

DRAPER®

INSTRUCTIONS FOR 150mm Bench Grinder & 200mm Bench Grinder

Stock No.05095, 05097 Part No.GD625L, GD825L

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY TO ENSURE THE SAFE AND EFFECTIVE USE OF THIS TOOL.



CE

Model 05097 shown

DRAPER®

GENERAL INFORMATION

Read all these instructions before operating this product and save these instructions.

This manual has been compiled by Draper Tools and is an integrated part of the product with which it is enclosed and should be kept with it for future references.

This manual describes the purpose for which the product has been designed and contains all the necessary information to ensure its correct and safe use. We recommend that this manual is read before any operation or, before performing any kind of adjustment to the product and prior to any maintenance tasks. By following all the general safety instructions contained in this manual, it will ensure both product and operator safety, together with longer life of the product itself.

All photographs and drawings in this manual are supplied by Draper Tools to help illustrate the operation of the product.

Whilst every effort has been made to ensure accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.



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GUARANTEE

Draper tools have been carefully tested and inspected before shipment and are guaranteed to be free from defective materials and workmanship.

Should the tool develop a fault, please return the complete tool to your nearest distributor or contact Draper Tools Limited, Chandler's Ford, Eastleigh, Hampshire, SO53 1YF, England.
Telephone Sales Desk: (023) 8049 4333 or Product Helpline (023) 8049 4344.

A proof of purchase must be provided with the tool.

If upon inspection it is found that the fault occurring is due to defective materials or workmanship, repairs will be carried out free of charge. This guarantee period covering parts/labour is 12 months from the date of purchase except where tools are hired out when the guarantee period is ninety days from the date of purchase. The guarantee is extended to 24 months for parts only. This guarantee does not apply to normal wear and tear, nor does it cover any damage caused by misuse, careless or unsafe handling, alterations, accidents, or repairs attempted or made by any personnel other than the authorised Draper warranty repair agent.

Note: If the tool is found not to be within the terms of warranty, repairs and carriage charges will be quoted and made accordingly.

This guarantee applies in lieu of any other guarantee expressed or implied and variations of its terms are not authorised.

Your Draper guarantee is not effective unless you can produce upon request a dated receipt or invoice to verify your proof of purchase within the guarantee period.

Please note that this guarantee is an additional benefit and does not affect your statutory rights.

Draper Tools Limited.



SPECIFICATION

The Draper Tools policy of continuous improvement determines the right to change specification without notice.

Stock no.	05095.....	05097
Part no.....	GD625L.....	GD825L
Rated voltage.....	230V~50Hz.....	230V~50Hz
Rated input.....	370W(S2).....	550W(S2)
Revolutions per minute (no load).....	2850.....	2850
Wheel dimension:		
Maximum diameter.....	150mm.....	200mm
Maximum thickness.....	20mm.....	25mm
Bore diameter.....	12.7mm.....	15.8mm
Abrasive Wheel (supplied):		
Fine.....	60.....	60
Coarse.....	36.....	36
Sound Pressure Level.....	82dB(A).....	86dB(A)
Sound Power Level.....	92dB(A).....	95.7dB(A)
Vibration Level.....	<2.5m/s ²	<2.5m/s ²
Weight.....	9kg.....	19kg

ALWAYS WEAR APPROVED SAFETY GOGGLES



POWER SUPPLY

CAUTION: Risk of electric shock. Do not open.

This appliance is supplied with a moulded 3 pin mains plug for your safety. The value of the fuse fitted is marked on the pin face of the plug. Should the fuse need replacing, ensure the substitute is of the correct rating, approved to BS1362 and ASTA or BS Kite marked.

ASTA 
BSI 


The fuse cover is removable with a small plain slot screwdriver. Ensure the fuse cover is replaced before attempting to connect the plug to an electrical outlet. If the cover is missing, a replacement must be obtained or the plug replaced with a suitable type.

If a replacement plug is to be fitted this must be carried out by a qualified electrician.

The damaged or incomplete plug, when cut from the cable shall be disabled to prevent connection to a live electrical outlet.

This appliance is Class I[†] and is designed for connection to a power supply matching that detailed on the rating label and compatible with the plug fitted.

If an extension lead is required, use an approved and compatible lead rated for this appliance. Follow all the instruction supplied with the extension lead.

[†]Earthed : This product requires an earth connection to protect against electric shock from accessible conductive parts in the event of a failure of the basic insulation.



GENERAL SAFETY INSTRUCTIONS FOR POWER TOOLS

GENERAL SAFETY INSTRUCTIONS

WARNING: When using electric tools basic safety precautions should always be followed to reduce the risk of fire, electric shock and personal injury including the following.

Read all these instructions before attempting to operate this product and save these instructions.

SAFE OPERATION

1. KEEP WORK AREA CLEAR

- Cluttered areas and benches invites injuries.

2. CONSIDER WORK AREA ENVIRONMENT

- Do not expose tools to rain.
- Do not use tools in damp or wet locations.
- Keep work area well lit.
- Do not use tools in the presence of flammable liquids or gases.

3. GUARD AGAINST ELECTRIC SHOCK

- Avoid body contact with earthed or grounded surfaces (e.g. pipes, radiators, ranges, refrigerators).

4. KEEP OTHER PERSONS AWAY

- Do not let persons, especially children, not involved in the work touch the tool or the extension cord and keep them away from the work area.

5. STORE IDLE TOOLS

- When not in use, tool should be stored in a dry locked-up place, out of reach of children.

6. DO NOT FORCE THE TOOL

- It will do the job better and safer at the rate for which it was intended.

7. USE THE RIGHT TOOL

- Do not force tools to do the job of a heavy duty tool.
- Do not use tools for purposes not intended; for example do not use circular saws to cut tree limbs or logs.

8. DRESS PROPERLY

- Do not wear loose clothing or jewellery, they can be caught in moving parts.
- Non-skid footwear is recommended when working outdoors.
- Wear protective hair covering to contain long hair.

9. USE PROTECTIVE EQUIPMENT

- Use safety glasses.
- Use face or dust mask if working operations create dust.

10. CONNECT DUST EXTRACTION EQUIPMENT

- If the tool is provided for the connection of dust extraction and collecting equipment, ensure these are connected and properly used.

11. DO NOT ABUSE THE CORD

- Never yank the cord to disconnect it from the socket. Keep the cord away from heat, oil and sharp edges.

12. SECURE WORK

- Where possible use clamps or a vice to hold the work. It is safer than using your hand.

13. DO NOT OVERREACH

- Keep proper footing and balance at all times.

14. MAINTAIN TOOLS WITH CARE

- Keep cutting tools sharp and clean for better and safer performance.
- Follow instruction for lubricating and changing accessories.
- Inspect tool cords periodically and if damaged have them repaired by an authorized service facility.
- Inspect extension cords periodically and replace if damaged.
- Keep handles dry, clean and free from oil and grease.

15. DISCONNECT TOOLS

- When not in use, before servicing and when changing accessories such as blades, bits and cutters, disconnect tools from the power supply.

16. REMOVE ADJUSTING KEYS AND WRENCHES

- Form the habit of checking to see that keys and adjusting wrenches are removed from the tool before turning it on.

17. AVOID UNINTENTIONAL STARTING

- Ensure switch is in "off" position when plugging in.

18. USE OUTDOOR EXTENSION LEADS

- When the tool is used outdoors, use only extension cords intended for outdoor use and so marked.

19. STAY ALERT

- Watch what you are doing, use common sense and do not operate the tool when you are tired.

20. CHECK DAMAGED PARTS

- Before further use of tool, it should be carefully checked to determine that it will operate properly and perform its intended function.
- Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation.
- A guard or other part that is damaged should be properly repaired or replaced by an authorized service centre unless otherwise indicated in this instruction manual.
- Have defective switches replaced by an authorized service centre.
- Do not use the tool if the switch does not turn it on and off.

21. WARNING

- The use of any accessory or attachment other than one recommended in this instruction manual may present a risk of personal injury.

22. HAVE YOUR TOOL REPAIRED BY A QUALIFIED PERSON

- This electric tool complies with the relevant safety rules. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

ADDITIONAL SAFETY INSTRUCTIONS

- Check that speed marked on the wheel is equal to or greater than the rated speed of the grinder;
- Ensure that the wheel dimensions are compatible with the grinder;
- Abrasive wheels shall be stored and handled with care in accordance with manufacturer's instructions;
- Inspect the grinding wheel before use, do not use chipped, cracked or otherwise defective products;
- Ensure that mounted wheels and points are fitted in accordance with the manufacturer's instructions;
- Ensure that blotters are used when they are provided with the bonded abrasive product and when they are required;
- Ensure that the abrasive product is correctly mounted and tightened before use and run the tool at no-load for 30 s in a safe position, stop immediately if there is considerable vibration or if other defects are detected.
If this condition occurs, check the machine to determine the cause;
- If a guard is supplied with the tool never use the tool without such a guard.
- Do not use separate reducing bushings or adapters to adapt large hole abrasive wheels;
- For tools intended to be fitted with threaded hole wheel, ensure that the thread in the wheel is long enough to accept the spindle length;
- Check that the work piece is properly supported;
- Do not use cutting wheel for side grinding;
- Ensure that sparks resulting from use do not create a hazard e.g. do not hit persons, to ignite flammable substances;
- Ensure that ventilation openings are kept clear when working in dusty conditions. If it should become necessary to clear dust, first disconnect the tool from the mains supply (use non metallic objects) and avoid damaging internal parts;
- Always use eye and ear protection;
- Personal protective equipment such as dust

mask, gloves, helmet and apron should be worn;

- The wheel continues to rotate after the tool is switched off.

1. **Warning.** When using electric tools, basic safety precautions, including the following should always be followed to reduce the risk of fire, electric shock and personal injury.
2. **Use the right tool.** Do not force small tools or attachments to do the job of a heavy duty tool. Do not use tools for purposes not intended; for example, do not use circular saws to cut tree limbs or logs.
3. **Secure work.** Use clamps of a vice to hold the work. It is safer than using your hands and it frees both hands to operate the tool.
4. **Stay alert.** Watch what you are doing. Use common sense. Do not operate tool when you are tired.
5. **Wear proper clothing.** Do not wear loose clothing, neckties or jewellery (ring, wristwatches etc.) to catch in moving parts. NONSLIP footwear is recommended. Wear protective covering to contain long hair. Roll long sleeves above the elbow.
6. **Use safety goggles (Head protection).** Wear goggles approved to the relevant standards at all times. Normal spectacles only have impact resistant lenses, they are NOT safety glasses. Also, use face or dust mask if application is dusty and ear protectors during all operations.
7. **Sound levels.** Some types of machines may have high sound levels when working. In such cases ear protection must be worn.
8. **Vibration levels.** Hand held power tools produce different vibration levels. You should always refer to the specifications and the relevant Health and Safety guidelines.
9. **Dust extraction.** If your tool is fitted with a dust extraction facility, always ensure that it is connected and being used with a dust extractor. Vacuum cleaners can be used if suitable for the material being extracted.
10. **Check damaged parts.** Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, free running of

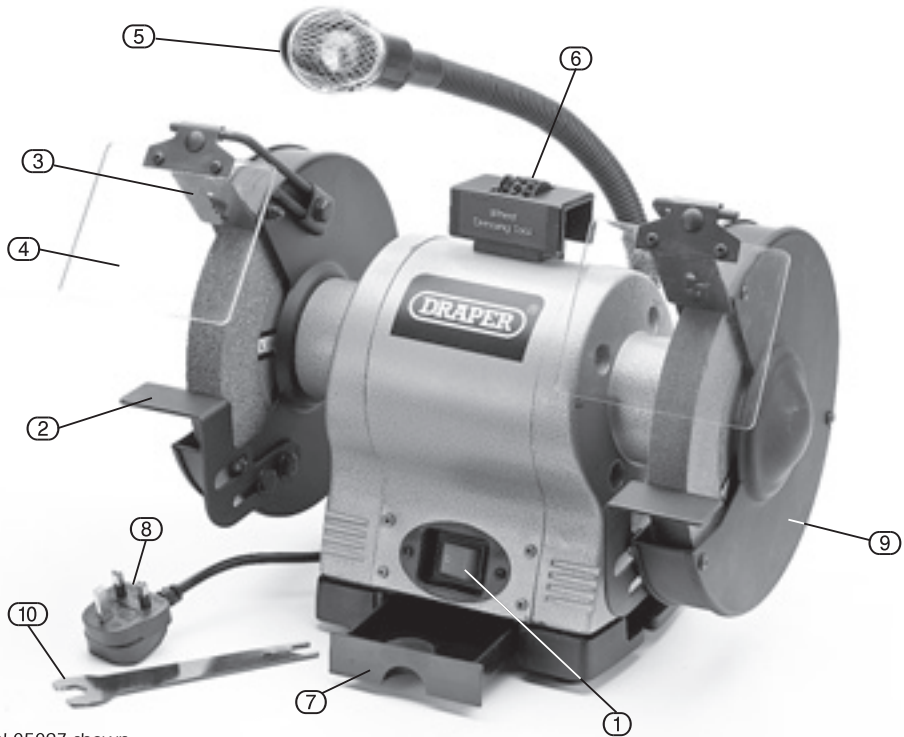
moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced by an authorised service centre unless otherwise indicated in this instruction manual. Have defective switches replaced by an authorised service centre. Do not use the tool if the switch does not turn it on and off.

11. Have your tool repaired by a qualified person.

This electric tool is in accordance with the relevant safety requirements. Repairs should only be carried out by qualified persons using original spare parts, otherwise this may result in considerable danger to the user.

SAFETY RECOMMENDATIONS FOR THE CORRECT USE OF ABRASIVE PRODUCTS

- a. **General.** Bonded abrasive products are breakable and shall therefore be handled with utmost care. The use of damaged or improperly mounted or used abrasive products is dangerous and can cause serious injuries.
 - b. **Delivery, handling and storage.** Abrasive products shall be handled and transported with care. Abrasive products shall be stored in such a manner that they are not subjected to mechanical damaged and harmful environmental influences.
 - c. **Selection of the abrasive product.** Information on the label or the abrasive product as well as restrictions of use, safety indications or any other instructions shall be followed. In case of doubt concerning the selection of abrasive products, the user shall request information from the manufacturer or supplier.
 - d. **Visual inspection and ring test.** Abrasive products shall be subjected to a visual inspection as received before mounting. In addition, a ring test shall be executed for vitrified wheels with $D > 80\text{mm}$. Damaged abrasive products shall be destroyed.
 - e. **Mounting before starting and information for grinding.** The mounting of abrasive products shall be carried out according to the instructions provided by both the wheel and the machine manufacturer. Mounting of abrasive products shall be carried out by a qualified trained person. Each time after mounting, the wheel shall be test run for a reasonable time - the specified maximum operating speed of the wheel shall not be exceeded.
- f. **Further information.** The following instructions shall be observed, supplementary to the information contained in the instruction for use of the grinding machine:
 - Observance of the user's information from the grinding machine manufacturer.
 - Safety devices shall be mounted to the machine and shall be secured.
 - No grinding operations without protection by safety devices (use guard when grinding).
 - Use of personal protective equipment according to the type of machine and type of application, e.g. eye and face protection, ear protection, respiratory protective devices, protective footwear, protective gloves and other protective clothing.
 - Only grinding operations for which the abrasive product is suitable shall be carried out (taking into account restrictions of use, safety indications or other information).
 - Jamming of the hand-held grinding machine shall be prevented. In the case of cutting-off with hand-held grinding machines, the abrasive product shall be placed in the cutting gap in a straight position.
 - Before placing the hand-held grinding machine on the workbench or on the floor it shall be turned off and it shall be ensured that the abrasive product has stopped.



Model 05097 shown

- | | |
|------------------------|--------------------------|
| ① On/Off switch | ⑥ Wheel dressing tool |
| ② Adjustable tool rest | ⑦ Tool tray |
| ③ Spark deflector | ⑧ Moulded plug and cable |
| ④ Eyseshield | ⑨ Wheel guard |
| ⑤ Light | ⑩ Spanner |

- **UNPACKING:** After removing the packing material, make sure the product is in perfect condition and that there are no visible damaged parts. If in doubt, do not use the product and contact the dealer from whom it was purchased.

The packaging materials (plastic bags, polystyrene, etc.), must be disposed of in an appropriate refuse collection container. These materials must not be left within the reach of children as they are potential sources of danger.

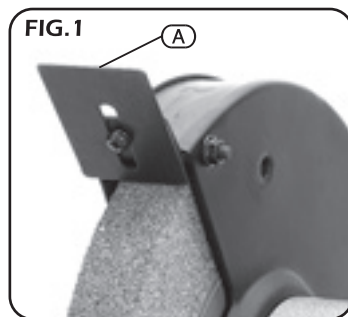
- NOTE:

Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

- SPARK DEFLECTORS: (FIG.1)

Fit both the spark deflectors (A) to the wheel guards using the screws provided.

- Adjust the spark arrestor frequently so as to compensate for wear of the wheel, keep the distance between the spark arrestor and wheel as small as possible and in any case not greater than 2mm.

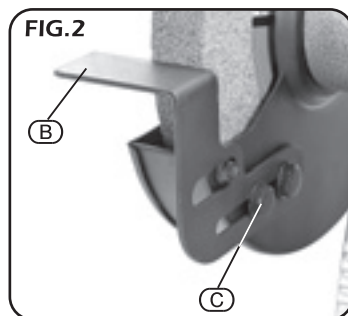


- TOOL RESTS: (FIG.2)

Fit both the tool rests (B), to the inner edge of the wheel guards using the locking nuts (C) provided. Adjust them so there is approximately 1.5mm between the grinding wheel face and the tool rest.

- NOTE:

Ensure the tool rest sits over the guard securing bolt.



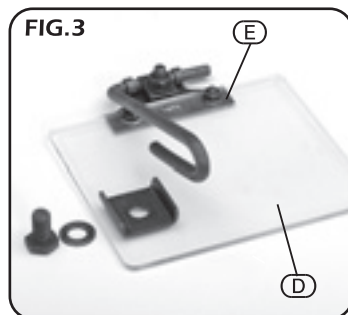
- EYESHIELDS: (FIG.3)

Assemble the clear plastic shield (D) to the metal plate (E) using the nuts and screws provided. Clamp (E) to the rod and fix the assembled shield to the wheel guard.

Select the required position and tighten all the fixings.

- NOTE:

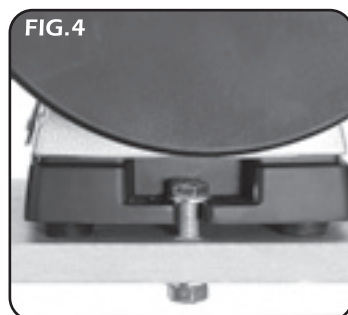
Do not over tighten the fixings holding the shield as this may cause it to crack. Never attempt to use the bench grinder with the eyeshields cracked, missing or incorrectly positioned. The eyeshield must remain between the user and abrasive wheel.



- BENCH MOUNTING YOUR GRINDER: (FIG.4)

Securely bolt the bench grinder to a work bench or other secure surface through the two points in the base (fixings are not supplied). Ensure there is enough clear space around the grinder to accommodate large items which may be ground, i.e. garden tools, etc.

To reduce any vibration, mount the grinder on a vibration absorption mat, Draper Stock No.30743.



- **NOTE:**

Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

- **REPLACING THE GRINDING WHEELS: (FIG 5)**

Do not use damaged grinding wheels.

Switch the grinder off and disconnect the power supply. Remove the screws and nuts holding the wheel guard, and remove the cover. Hold the other wheel by hand, and remove the locking nut and flange. Slide off the old grinding wheel.

Use only grinding wheels recommended by the manufacturer which has a marked speed equal or greater than the speed marked on the nameplate of the tool and have a maximum dimension no greater than:

- 150mm diameter, 19mm thickness with a corresponding bore size of 12.7mm (GD625L).
- 200mm diameter, 25mm thickness with a corresponding bore size of 15.8mm (GD825L).

Abrasive products shall be subjected to a visual inspection as received before mounting.

In addition, a ring test shall be executed for vitrified wheels with $D > 80\text{mm}$.

Damaged abrasive products shall be destroyed.

- **NOTE:** The left hand grinding wheel locking nut has a left handed thread. When fitting a new grinding wheel, always check that the stated max. RPM on the wheel exceeds the RPM of the bench grinder. Also, inspect the new wheel for any damage, such as flaws or cracks. If the wheel appears satisfactory, fit it to the grinder.

Replace the flange and locking nut securely. Do not overtighten to avoid damage to the wheel. Re-assemble the guard fully prior to carrying out testing.

Each time after mounting, the wheel shall be test run for a reasonable time.

The specified maximum operating speed of the wheel shall not be exceeded.

A bench grinder is designed for hand grinding operations only, such as sharpening drill bits, chisels and screwdrivers or removing excess metal from work pieces.

A coarse grit abrasive wheel could be used for rough metals, to remove large amounts of metal or where a smooth finish is not important.

A fine grit abrasive wheel could be used for sharpening tools or grinding close to size. A fine grit wheel removes metal more slowly and therefore gives the work piece a smooth finish and does not generate enough heat to anneal the cutting edges.

- **NOTE:** Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

1. Check that there is a 1.5mm clearance between the tool rests and the surface of the accessory. Adjust as necessary. Re-check the gap between the spark deflectors and the surface of the grinding wheels. These should also be 1.5mm. Adjust as necessary.
2. Check that the eyeshields have been secured in the correct position and that the grinding wheel lock nuts are tight.
3. When grinding, 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.
4. When necessary, dress the abrasive wheels using a wheel dressing tool. After dressing, adjust the tool rests and spark deflectors as necessary to maintain a 1.5mm clearance from the wheel.



FIG.5



GRINDING TIPS

1. Ensure that the item to be ground is comfortably and securely held.
2. Adjust tool rest to correct angle.
3. Present the workpiece smoothly on to the grinding wheel face with a light and even pressure.
4. Grind against the edge of the workpiece to avoid burrs.
5. Never grind on the sides of the wheels.
6. Best results are achieved if the grinder is allowed to rotate at its maximum speed. Excess pressure from the workpiece can damage the wheel and overload the motor.
7. Check grinding wheels regularly for wear or damage. Replace wheels that are worn more than 25%. Damaged wheels should be discarded immediately as they are dangerous and can cause the grinder to vibrate.
8. After grinding fine edge tools, they should be honed by hand on a fine slip stone.



ACCESSORIES

The following accessories are available from your local Draper Stockist.

GRINDING WHEELS.

Stock No.: 09505
 Part No.:AG150
 Type Grit:Fine 60
 Diameter: 150mm
 Bore size: 12.7mm
 Width (Face size): 19mm

Stock No.: 09506
 Part No.:AG150
 Type Grit: Coarse 36
 Diameter: 150mm
 Bore size: 12.7mm
 Width (Face size): 19mm

Stock No.: 09507
 Part No.:AG150
 Type Grit: (80 Grit) Green
 Diameter: 150mm
 Bore size: 12.7mm
 Width (Face size): 19mm
 Note: Suitable for grinding T.C.T.

Stock No.: 09509
 Part No.:AG200
 Type Grit:Fine 60
 Diameter: 200mm
 Bore size: 16mm
 Width (Face size): 25mm

Stock No.: 09510
 Part No.:AG200
 Type Grit: Coarse 30
 Diameter: 200mm
 Bore size: 15.8mm
 Width (Face size): 25mm

GENERAL ACCESSORIES

Stock No.: 44351
 Part No.: 1180C
 Description: Drill Grinding Attachment

WARNING: for your own safety always turn the main switch on the machine “off” and remove the plug from the power supply before carrying out any maintenance or trouble shooting.

Problem	Cause	Remedy
Machine will not start	<ol style="list-style-type: none"> 1. Fuse 2. Other 	<ol style="list-style-type: none"> 1. 3 amp time delay fuse or circuit breaker 2. Authorized service agent
Machine vibrates	<ol style="list-style-type: none"> 1. Wheel out of balance 2. Wheel loose 3. Damaged wheel (consumable item) 	<ol style="list-style-type: none"> 1. Dress wheels 2. Stop machine immediately. Tighten wheel 3. Replace wheel†

† Replacement abrasive wheel and other accessories can be obtained from your local Draper stockist.

- At the end of the machine’s working life, or when it can no longer be repaired, ensure that it is disposed of according to national regulations.
- Contact your local authority for details of collection schemes in your area.

In all circumstances:

- Do not dispose of power tools with domestic waste.
- Do not incinerate.
- Do not abandon in the environment.
- Do not dispose of WEEE* as unsorted municipal waste.



* Waste Electrical & Electronic Equipment.

Regular inspection and cleaning reduces the necessity for maintenance operations and will keep your tool in good working condition.

The motor must be correctly ventilated during tool operation. For this reason avoid blocking the air inlets with hands. After use disconnect the tool from the power supply and vacuum the ventilation slots.

If the replacement of the supply cord is necessary, this has to be done by the manufacturer or his agent in order to avoid a safety hazard.



Wear safety glasses.



Do not dispose of WEEE*
as unsorted municipal waste.

* Waste Electrical & Electronic Equipment.



NOTES



NOTES

- **DRAPER TOOLS LIMITED,**
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Eastleigh, Hampshire. SO53 1YF. U.K.

- **Helpline:** (023) 8049 4344
- **Sales Desk:** (023) 8049 4333
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- **E-mail:** sales@drapertools.com
- **Sales Fax:** (023) 8049 4209
- **General Enquiries:** (023) 8026 6355

- **Service/Warranty Repair Agent**
For aftersales servicing or warranty repairs, please contact the Draper Tools Helpline for details of an agent in your local area.

YOUR DRAPER STOCKIST

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