



INSTRUCTIONS FOR 150mm 150W Bench Grinder

Stock No.83420 Part No.LD150

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



GENERAL INFORMATION

These instructions accompanying the product are the original instructions. This document is part of the product, keep it for the life of the product passing it on to any subsequent holder of the product. Read all these instructions before assembling, operating or maintaining this product.

This manual has been compiled by Draper Tools describing the purpose for which the product has been designed, and contains all the necessary information to ensure its correct and safe use. 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 the accuracy of information contained in this manual, the Draper Tools policy of continuous improvement determines the right to make modifications without prior warning.

1. TITLE PAGE

1.1 INTRODUCTION:

USER MANUAL FOR:

150mm 150W BENCH GRINDER

Stock no. 83420.

Part no. LD150.

1.2 REVISIONS:

Date first published November 2015

As our user manuals are continually updated, users should make sure that they use the very latest version.

Downloads are available from: <http://www.drapertools.com/manuals>

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1.3 UNDERSTANDING THIS MANUALS SAFETY CONTENT:

WARNING! Information that draws attention to the risk of injury or death.

CAUTION! Information that draws attention to the risk of damage to the product or surroundings.

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3. GUARANTEE

3.1 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 90 days from the date of purchase. 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.

4. INTRODUCTION

4.1 SCOPE

This grinder is intended for garage/workshop use for sharpening and removing rust, paint, etc.

4.2 SPECIFICATION

Stock no.	83420
Part no.	LD150
Rated voltage	230V~50Hz
Rated input.....	150W
Operating condition	S2: 30min
Revolutions Per Minute (no load)	2950r/min
Wheel Dimension:	
Maximum Diameter	150mm
Maximum Thickness.....	16mm
Bore Diameter	12.7mm
Abrasive wheels supplied	1 x 60grit, 1 x 30grit
Sound Pressure Level.....	73.8dB(A)
Sound Power Level.....	86.8dB(A)
Weight (machine only)	5kg

4.3 HANDLING & STORAGE

This machine should be stored in a dry location and in its box. Avoid storing this machine in areas prone to damp or humidity.

When handling this machine never pick up or carry this machine by the power supply cable. Always lift from grinder base.

5. HEALTH & SAFETY INFORMATION

5.1 GENERAL SAFETY INSTRUCTIONS FOR POWER TOOL USE

When using any type of power tool there are steps that should be taken to make sure that you, as the user, remain safe.

Common sense and a respect for the tool will help reduce the risk of injury.

Read the instruction manual fully. Do not attempt any operation until you have read and understood this manual.

Most important you must know how to safely start and stop this machine, especially in an emergency.

Keep the work area tidy and clean. Attempting to clear clutter from around the machine during use will reduce your concentration. Mess on the floor creates a trip hazard. Any liquid spilt on the floor could result in you slipping.

Find a suitable location. If the machine is bench mounted; the location should provide good natural light or artificial lighting as a replacement. Avoid damp and dusty locations as it will have a negative effect on the machine's performance. If the machine is portable; do not expose the tool to rain. In all cases do not operate power tools near any flammable materials.

Beware of electric shock. Avoid contact with earthed surfaces; because they can conduct electricity if there is an electrical fault with the power tool. Always protect the power cable and route it away from danger.

Keep bystanders away. Children, onlookers and passers by must be restricted from entering the work area for their own protection. The barrier must extend a suitable distance from the tool user.

Unplug and house all power tools that are not in use. A power tool should never be left unattended while connected to the power supply. They must be housed in a suitable location, away locked up and from children.

Do not overload or misuse the tool. All tools are designed for a purpose and are limited to what they are capable of doing. Do not attempt to use a power tool (or adapt it in any way) for an application it is not designed for. Select a tool appropriate for the size of the job. Overloading a tool will result in tool failure and user injury: This covers the use of accessories.

Dress properly. Loose clothing, long hair and jewellery are all dangerous because they can become entangled in moving machinery: This can also result in parts of body being pulled into the machine. Clothing should be close fitted, with any long hair tied back and jewellery and neck ties removed. Footwear must be fully enclosed and have a nonslip sole.

Wear personal protective equipment (PPE). Dust, noise, vibration and swarf can all be dangerous if not suitably protected against. If the work involving the power tool creates dust or fumes; wear a dust mask. Vibration to the hand, caused by operating some tools for longer periods must be protected against. Wear vibration reducing gloves and allow long breaks between uses. Protect against dust and swarf by wearing approved safety goggles or a face shield. These are some of the more common hazards and preventions; however, always find out what hazards are associated with the machine/work process and wear the most suitable protective equipment available.

Do not breathe contaminated air. If the work creates dust or fumes; connect the machine (if possible) to an extraction system either locally or remotely. Working outdoors can also help if possible.

Move the machine as instructed. If the machine is hand held, do not carry it by the power supply cable. If the product is heavy; employ a second or third person to help move it safely or use a mechanical device. Always refer to the instructions for the correct method.

Do not overreach. Extending your body too far can result in a loss of balance and you falling. This could be from a height or onto a machine and will result in injury.

Maintain your tools correctly. A well maintained tool will do the job safely. Replace any damaged or missing parts immediately with original parts from the manufacturer. As applicable; keep blades sharp; moving parts clean, oiled or greased; handles clean; and emergency devices working.

5. HEALTH & SAFETY INFORMATION

Wait for the machine to stop. Unless the machine is fitted with a safety brake; some parts may continue to move due to momentum. Wait for all parts to stop; then unplug it from the power supply before making any adjustments, carrying out maintenance operations or just finishing using the tool.

Remove and check setting tools. Some machinery requires the use of additional tools or keys to set, load or adjust the power tool. Before starting the power tool always check to make certain they have been removed and are safely away from the machine.

Prevent unintentional starting. Before plugging any machine in to the power supply, make sure the switch is in the OFF position. If the machine is portable; do not hold the machine near the switch and take care when putting the machine down; that nothing can operate the switch.

Carefully select an extension lead. Some machines are not suitable for use with extension leads. If the tool is designed for use outdoors; use an extension lead also suitable for that environment. When using an extended lead, select one capable of handling the current (amps) drawn by the machine in use. Fully extend the lead regardless of the distance between the power supply and the tool. Excess current (amps) and a coiled extension lead will both cause the cable to heat up and can result in fire.

Concentrate and stay alert. Distractions are likely to cause an accident. Never operate a power tool if you are under the influence of drugs (prescription or otherwise), including alcohol or if you are feeling tired. Being disorientated will result in an accident.

Have this tool repaired by a qualified person. This tool is designed to conform to the relevant international and local standards and as such should be maintained and repaired by someone qualified; using only original parts supplied by the manufacturer: This will ensure the tool remains safe to use.

5.2 SPECIFIC SAFETY INSTRUCTIONS FOR BENCH GRINDERS

ADDITIONAL SAFETY INSTRUCTIONS

Check the 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 seconds 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;

Never use the tool without 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;

5. HEALTH & SAFETY INFORMATION

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.

5.3 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.

5. HEALTH & SAFETY INFORMATION

5.4 CONNECTION TO THE POWER SUPPLY


Make sure the power supply information on the machine's rating plate are compatible with the power supply you intend to connect it to.

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.

6. TECHNICAL DESCRIPTION

6.1 IDENTIFICATION



- ① Wheel guard
- ② On/Off rocker switch
- ③ Moulded plug and cable

7. UNPACKING & CHECKING

7.1 PACKAGING

Carefully remove the machine from the packaging and examine it for any sign of damage that may have happened during shipping. Lay the contents out and check them against the parts shown below. If any part is damaged or missing; please contact the Draper Helpline (the telephone number appears on the Title page) and do not attempt to use the machine.

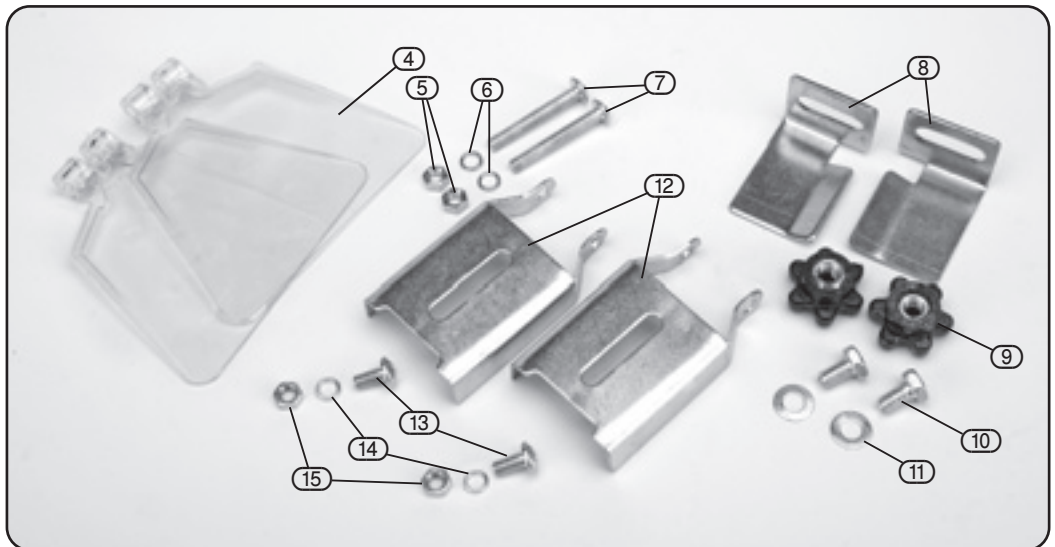
The packaging material should be retained at least during the guarantee period: in case the machine needs to be returned for repair.

Warning! Some of the packaging materials used may be harmful to children. Do not leave any of these materials in the reach of children.

If any of the packaging is to be thrown away, make sure they are disposed of correctly; according to local regulations.

7.2 WHAT'S IN THE BOX?

As well as the grinder; there are several parts not fitted or attached to it.



- | | | |
|--|-----------------------------|-------------------------------------|
| ④ Eyeshield. | ⑧ Tool rests. | ⑫ Spark deflectors. |
| ⑤ Eyeshield/Spark deflector Fixing nuts. | ⑨ Tool rest adjusting nuts. | ⑬ Spark deflector adjustable bolts. |
| ⑥ Eyeshield/Spark deflector washers. | ⑩ Tool rest bolts. | ⑭ Spark deflector washers. |
| ⑦ Eyeshield/Spark deflector bolts. | ⑪ Tool rest washers. | ⑮ Spark deflector nuts. |

8. PREPARING THE GRINDER

8.1 INSTALLATION

Choose a location that is level, flat and with a lot of natural light.

The bench grinder should be operated on a work bench that is high enough to prevent any injury caused by working in an uncomfortable position; but not too high that the work piece cannot be safely viewed from above.

WARNING! Bending over or having your neck bent for too long (from looking down) can lead to fatigue injuries.

The environment will have a negative result on its operation if you are not careful. If the air is damp, components will rust. If the machine is unprotected from dust and debris; components will become clogged: And if not cleaned and maintained correctly or regularly the machine will not perform at its best.

The work bench should offer enough space around the bench grinder for all possible applications and to house any accessories.

Although the bench grinder has been assembled in the factory, some final assembly and adjustments will be required before it can be used. The fine setup will come from making small adjustments.

8.2 BENCH MOUNTING YOUR GRINDER

Securely bolt the bench grinder to a work bench or other secure surface through the various 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.

8. PREPARING THE GRINDER

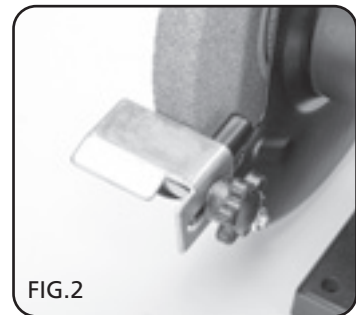
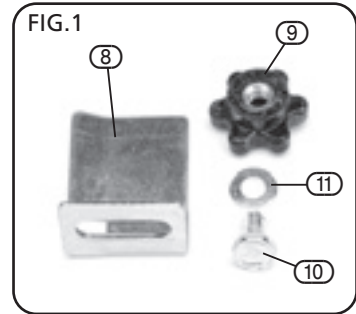
NOTE: Remove the plug from the socket before carrying out adjustment, servicing or maintenance.

8.3 FITTING TOOL REST - FIGS. 1 - 3

Attach the tool rest (8) using the bolt (10), large washers (11) and fixing nut (9).

Now adjust the tool rests so there is approximately a 1.5mm ($\frac{1}{16}$ ") gap between the surface of the grinding wheels and the tool rests.

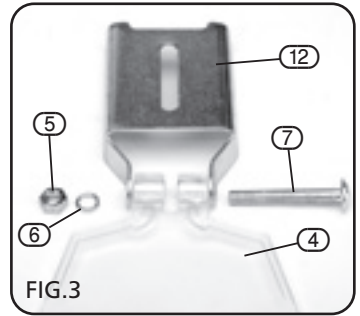
Repeat for other side.



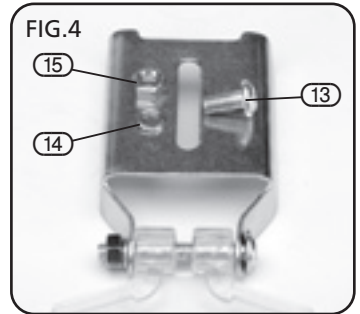
8. PREPARING THE GRINDER

8.4 FITTING EYESHIELD - FIGS. 3 - 5

Attach the eyeshield (4) to the spark deflectors (12) using bolt (7), washer (6) and nut (5).



Attach the assembled eyeshield and spark deflector to the grinder, using bolt (13), washer (14) and nut (15).



Fully assembled eyeshield and spark deflector.



9. OPERATING THE GRINDER

9.1 ON/OFF SWITCH - FIG. 6

Turn the grinder "on" using the switch marked "I". To turn off, press the switch marked "O".

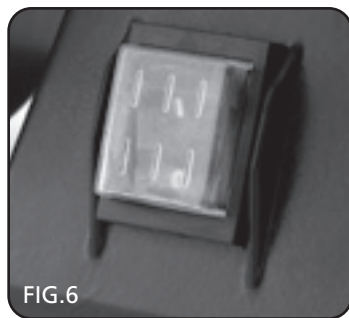


FIG. 6

9.2 CHANGING THE GRINDING WHEEL - FIG. 7

1. Switch the bench grinder "OFF" and disconnect from the power supply.
2. Remove the screws which secure the grinding wheel side covers then take off covers.
3. Use two spanners to unlock the retaining nut.
NOTE: The grinding wheel nut has a left thread.
4. When fitting a new grinding wheel always check that the stated max. grinding wheel RPM exceeds the RPM of the bench grinder. Also check the grinding wheel for damage such as flaws or cracks, then if the wheel appears satisfactory, fit the new wheel to the grinder.
5. Remove the old wheel and replace it with the new one.
6. Place the flange on the spindle and tighten the spindle nut just enough to hold the wheel firmly. **Do not over tighten the nut as the wheel may become damaged.** Repeat the above to replace the opposite wheel.
7. Re-assemble the side covers.
8. Stand to one side of the grinder and switch "ON". Let the grinder operate at full speed for approximately one minute so that any undetected cracks or flaws in the wheel will become apparent.



FIG. 7

10. 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.

11. OPTIONAL ACCESSORIES

GRINDING WHEELS:

Stock No.	Part No.	Type Grit	Diameter	Bore Size	Width (face size)
85211	AG150D	Coarse 36	150mm	12.7mm	16mm
85213	AG150E	Fine 60	150mm	12.7mm	16mm

12. EXPLANATION OF SYMBOLS/PICTOGRAMS



Warning!
Wear safety glasses.



Warning!
Read the instruction manual.



Do not dispose of WEEE*
as unsorted municipal waste.



* Waste Electrical & Electronic Equipment.

13. DISPOSAL

13.1 DISPOSAL

- 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.

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- **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.

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