension cable suitable for outdoor use.** Use of a cable suitable for outdoor use reduces the risk of electric shock
5. **If operating the power tool in a damp location is unavoidable, use a residual current device (RCD) protected supply.**

## 3) PERSONAL SAFETY

1. **Stay alert, watch what you are doing and use common sense when operating a power tool.** Do not use a power tool while you are tired or under the influence of drugs, alcohol or medication. A moment of inattention while operating power tools may result in personal injury.
2. **Use safety equipment. Always wear eye protection.** Safety equipment such as dust mask, non-skid safety shoes, hard hat, or hearing protection used for appropriate conditions will reduce personal injuries.
3. **Avoid accidental starting.** Ensure the switch is in the off position before plugging in. Carrying power tools with your finger on the switch or plugging in power tools that have the switch on invites accidents.
4. **Remove any wrench before turning the power tool on.** A wrench left attached to a rotating part may result in personal injury.
5. **Do not overreach.** Keep proper footing and balance at all times. This enables better control of the power tool in unexpected situations.
6. **Dress properly.** Do not wear loose clothing or jewellery. Keep your hair, clothing and gloves away from moving parts. Loose clothes, jewellery or long hair can be caught in moving parts.

## 4) POWER TOOL USE AND CARE

1. **Do not force the power tool.** Use the correct accessories for your application. The correct power tool will do the job better and safer at the rate which it was designed.
2. **Do not use the power tool if the switch does not turn it on and off.** Any power tool that cannot be controlled with the switch is dangerous and must be repaired.
3. **Disconnect the plug from the power source before changing accessories, or storing power tools.** Such preventive safety measures reduce the risk of starting the power tool accidentally.
4. **Store idle tools out of the reach of children and do not allow persons unfamiliar with the power tool or these instructions to operate it.** Power tools are dangerous in the hands of untrained users.
5. **Maintain power tools.** Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the power tool's operation. If damaged, have the power tool repaired before use. Many accidents are caused by poorly maintained power tools.
6. **Use the power tool and accessories in accordance with these instructions and in the manner intended, taking into account the working conditions and the work to be performed.** Use of the power tool for operations different from intended could result in a hazardous situation.
7. The performance of this tool may vary, depending upon variations in line voltage. Extension cable usage may also affect performance.

## 5) SERVICE

1. **Have your power tool serviced by qualified service personnel using only identical replacement parts.** This will ensure that the safety of the power tool is maintained.

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## BENCH GRINDER SAFETY WARNINGS

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1. Hold the hand tool or blade being sharpened firmly to prevent loss of control.
2. NEVER install a abrasive flap wheel or sanding disc on this grinder.
3. Always replace a cracked grinding wheel immediately.
4. Never use damaged or incorrect grindstones. The stone and retaining bolt were specially designed for your grinder, for optimum performance and safety of operation. Inspect the condition of the grinding stone before use and do not use if any damage is noticed.
5. Do not use aluminium oxide wheels when grinding non-ferrous metals such as aluminium or brass. Use silicon carbide wheels (not included) for grinding non-ferrous metals.
6. Always use the tool rests to steady the workpiece. If the tool attachments are not used, the torque of the spinning grinding/polishing wheel may pull the workpiece from your hands.
7. Never leave the grinder unattended when it is connected to an electrical power supply. Switch off the machine and unplug it before leaving.

8. ALWAYS check for damaged parts. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine if it would operate properly and perform its intended function. Check for misalignment or binding of moving parts, breakage of parts and any other condition that may affect the tool's operation. A part that is damaged should be properly repaired or replaced at an authorised service center. Following this rule will reduce the risk of electric shock, fire or serious injury.
9. Gloves, manufactured to the current European safety standards should be worn when operating grinding equipment.
10. Eye protection manufactured to the current European safety standards should be worn when operating grinding equipment.

**Note: Bench grinders used in industrial environments may be subject to the requirements of The Provision and Use of Work Equipment regulations 1992 (particularly regarding the training requirement of The Abrasive Wheels Regulations 1970), or other legislation. If in doubt seek advice.**

**Please keep these instructions in a safe place for future reference.**

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## SAFETY SYMBOLS

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Read Instruction Manual Before Use



This Machine Is Not Suitable For Hand Held Use



Not Permitted For Wet Grinding



Wear Eye Protection



Wear Ear Defenders



Wear Protective Gloves

# ELECTRICAL CONNECTIONS



**WARNING! READ THESE ELECTRICAL SAFETY INSTRUCTIONS THOROUGHLY BEFORE CONNECTING THE PRODUCT TO THE MAINS SUPPLY.**

Before switching the product on, make sure that the voltage of your electricity supply is the same as that indicated on the rating plate. This product is designed to operate on 230VAC 50Hz. Connecting it to any other power source may cause damage.


This product may be fitted with a non-rewireable plug. If it is necessary to change the fuse in the plug, the fuse cover must be refitted. If the fuse cover becomes lost or damaged, the plug must not be used until a suitable replacement is obtained.

If the plug has to be changed because it is not suitable for your socket, or due to damage, it should be cut off and a replacement fitted, following the wiring instructions shown below. The old plug must be disposed of safely, as insertion into a mains socket could cause an electrical hazard.

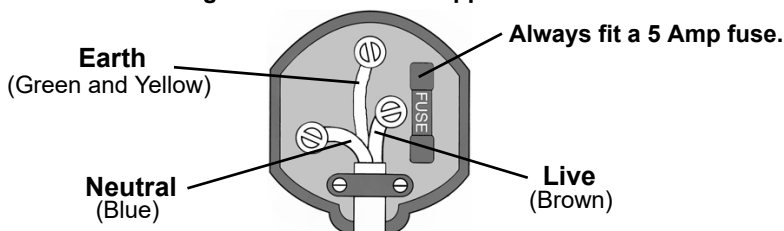


**WARNING! THE WIRES IN THE POWER CABLE OF THIS PRODUCT ARE COLOURED IN ACCORDANCE WITH THE FOLLOWING CODE: BLUE = NEUTRAL BROWN = LIVE YELLOW AND GREEN = EARTH**

If the colours of the wires in the power cable of this product do not correspond with the markings on the terminals of your plug, proceed as follows.

- The wire which is coloured **Blue** must be connected to the terminal which is marked **N** or coloured **Black**.
- The wire which is coloured **Brown** must be connected to the terminal which is marked **L** or coloured **Red**.
- The wire which is coloured **Yellow and Green** must be connected to the terminal which is marked **E** or  or coloured **Green**.

**Plug must be BS1363/A approved.**



**Ensure that the outer sheath of the cable is firmly held by the clamp**

**We strongly recommend that this machine is connected to the mains supply via a Residual Current Device (RCD)**

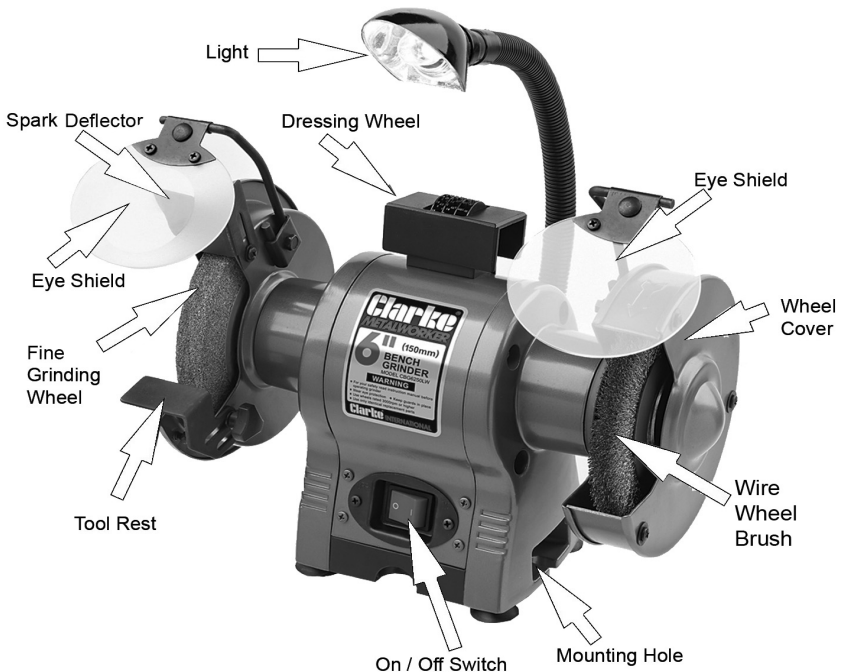
If in any doubt, consult a qualified electrician. DO NOT attempt any repairs yourself.

## CARTON CONTENTS

The following items should be supplied in the carton. If any parts are missing or damaged, please contact the Clarke dealer where you purchased the bench grinder.

1 x Bench Grinder Assembly (1 Fine grinding wheel & 1 Wire brush wheel attached)
2 x Eye Shields (1 with Built-in Magnifying Lens)
2 x Eye Shield Arms with bolts and washers
2 x Eye Shield Brackets
1 x Hand Knob with washers
1 x Spark Deflector with bolts and washers
1 x Tool Rests with screws and washers
1 x Wheel Dresser

## PART IDENTIFICATION

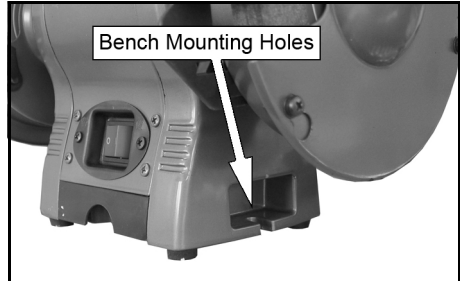


## BEFORE USE

### MOUNTING THE GRINDER ON A WORKBENCH

**NOTE:** We highly recommend that you bolt this bench grinder securely to a workbench to gain maximum stability for your machine.

1. Using the base of the bench grinder as a template, mark the bench through the holes in the casting.
2. Bolt the bench grinder to the bench with bolts, washers and nuts (not supplied).
3. To reduce vibration, mount the bench grinder on a vibration absorbing mat.



### INSTALLING THE TOOL REST (GRINDING WHEEL ONLY)

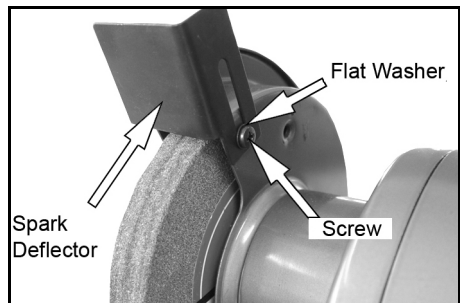
1. Fix the tool rest to the bench grinder with the hand knob and washer as shown.
  - The tool rest is adjustable and should be positioned 1.5 mm from the grinding wheel.
  - Ensure that the tool rest is firmly fixed and horizontal.



### INSTALLING THE SPARK DEFLECTOR (GRINDING WHEEL ONLY)

Fit the spark deflector to the wheel guards using the screws provided.

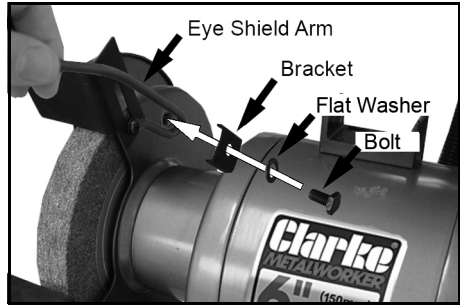
- Adjust the spark deflector frequently to compensate for wear of the wheel, keep the distance between the spark deflector and wheel as small as possible and never more than 2mm.





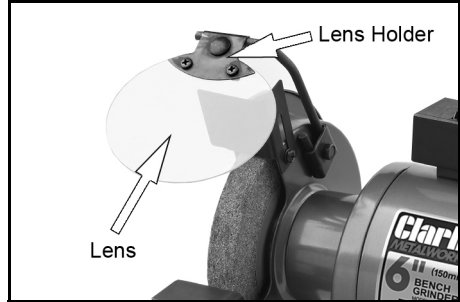
## INSTALLING THE EYE SHIELDS

1. Attach the left eye shield arm to the bench grinder using the bracket, flat washer and bolt supplied.



2. Fit the lens to the lens holder as shown.
3. Repeat for right side eye shield.

**NOTE:** Adjust the eye shields to an appropriate distance from the tool rests avoiding interference during operation.



## SHARPENING TIPS

### SCISSORS

If possible, take the scissors apart to make the sharpening operation easier and safer. Remove material only from the outside surface and work from the handle end of the blade toward the tip.

### KNIVES

Remove metal equally from both faces, working from the handle end of the blade toward the tip.

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## OPERATION

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CAUTION: KEEP ALL BYSTANDERS A SAFE DISTANCE AWAY FROM THE TOOL AND NOT IN DIRECT LINE, FRONT OR BACK OF THE GRINDER.

CAUTION: ALWAYS WEAR SAFETY GLASSES

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**NOTE:** Check that there is a 1.5 mm clearance between the tool rests and the surface of the grinding wheel. Adjust as necessary.

**NOTE:** Check the gap between the spark deflectors and the surface of the grinding wheel. These should also be a maximum of 2 mm. Adjust as necessary.

**NOTE:** Check that the eyeshields have been secured in the correct position and that the grinding wheel lock nuts are tight.

1. Stand to the side of the bench grinder and switch it on using the on/off switch.
  - Let the wheels reach full speed before use.
  - The wheel rotates in the same direction as the arrow stamped in the side of the wheel guard.
2. Hold the work piece firmly against the tool rest (if grinding). Hold very small pieces with pliers or other suitable clamps.
3. Feed the work piece smoothly and evenly against the wheel.
4. Always keep the work piece moving across the face of the wheel. Grinding against the same part of the wheel will cause uneven wear of the wheel face.
  - Grind only on the face of the grinding wheel and never the side of it.
  - The wire wheel can be used to remove paint and rust. Always wear a dust mask when removing paint or rust.

**NOTE:** Prolonged grinding will cause most tools to become hot. Use care when handling hot tools.

5. Switch the bench grinder off using the on/off switch when you have finished.

### USING THE BUILT IN LIGHT

The built in light will come on automatically whenever the bench grinder is switched on.

The arm can bend to set the light in to a suitable position.

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## ENVIRONMENTAL RECYCLING POLICY

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Through purchase of this product, the customer is taking on the obligation to deal with the WEEE in accordance with the WEEE regulations in relation to the treatment, recycling & recovery and environmentally sound disposal of the WEEE.

In effect, this means that this product must not be disposed of with general household waste. It must be disposed of according to the laws governing Waste Electrical and Electronic Equipment (WEEE) at a recognised disposal facility.

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## MAINTENANCE

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**WARNING: DISCONNECT THE GRINDER FROM THE MAINS SUPPLY BEFORE FITTING REPLACEMENT WHEELS, CLEANING OR ADJUSTMENT.**

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Keep the machine clean by wiping off dust with a clean cloth, and occasionally blowing the grinder through with compressed air. Always wear protective goggles when blowing through with compressed air.

The grinding wheel may need trueing or dressing occasionally. Only dress the wheel with a proper dressing tool, whilst wearing safety goggles or glasses. If in doubt seek expert advice.

### DRESSING THE WHEEL

When the wheel starts to become clogged with debris, use the dresser tool supplied to clean (dress) it.

1. Start the bench grinder running
2. Place the dresser tool on the tool rest with the dresser wheels facing the abrasive wheel.
3. Slide the dresser tool forward until contact is made with the abrasive wheel and maintain a light pressure to clean the debris from the abrasive wheel.
4. After dressing, adjust the tool rest and spark deflector as necessary.

### CHANGING THE LIGHT BULB

Remove the bulb by twisting it anticlockwise.

Replace with an identical bulb (12V, 10W, ES10 fitting) available from the Clarke Parts Department.

## REPLACING THE WHEELS



**WARNING: THE POSITIONS OF THE GRINDING WHEEL AND WIRE WHEEL SHOULD NOT BE INTERCHANGED, AS THIS MAY RESULT IN INJURY OR DAMAGE TO THE PRODUCT**

**WARNING: DO NOT USE DAMAGED GRINDING WHEELS.**

**WARNING: SWITCH THE GRINDER OFF AND DISCONNECT THE POWER SUPPLY BEFORE CHANGING THE GRINDING WHEELS**

1. Loosen the screws shown and rotate and remove the cover.
2. Hold the other wheel by hand, and remove the nut and outer flange.

**NOTE:** The left hand wheel locking nut has a left handed thread.

3. Slide off the old wheel and replace with a new one.

- Use only wheels recommended by the manufacturer which have a marked speed equal to or greater than the speed marked on the nameplate of the tool
- The disc should have maximum dimensions of 150 mm diameter, 20 mm thick with a bore size of 12.7 mm.
- Inspect the wheel for cracks, chips or any other visible damage, damaged abrasive products must be destroyed and discarded

4. Replace the outer flange.

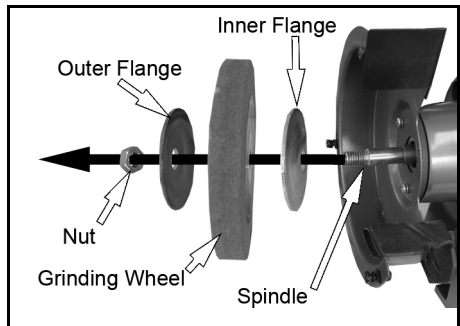
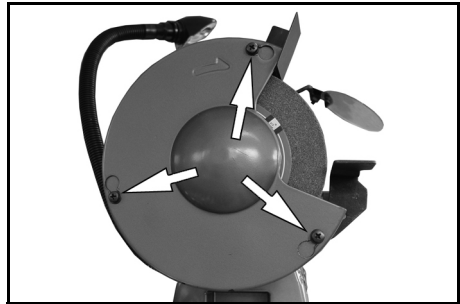
- Make sure both wheel flanges are placed with the concave sides towards the wheel.

5. Replace the nut securely.

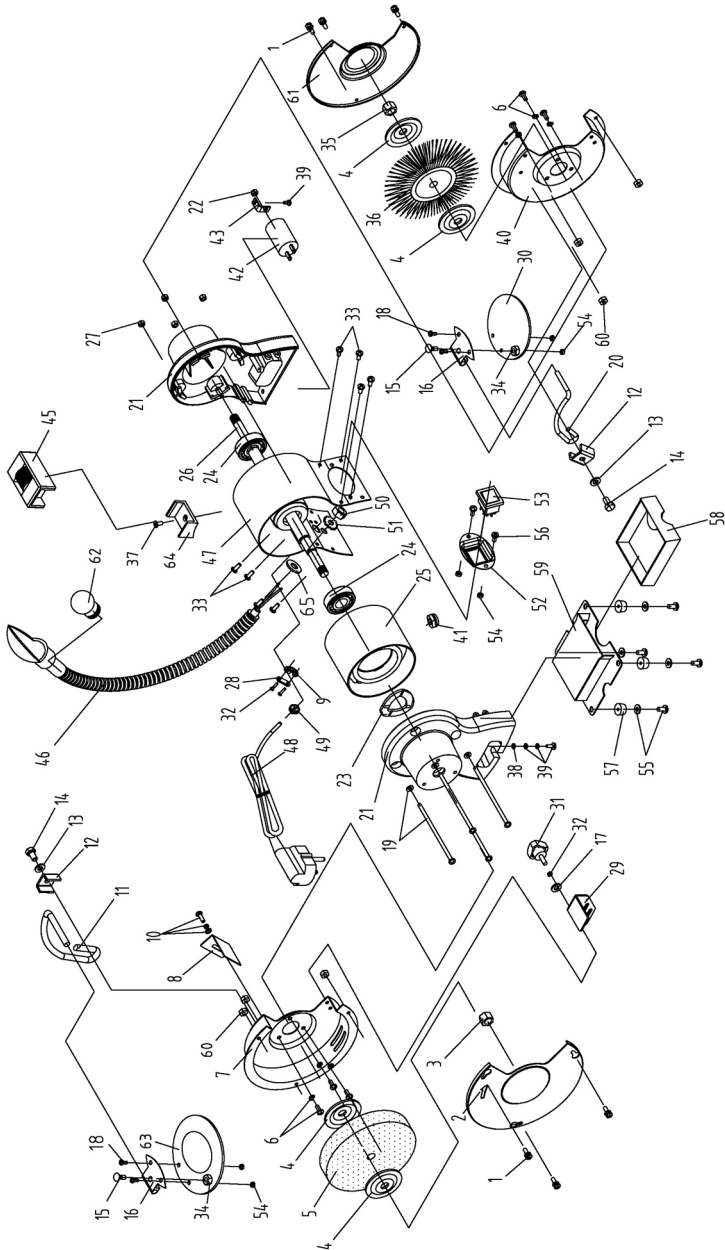
- Do not overtighten as this may damage the grinding wheel.

6. Re-assemble the guards fully prior to carrying out testing.

- Each time after mounting, the wheel should be test run for a reasonable time (approximately 1 minute).



# PARTS DIAGRAM



# PARTS LIST

1	Phillips Screw Assembly.	WACBG6250LW01
2	Left Guard Cover	WACBG6250LW02
3	I type hex nut	WACBG6250LW03
4	Wheel flange	WACBG6250LW04
5	Wheel(36#)	WACBG6250LW05
6	Phillips Screw Assembly.	WACBG6250LW06
7	Left Guard inner cover	WACBG6250LW07
8	Left Spark Deflector	WACBG6250LW08
9	Wire Pressing Board	WACBG6250LW09
10	Phillips Screw Assembly.	WACBG6250LW10
11	Left eyeshield mount rod	WACBG6250LW11
12	Eyeshield bracket	WACBG6250LW12
13	Flat washer	WACBG6250LW13
14	hex bolt	WACBG6250LW14
15	Dome Screw	WACBG6250LW15
16	Eyeshield plate	WACBG6250LW16
17	Big Flat Washer	WACBG6250LW17
18	Phillips Screw	WACBG6250LW18
19	Phillips Screw	WACBG6250LW19
20	Right Eyeshield mount rod	WACBG6250LW20
21	End cap	WACBG6250LW21
22	I type hex nut	WACBG6250LW22
23	Wavy washer	WACBG6250LW23
24	Ball bearing	WACBG6250LW24
25	Stator	WACBG6250LW25
26	Rotor	WACBG6250LW26
27	Nut	WACBG6250LW27
28	Wire Pressing Bsee Plate	WACBG6250LW28
29	Left work rest	WACBG6250LW29
30	Eyeshield	WACBG6250LW30
31	Locked Knob	WACBG6250LW31
32	Phillips Screw	WACBG6250LW32
33	Phillips Screw	WACBG6250LW33
34	Hex nut	WACBG6250LW34
35	Nut	WACBG6250LW35

36	Wire wheel	WACBG6250LW36
37	Phillips Screw	WACBG6250LW37
38	Tooth locked washer	WACBG6250LW38
39	Phillips Screw Assembly.	WACBG6250LW39
40	Right Guard inner cover	WACBG6250LW40
41	Cord bushing	WACBG6250LW41
42	Capacitor	WACBG6250LW42
43	Capacitor stand	WACBG6250LW43
44	Standard washer	WACBG6250LW44
45	Wheel Dressing Tool	WACBG6250LW45
46	Lamp assembly	WACBG6250LW46
47	Motor housing	WACBG6250LW47
48	Cord & Plug	WACBG6250LW48
49	Strain-relief	WACBG6250LW49
50	Nut	WACBG6250LW50
51	Tooth Lock washer	WACBG6250LW51
52	Switch Plate	WACBG6250LW52
53	Switch	WACBG6250LW53
54	Hex nut	WACBG6250LW54
55	Phillips Screw Assembly	WACBG6250LW55
56	Phillips Screw	WACBG6250LW56
57	Rubber foot	WACBG6250LW57
58	Tool kit	WACBG6250LW58
59	Base Plate	WACBG6250LW59
60	lock nut	WACBG6250LW60
61	Left Guard Cover	WACBG6250LW61
62	bulb	WACBG6250LW62
63	Magnified Eyeshield	WACBG6250LW63
64	Dressing tool base	WACBG6250LW64
65	Flat washer	WACBG6250LW65

# DECLARATION OF CONFORMITY



**Clarke**<sup>®</sup>  
**INTERNATIONAL**

Hemnal Street, Epping, Essex CM16 4LG

## DECLARATION OF CONFORMITY

**This is an important document and should be retained.**

**We hereby declare that this product(s) complies with the following directive(s):**

- 2014/30/EU *Electromagnetic Compatibility Directive.*  
2006/42/EC *Machinery Directive.*  
2011/65/EU *Restriction of Hazardous Substances, (amended by 2015/863).*

**The following standards have been applied to the product(s):**

- EN 62841-3-4:2016+A11:2017, EN 62841-1:2015, EN 55014-1:2017, EN 55014-2:2015,  
EN 61000-3-2:2014, EN 61000-3-3:2013.

The technical documentation required to demonstrate that the product(s) meet(s) the requirement(s) of the aforementioned directive(s) has been compiled and is available for inspection by the relevant enforcement authorities.

The CE mark was first applied in: 2007

**Product Description:** 6" Bench Grinder 250W, 6" Bench Grinder 250W with Light  
6" Bench Grinder 250W with Light and Wire Wheel.

**Model number(s):** CBG6250, CBG6250L, CBG6250LW

**Serial / batch Number:** N/A

**Date of Issue:** 16/07/2020

**Signed:**

**J.A. Clarke**  
**Director**









# A SELECTION FROM THE VAST RANGE OF

# Clarke®

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## PARTS & SERVICE: 0208 988 7400

**Parts Enquiries**  
[Parts@clarkeinternational.com](mailto:Parts@clarkeinternational.com)

**Servicing & Technical Enquiries**  
[Service@clarkeinternational.com](mailto:Service@clarkeinternational.com)

SALES: UK 01992 565333 or Export 00 44 (0)1992 565335

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