



Ø150MM BENCH GRINDER WITH Ø200MM WETSTONE 250W

MODEL NO: **SM521**

Thank you for purchasing a Sealey product. Manufactured to a high standard, this product will, if used according to these instructions, and properly maintained, give you years of trouble free performance.

IMPORTANT: PLEASE READ THESE INSTRUCTIONS CAREFULLY. NOTE THE SAFE OPERATIONAL REQUIREMENTS, WARNINGS & CAUTIONS. USE THE PRODUCT CORRECTLY AND WITH CARE FOR THE PURPOSE FOR WHICH IT IS INTENDED. FAILURE TO DO SO MAY CAUSE DAMAGE AND/OR PERSONAL INJURY AND WILL INVALIDATE THE WARRANTY. KEEP THESE INSTRUCTIONS SAFE FOR FUTURE USE.



Refer to instructions



Wear eye protection



Wear ear protection



Wear a mask

1. SAFETY

1.1. ELECTRICAL SAFETY

- WARNING!** It is the user's responsibility to check the following:
- ✓ Check all electrical equipment and appliances to ensure that they are safe before using. Inspect power supply leads, plugs and all electrical connections for wear and damage. Sealey recommend that an RCD (Residual Current Device) is used with all electrical products.
- Electrical safety information.** It is important that the following information is read and understood:
- ✓ Ensure that the insulation on all cables and on the appliance is safe before connecting it to the power supply.
- ✓ Regularly inspect power supply cables and plugs for wear or damage and check all connections to ensure that they are secure.
- Important:** Ensure that the voltage rating on the appliance suits the power supply to be used and that the plug is fitted with the Correct fuse.
- ✗ **DO NOT** pull or carry the appliance by the power cable.
- ✗ **DO NOT** pull the plug from the socket by the cable.
- ✗ **DO NOT** use worn or damaged cables, plugs or connectors. Ensure that any faulty item is repaired or is replaced immediately by a Qualified electrician.

If the cable or plug is damaged during use, switch off the electricity supply and remove from use.

Ensure that repairs are carried out by a qualified electrician.

1.2. GENERAL SAFETY

- WARNING!** Disconnect the grinder from the mains power, and ensure the grinding wheels are at a standstill before attempting to change accessories, service or perform any maintenance.
- ✗ **DO NOT** use a damaged accessory. Before each use, inspect the accessory such as abrasive wheels for chips and cracks.
- ✗ **DO NOT** operate the grinder if any parts are damaged or missing as this may cause failure and/or personal injury.
- ▲ **DANGER! DO NOT** use a damaged wheel as it is dangerous and may cause damage and/or serious personal injury.
- WARNING!** Only persons qualified under the "Abrasive Wheels Regulations" and holding a current grinding wheel certificate are to change or dress grinding wheels. Unplug grinder from mains power and refer to Section "Grinding Wheels" below for details.
- ✓ After inspecting and installing an accessory, position yourself and bystanders away from the plane of the rotating accessory and run the power tool at maximum no-load speed for one minute. Damaged accessories will normally break apart during this test time.
- ✓ The rated speed of the accessory must be at least equal to the maximum speed marked on the grinder. Accessories running faster than their rated speed can break and fly apart.
- ✓ Never grind on the sides of a grinding wheel. Grinding on the side can cause the wheel to break and fly apart.
- ✓ Only use accessories with a diameter and maximum thickness specified in the Specification section of this manual.
- ✓ Bench grinders must always be stable and secure e.g. fixed to a bench or the like.
- ✓ Grinding wheels must be correctly mounted and free of defects before use (ring tested).
- ✓ Spark arrestors and work rests must be adjusted frequently so as to compensate for the wear of the wheel.
- WARNING!** Keep all guards and holding screws in place, tight and in good working order. Check regularly for damaged parts. A guard or any other part that is damaged should be repaired or replaced before tool is next used. The eye shields are a mandatory fitting when grinder is used in premises covered by the Health & Safety at Work Act.
- ✓ Distance between the spark arrestor/work rest and the wheel must be kept as small as possible and in any case no greater than 2mm.
- ✓ Worn wheel/s must be replaced when the 2mm gap between the spark arrestor/work rest is no longer able to be maintained.
- ✓ For tools with two spindles: always use the tool with accessories on both spindles in order to limit the risk of contact with the rotating spindle.
- ✓ Always use the guard, work rest, transparent screen and spark arrestor as required for the accessory(ies).
- ✓ Damaged or deeply grooved wheels must be replaced.
- ✓ Always adjust the work rest so that the angle between the work rest and the tangent of the accessory is always greater than 85°.
- ✓ Grinding wheels must always be handled and stored in the correct manner.
- ✓ Maintain the grinder in good condition and check moving parts alignment regularly.
- ✓ Replace or repair damaged parts. Use recommended parts only. Non-authorized parts may be dangerous and will invalidate the warranty.
- ✓ Locate grinder in a suitable working area, keep area clean, tidy and free from unrelated materials. Ensure adequate lighting.
- ✓ Before each use check grinding wheels for condition. If worn or damaged replace immediately.
- WARNING!** Always wear approved eye or face protection when operating the grinder.
- ✓ Use breathing protection in accordance with COSHH regulations if fumes or dust pose a hazard. Wear ear defenders if necessary.
- ✓ Maintain correct balance and footing. Ensure the floor is not slippery and wear non-slip shoes.

- ✓ Remove ill fitting clothing. Remove ties, watches, rings and other loose jewellery and contain and/or tie back long hair.
- ✓ Keep children and unauthorised persons away from the working area.
- ✗ **DO NOT** use the grinder for a task it is not designed to perform.
- ☐ **WARNING! DO NOT** grind any materials containing asbestos.
- ✗ **DO NOT** switch on the grinder whilst the wheel is in contact with the workpiece.
- ✗ **DO NOT** get the grinder wet or use in damp or wet locations or areas where there is condensation.
- ✗ **DO NOT** use grinder where there are flammable liquids, solids or gases, e.g. paint solvents and including waste wiping or cleaning rags etc.
- ✗ **DO NOT** touch the workpiece close to the ground surface as it will be very hot. Allow to cool. The workpiece may also be very sharp.
- ✗ **DO NOT** operate the grinder when you are tired, under the influence of alcohol, drugs or intoxicating medication.
- ✗ **DO NOT** leave the grinder operating unattended.
- ✓ When not in use switch off the grinder, disconnect from the mains power supply and clean the machine and working area.

2. INTRODUCTION

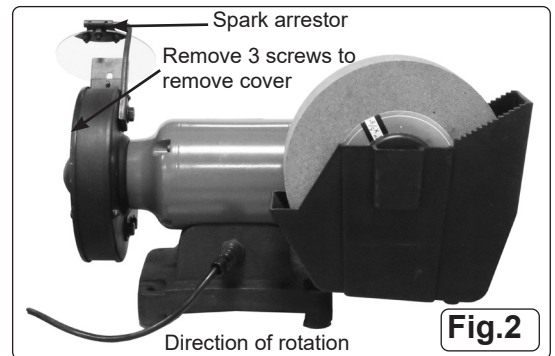
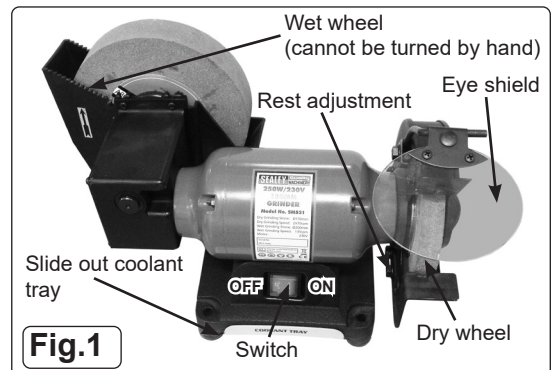
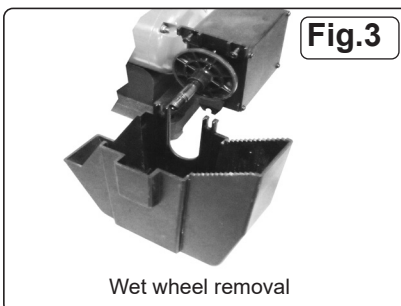
Fitted with 230V induction motor and is fully guarded. Suitable for workshop use. Supplied with Ø200mm wet stone and Ø150mm dry stone, ready to use. Suitable for sharpening fine blades.

3. SPECIFICATION

MODEL NO:	SM521
Motor Power:	250W
Supply:	230V
Wet Grinding Stone Size:	Ø200mm
Wet Grinding Stone Model No:	SM521GW200W
Wet Grinding Speed:	130rpm
Dry Grinding Stone Size:	Ø150mm
Dry Grinding Stone Model No:	BG150/15 (Fine), BG150/16 (Coarse)
Dry Grinding Speed:	2850rpm
Power Supply cable length:	1.7m

GRINDING WHEEL SIZE MM	DIAMETER	WIDTH	BORE SIZE
60#	150mm	20mm	12.7mm
80#	200mm	40mm	20mm

4. ASSEMBLY



- ☐ Unpack the product and check contents. If there are any damaged or missing parts contact your supplier immediately.
- ☐ **WARNING!** Before assembly check to ensure grinder is unplugged from mains.
- 4.1. EYESHIELD**
 - 4.1.1. Adjust eyeshield so that the perspex shield provides maximum protection against debris being thrown from the wheel.
- 4.2. TOOL REST**
 - 4.2.1. Tool rest should be adjusted to provide no more than a 2mm gap between the wheel and rest.
 - 4.2.2. Turn the dry wheel by hand to check that this distance remains true for the complete rotation.
- 4.3. SPARK ARRESTOR**
 - 4.3.1. Adjust spark arrestor to ensure that the lower edge is no more than 2mm from the surface of the wheel.
- 4.4. WHEEL DRESSING**

The rotating toothed wheels of the wheel dresser should be placed in gentle contact with the grinding face of the wheel.

 - ☐ **WARNING:** Wheel dressing should only be carried out by a suitably trained and qualified person.
- 4.5. INSTALLATION**
 - 4.5.1. Bolt the grinder securely to a fireproof workbench using the base securing slots as a template. Check that all assembly nuts and bolts are secure then read section 5 (grinding stones) before use.

5. GRINDING STONES

MANDATORY SAFETY INSTRUCTIONS (The following instructions must be observed together with section 1 safety).
DANGER! Use of a damaged stone is dangerous and may cause damage and/or personal injury.

- ☐ **WARNING!** Ensure grinder is unplugged from the mains power supply before attempting to change grinding stones (or wheel).
- ✓ Only persons qualified under the "Abrasive Wheels Regulations" and holding a current grinding wheel certificate are authorised to change and dress grinding stones (wheels).

- ✓ Grinding stones (wheels) used with this machine must be of an adequate speed rating and suitable for the material to be ground.
- ✓ Ensure the grinding stone's maximum speed specification is higher than that indicated on the machine data plate.
- ✓ Check grinding stone is secure, the stone is not worn or damaged and that there are no splits or cracks. If damaged replace immediately.
- ✓ Ensure replacement stone is not damaged in any way such as cracks, deformations or splinters etc. Also check the mounting flanges to ensure they are not deformed, burred or chipped. Damaged items must **NOT** be used as they may cause irregular pressure on the stone which may cause a stone to break. **DO NOT** over tighten a stone. Never tamper with a stone in order to adapt it to a different size holder.
- ✓ Install a new stone as in 5.1 and 5.2. Once mounted on the grinder test the stone before use by facing the grinder in a safe direction (point away from yourself, others and vulnerable items) and run for a short time. Dress the stone if necessary.

5.1. DRY STONE CHANGING PROCEDURE

- **WARNING!** Unplug grinder from the mains power supply before changing stone.

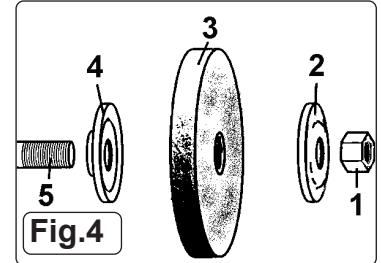
5.1.1. Remove three cross head machine screws and nuts from wheel cover and remove cover.

5.1.2. Hold grinding stone firmly. To protect your hands use cloth or ar gloves. Unscrew retaining nut (Fig.4).

Note: The 19mm A/F nut on the wet and dry grinding wheels are standard right hand thread (undo anti-clockwise). It may be necessary to strike the wrench sharply in the loosening direction with the heel of your hand to loosen the nut.

5.1.3. Remove grinding stone washer (fig 4.2), stone (3), and washer (4) from main spindle (5). (Fig.4), from main spindle (dry stone), or worm spindle (wet stone).

5.1.4. Carefully inspect the new stone before installing to ensure there are no fissures, chips, or cracks. Tap the grinding wheel gently with a rubber mallet and listen for a sustained high pitch (good) or dull short sound (flawed).



- **WARNING! DO NOT** use a damaged stone.

5.1.5. Install the new stone by reversing steps above. Ensure the domed washers are installed with the flange on the inside.

5.1.6. Hold stone steady and secure locking nut. **DO NOT** over tighten as this may crack the stone.

5.1.7. Replace stone cover, re-adjust tool rest to a maximum of 2mm from stone face and tighten securely.

5.2. WET STONE CHANGING PROCEDURE

5.2.1. Slacken two cross head machine screws and nuts on wheel cover top and one hexagon head screw and nut at the bottom of the cover.

5.2.2. Four tabs at the top of the plastic cover can be forced off the ledge and the cover can be removed vertically downward, see Fig.3. The bottom screw and nut will also now be removed.

5.2.3. Follow points 5.1.2. to 5.1.6 and finally refit the cover.

6. OPERATION

6.1. PRE-USE INSPECTION

- **WARNING!** Inspect the grinder before operating the machine. Ensure the grinder is unplugged from The mains power before commencing the inspection.

6.1.1. Check the tool rest on the dry wheel is securely fixed and set at a maximum of 2mm from the grinding stone.

6.1.2. Check that eye shield is in good condition, secure and that you can see through it clearly.

6.1.3. Turn the dry grinding stone by hand and check for any damage. Check they do not touch the tool rest or guards and are correctly aligned. If any of the above checks fail, replace, repair, or adjust as necessary before starting the grinder.

6.2. STONE USE

Depending on the model, grinders are supplied with one or two aluminous oxide stones. Stones have two grades, fine for hard materials and coarse for soft materials. When grinding, should surface of the stone become "loaded" (coated with particles of the material being ground) it is probably the wrong grade of stone for the job.

IMPORTANT: Grinding stones **MUST** Only be assembled by a person holding a grinding wheel certificate. See section 5.

6.3. USING THE GRINDER

6.3.1. Plug the grinder into the mains power supply.

6.3.2. Place the eyeshield in its appropriate safety location.

6.3.3. Switch the grinder on and bring the workpiece slowly into contact with the spinning stone, or wire wheel.

6.3.4. When you have completed your task, unplug the grinder from the mains power supply, and clean the machine ready for next use.

7. MAINTENANCE

- **WARNING!** Ensure the grinder is unplugged from the mains power supply before performing any maintenance or service.

7.1. As the grinding stone wears, adjust the position of the tool rest. The rest must be set at a maximum of 2mm from the stone surface.

7.2. Regularly remove the grinding stone covers and clean out any dust and dirt.

7.3. The machine motor and bearing are sealed units and require no regular maintenance. Should you require assistance, contact your local Sealey service agent.

7.4. For information relating to the handling and maintenance of grinding stones refer to section 5.



ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.



REGISTER YOUR
PURCHASE HERE



WEEE REGULATIONS

Dispose of this product at the end of its working life in compliance with the EU Directive on Waste Electrical and Electronic Equipment (WEEE). When the product is no longer required, it must be disposed of in an environmentally protective way. Contact your local solid waste authority for recycling information.

NOTE: It is our policy to continually improve products and as such we reserve the right to alter data, specifications and component parts without prior notice.

IMPORTANT: No Liability is accepted for incorrect use of this product.

WARRANTY: Guarantee is 12 months from purchase date, proof of which is required for any claim.

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