Bucktool SCM8103 10 Inch Variable Speed Sharpening System Instruction Manual

Contents

Bucktool SCM8103 10 Inch Variable Speed Sharpening System

Product Information

Specifications

- **Motor:** 120VAC, 60Hz, S1 1.0A, S2 30min 1.2A
- **Wet Wheel size:** 10 x 2 x 1/2
- **Stropping wheel size:** 8
- **Wheel speed:** 90~160RPM

Product Usage Instructions

Safety Guidelines

Before using the power tool, always follow these general safety guidelines:

- Always wear eye protection and a respirator.
- Ensure all parts are properly assembled and tightened.
- Stand to the side of the power tool when starting it.
- Disconnect power before changing the grinding wheels or servicing the tool.
- Operate the tool at the speed recommended by the manufacturer.
- Do not operate the tool if you are tired or under the influence of alcohol or medication.
- Avoid loose clothing, gloves, or jewelry that can get caught in the tool.

Additional specific safety rules:

1. Do not operate the machine until it is completely assembled and installed correctly.
2. Seek advice if you are not familiar with the operation of the machine.
3. Follow all wiring codes and electrical connection recommendations.
4. Use the provided blotter and wheel flanges to mount grinding wheels.
5. Use only wheels suitable for the machine’s speed.
6. Do not over-tighten the wheel nut or use a vibrating wheel.

7. Inspect wheels for cracks or damage before use.
8. Adjust eye shields close to the grinding wheel and ensure they are in place and secured.

FAQ

Q: What should I do if I notice vibrations while using the sharpener?

- **A:** If you experience vibrations, stop using the machine immediately. Dress the grinding wheel, replace it, or check and replace the bearings of the shaft to resolve the issue.

Q: How often should I inspect the wheels for cracks or fragments?

- **A:** It is recommended to inspect the wheels for any damage before each use. Replace damaged wheels immediately to prevent any accidents while operating the sharpener.

SPECIFICATIONS

Motor	**120VAC, 60Hz , S1 1.0A, S2 30min 1.2A**
Wet Wheel size	**10″ x 2″ x 1/2″**
Stropping wheel size	**8″**
Wheel speed	**90~160RPM**

SAFETY GUIDELINES

GENERAL SAFETY GUIDELINES BEFORE USING THIS POWER TOOL

- Always wear eye protection and a respirator.
- Keep bystanders out of the work area while operating the tool.
- Wheel guards and eye shields must be properly adjusted and tightened.
- Always make sure the wheels are properly mounted.
- Stand to the side of the sharpener during start-up. Switch it on and let the sharpener operate at full speed for approximately one minute so that any undetected flaws or cracks will become apparent.
- Keep guards in place and working properly.
- Keep hands clear of grinding wheels.
- Never reach behind or beneath the grinding wheels.
- Disconnect power before changing grinding wheels or servicing. The grinding wheels continue to rotate after the tool is switched off. Always allow the wheels to stop before adjusting or servicing. Do not stop the wheel with your hands or workpiece.
- To avoid electric shock, DO NOT use in damp conditions or exposed to rain.
- When fitting a new grinding wheel, always check that the stated maximum RPM meets or exceeds that stated on the sharpener. Also check the new wheel for damage, such as flaws or cracks. If the wheel appears satisfactory, fit it to the sharpener.
- When a new grinding wheel has been fitted, stand to one side of the sharpener and switch it on. Let the

sharpener operate at full speed for approximately one minute so that any undetected flaws or cracks will become apparent

- Use only accessories that are recommended by the manufacturer for your model.
- DO NOT attempt to cut anything with the grinding wheel.
- Grounded tools must be plugged into an outlet that has been properly installed and grounded under all local codes and ordinances. Never remove the grounding prong from the plug or modify it in any way.
- Do not use adaptor plugs. If in doubt as to whether the outlet is properly grounded, consult a qualified electrician.
- Do not use the tool when tired or under the influence of drugs, alcohol, or medication.
- Do not wear loose clothing, gloves, or jewelry; tie up long hair and button all long-sleeved shirts.
- Ensure the power switch is off before plugging in the tool.
- Do not overtighten spindle nuts.
- Spacing between tool rests and wheels should be set to 1/8″ or less; hold the workpiece firmly against the tool rest.
- Service on these tools should only be performed by an authorized, qualified technician.

WARNING!

- Failure to follow these rules may result in serious personal injury.

ADDITIONAL SPECIFIC SAFETY RULES

1. DONOT operate this machine until it is completely assembled and installed according to the instructions. A machine incorrectly assembled can cause serious injury.
2. OBTAIN ADVICE from your supervisor, instructor, or another qualified person if you are not thoroughly familiar with the operation of this machine. Knowledge
3. FOLLOW ALL WIRING CODES and recommended electrical connections to prevent shock or electrocution.
4. ALWAYS USE THE PROVIDED BLOTTER and wheel flanges to mount the grinding wheels on the sharpener shaft to prevent wheel damage or accidental separation. Separation can result in fragments flying off the wheel at high speeds.
5. USE ONLY WHEELS suitable for the speed of the machine. Unsuitable grinding wheels can come apart, throwing fragments out at high speeds.
6. USE ONLY WHEELS that have a bore exactly equal to the arbors of the machine.
    - Never attempt to machine an undersized wheel to fit an armour. Unsuitable grinding wheels can come apart, throwing fragments out at high speeds.
7. DO NOT overtighten the wheel nut.
8. DO NOT USE A WHEEL THAT VIBRATES. Dress the grinding wheel, replace it, or replace the bearings of the shaft. Unsuitable grinding wheels can come apart, throwing fragments at high speeds.
9. INSPECT WHEELS for cracks or fragments before starting the machine. REPLACE DAMAGED WHEELS immediately. Parts of the wheel can be thrown at high speeds causing serious injury.
10. ADJUST EYE SHIELDS close to the grinding wheel, and re-adjust as the wheel wears down. Flying sparks are dangerous and can cause fires or explosions.
11. ALWAYS MAKE SURE the eye shields are in place, properly adjusted, and secured.
12. DJUST TOOL RESTS close to the grinding wheel (1/8″ separation or less).

- Tighten the tool rest securely to prevent shifting positions, and re-adjust as the wheel wears down. The workpiece can be drawn into the wheel, causing damage to the workpiece and/or serious injury.

13. Make sure the machine is properly mounted to the bench or stand before starting the motor.
14. STAND TO ONE SIDE before turning the machine on. Loose fragments or wheel parts could fly from the wheel at high speeds.
15. NEVER GRIND ON A COLD WHEEL. Run the sharpener for one full minute before applying the workpiece. A cold wheel tends to chip. Those fragments could fly from the wheel at high speeds.
16. NEVER START THE machine with the workpiece against the grinding wheel.
    - The workpiece can be drawn into the wheel, causing damage to the machine and/or serious injury.
17. CLEAN THE MACHINE thoroughly when processing different types of workpieces (wood, steel, or aluminum). Combining wood and metal dust can create an explosion or fire hazard. DO NOT GRIND or polish magnesium. Fire will result.
18. NEVER GRIND NEAR FLAMMABLE GAS OR LIQUIDS. Sparks can create a fire or an explosion.
19. AVOID awkward operations and. A sudden slip could cause a hand to move into the grinding wheel.
20. KEEP ARMS, HANDS, and fingers away from the wheel. The abrasive surfaces can cause serious injury.
21. Always use a tool rest and hold the workpiece firmly with both hands when grinding.
    - Loss of control of the workpiece can cause serious injury.
22. DRESS THE WHEEL on the face only. Dressing the side of the wheel could cause it to become too thin for safe use.
23. GRIND A WORKPIECE using the face of the grinding wheel only. Loss of control of the workpiece can cause serious injury.
24. NEVER APPLY COOLANT directly to the grinding wheel. Coolant can weaken the bonding strength of the grinding wheel and cause it to fail. Dip the workpiece in water to cool it.
25. DO NOT touch the ground portion of a workpiece until it has cooled sufficiently Grinding creates heat.
26. PROPERLY SUPPORT LONG OR WIDE workpieces. Loss of control of the workpiece can cause serious injury.
27. NEVER PERFORM LAYOUT, assembly, or set-up work on the table/work area when the machine is running. A sudden slip could cause a hand to move into the wheel. Severe injury can result.
28. Turn the MACHINE OFF, disconnect the machine from the power source, and clean the table/work area before leaving the machine. Lock the switch in the OFF position to prevent unauthorized use. Someone else might accidentally start the machine and cause serious injury to themselves.

WARNING!

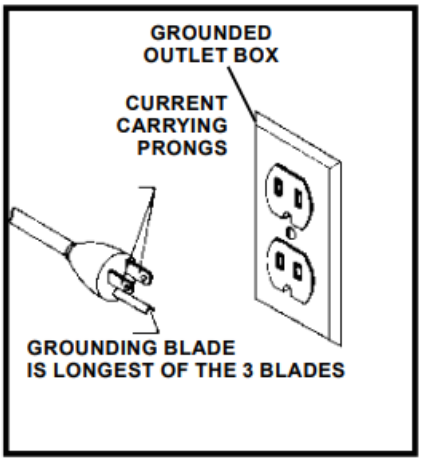
- Read, understand, and observe all instructions in this manual before using or operating the tool for which it is written and supplied.
- Ensure that anyone who is to use the tool has read and understood the instructions provided.

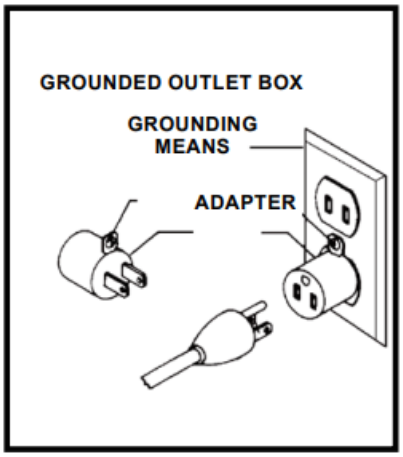
IMPORTANT INFORMATION-Electrical

- A separate electrical circuit should be used for your machines. This circuit should not be less than #12 wire and should be protected with a 20-A time-lag fuse.
- If an extension cord is used, use only 3-wire extension cords which have 3-pronged grounding type plugs and matching receptacles that will accept the machine’s plug.
- Before connecting the machine to the power line, make sure the switch is in the OFF” position and be sure that

the electric current is of the same characteristics as indicated on the machine.

- All line connections should make good contact. Running on low voltage will damage the machine.





MOTOR SPECIFICATIONS

- Your machine is wired for 120 V, 60Hz alternating current.
- Before connecting the machine to the power source, make sure the switch is in the “OFF” position.

GROUNDING INSTRUCTIONS

- All grounded, cord-connected machines: In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock.
- This machine is equipped with an electric cord having an equipment grounding conductor and a grounding plug.

DANGER!

- DO NOT EXPOSE THE MACHINE TO RAIN OR OPERATE THE MACHINE IN DAMP LOCATIONS.
- THIS MACHINE MUST BE GROUNDED WHILE IN USE TO PROTECT THE OPERATOR FROM ELECTRIC SHOCK.
- The plug must be plugged into a matching outlet that is properly installed and grounded under all local codes and ordinances.
- Do not modify the plug provided it will not fit the outlet, have the proper outlet installed by a qualified electrician.
- Improper connection of the equipment-grounding conductor can result in a risk of electric shock.
- The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor.
- If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.
- Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the machine is properly grounded.
- Use only 3-wire extension cords that have 3-pronged grounding type plugs and matching 3-conductor receptacles that accept the machine’s plug, as shown in Fig. A. Repair or replace damaged or worn cords immediately.

MINIMUM GAUGE FOR CORD SETS

- Use proper extension cords. Make sure your extension cord is in good condition and is a 3-wire extension cord that has a 3-pronged grounding type plug and matching receptacle which will accept the machine's plug.
- When using an extension cord, be sure to use one heavy enough to carry the current of the machine. An undersized cord will cause a drop in line voltage, resulting in loss of power and overheating.
- The table shows the correct gauge to use depending on the cord length. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

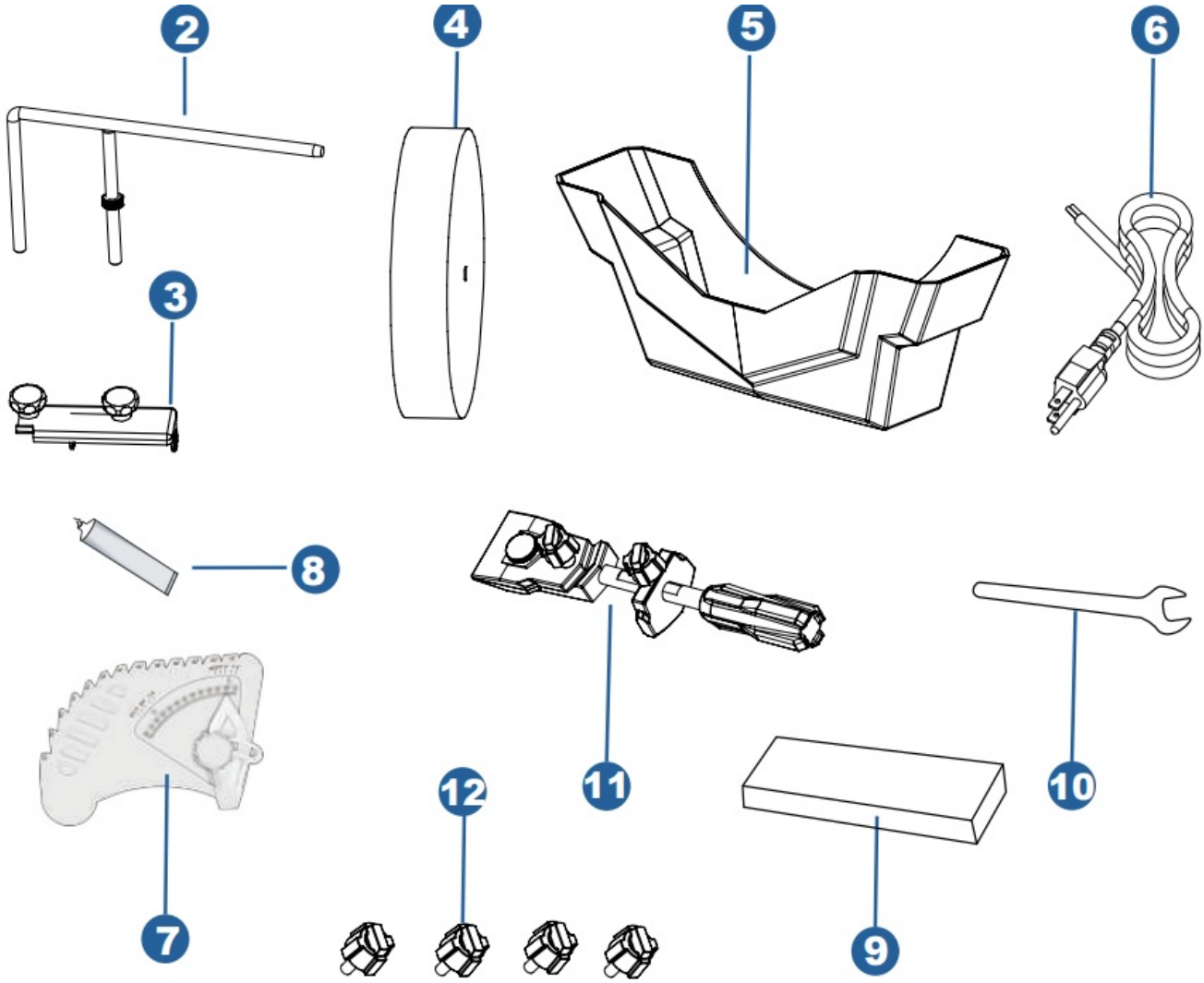
Ampere rating of the tool (120V circuit only)		Total length of cord			
		25′ (7.62 m)	50′ (15.24 m)	100′ (30.48 m)	150′ (45.72 m)
more than	not more than	Minimum Gauge for the extension cord (AWG)			
0	6	18	16	16	14
6	10	18	16	14	12
10	12	16	16	14	12
12	16	14	12	Not recommended	

WARNING!

- In all cases, make certain the receptacle in question is properly grounded.
- If you are not sure, have an electrician check the receptacle.

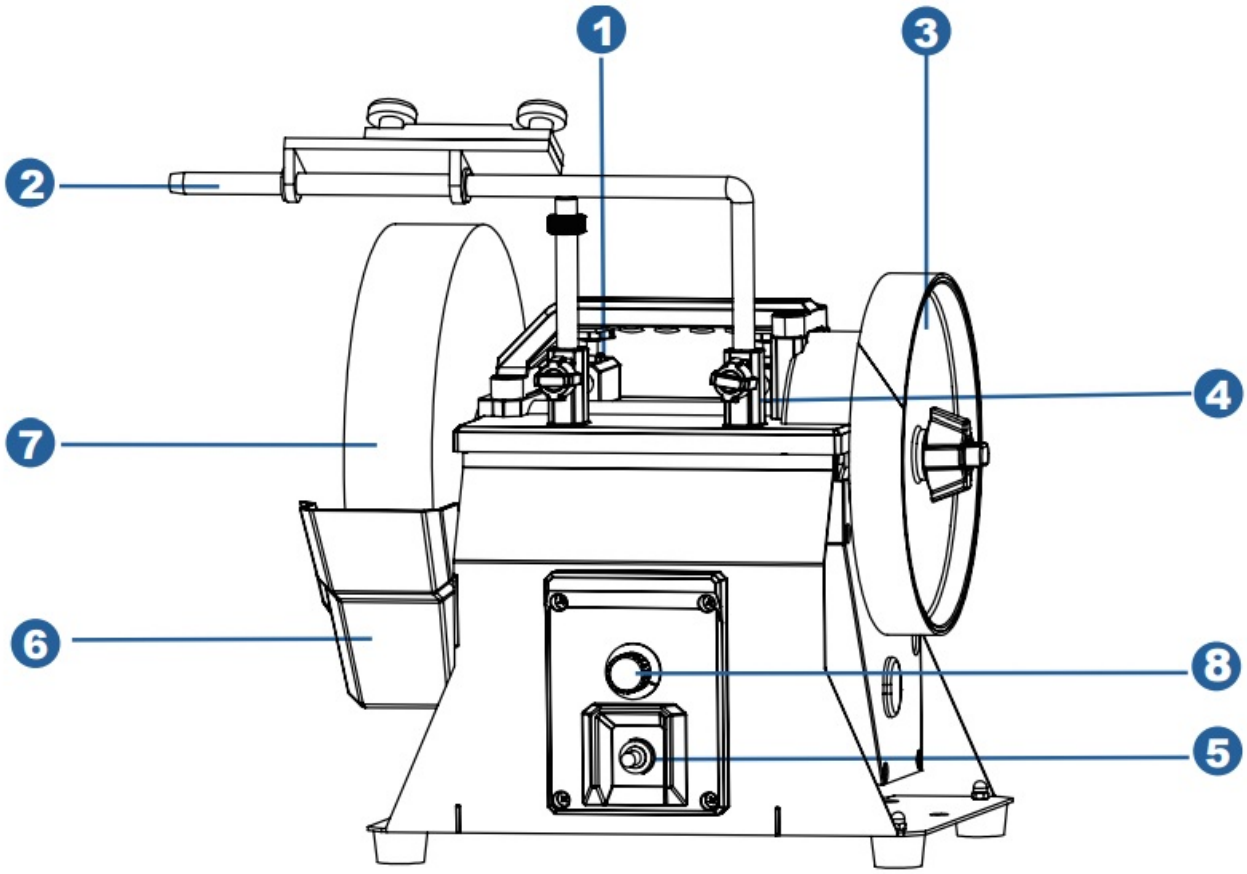
Package contents

No.	Description	Qty.
1	Sharpener (not shown)	1
2	Universal support	1
3	Grinding jig	1
4	Wet Grinding wheel	1
5	Water reservoir	1
6	Cord & plug	1
7	Angle guide	1
8	Honing compound	1
9	Wheel dressing stone	1
10	Wrench	1
11	Short knife jig	1
12	Lock knob	4



KEY PARTS DIAGRAM

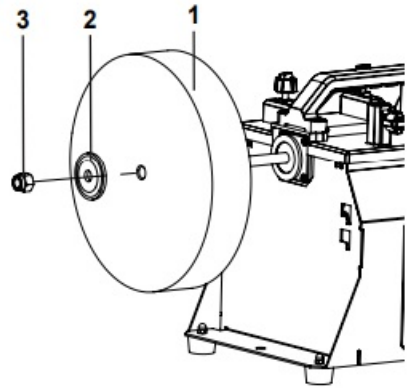
No.	Description
1	Horizontal mounts with knobs
2	Universal support
3	Leather stropping wheel
4	Vertical mounts with knobs
5	Power switch
6	Water reservoir
7	Grinding wheel
8	Variable speed knob



OPERATING INSTRUCTIONS

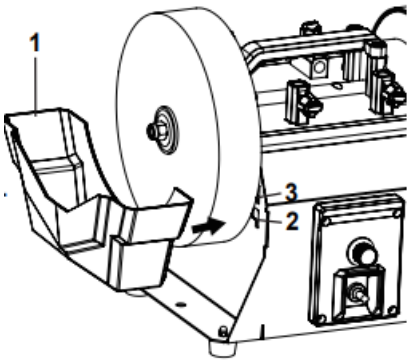
Mount The Wet Stone

- The sharpener is shipped with the Wet Stone (1) off of the machine. Make sure that the machine is not plugged in before assembling the stone onto the sharpener.
- Remove the nut (3) and outer flange(2)from the main shaft, slide the wet stone onto the shaft, then reinstall the flange (2) and nut (3) to secure the stone in place.



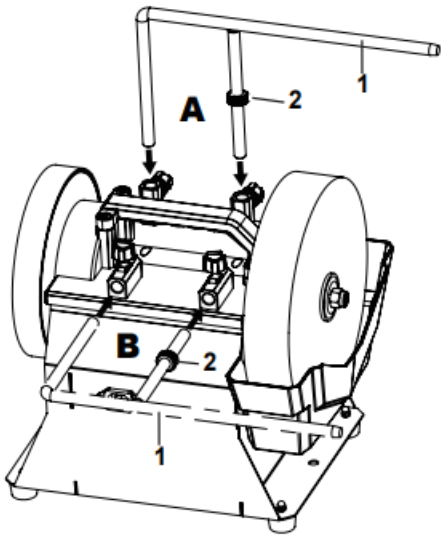
Mount The Water Tank

- Slide the notches on the water reservoir (1) into the two lower mounting slots (2).
- **NOTE:** There are two mounting positions on the grinding wheel side of the machine for installing the water reservoir For new wheels, use the lower mounting slots (2).
- As the wheel gets used, you will need to adjust the water reserve to the upper slots (3).



Installing The Universal Support

- The universal support (1) acts as both a work rest and as an attachment arm for various jigs.
- The Universal support can be installed either in the vertical (A) or horizontal (B) position.



Position A – Against Wheel Rotation

- Working along the rotation of the blade is preferable for more precise jobs that require less material removal. For fine sharpening on tools such as knives, scissors, or other carving instruments, grind with the rotation of the wheel.
- The grinding wheel rotates away from you. Use the two-directional power switch to change the direction of the wheel’s rotation. Remove the workpiece from the machine before changing rotation directions.

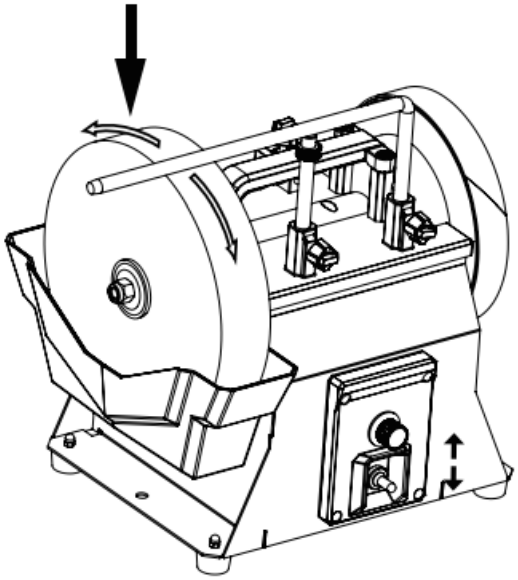
Mount The Universal Support

1. Select the suitable position for mounting the Universal support. Orient the work support so that the support arm is extended over the wheel you’ll be working with.
2. Loosen the mounting locking knobs and slide the work support into the mounting bushings.
3. Adjust the height of the work support to fit your workpiece and operation. Refer to Angle Guide” for setting up the work support for your blade’s bevel using the angle guide.
4. Use the fine adjustment nut (2) on the threaded bar to make fine adjustments to the work support as necessary.
    - Make sure the support arm is completely parallel and level with the face of the wheel, whether it be in the vertical or the horizontal position.

- Secure the support in place by tightening both locking knobs.

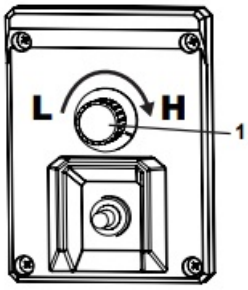
Grinding Against Wheel Rotation

- The sharpener additionally has been outfitted with an electrical power switch that permits the grinding wheel to rotate in the frontend reverse directions.
- Flip the power switch up, the grinding wheel rotates counterclockwise
- Flip the power switch down, and the grinding wheel rotates clockwise



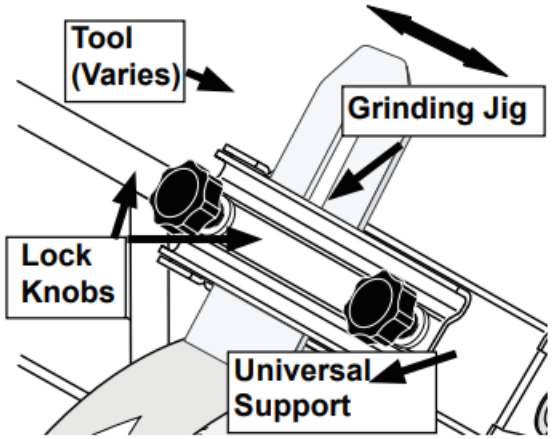
Variable Speed Knob

1. To increase speed, rotate the variable speed control knob (1) clockwise.
2. To reduce speed, rotate the variable speed control knob (1) counterclockwise.



GRINDING JIP

The grinding jig provided with the wet sharpener is used for securing a variety is used for securing a variety of tools, and can be positioned to grind with and against the wheel rotation.



Water Reservoir

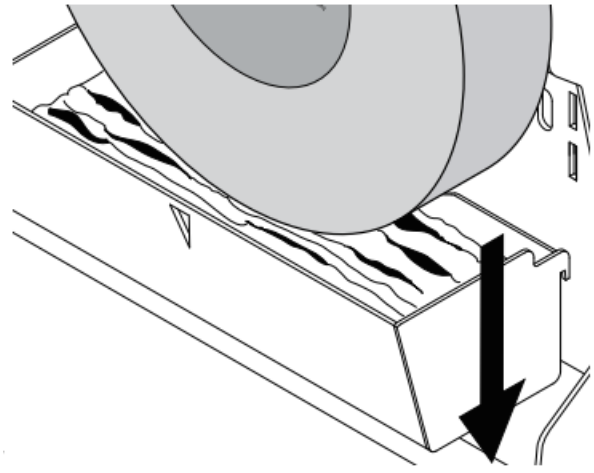
- The wet sharpener is designed for wet grinding and should never be used without water.
- The mounting tabs on the reservoir serve as hooks to attach to the reservoir mounting slots.

To fill and position the reservoir:

- Remove the reservoir and fill it with water just below the V-shaped notch.
- Attach the reservoir to the sharpener.

To mount the grinding jig:

- DISCONNECT THE SHARPENER FROM THE POWER!
- Slide the grinding jig onto the universal support, as illustrated.
- Insert the tool into the jig clamp, then use the angle guide, as described in the manual, to set the grinding angle.
- Once the grinding angle is set, tighten both lock knobs to secure the tool in place.



NOTE:

- If the sharpener is not going to be used immediately, do not put the grinding wheel in the water.
- Remove the reservoir to reduce the likelihood of damage to the wheel and potential hazards from being stored in water.

CAUTION:

- Always lock the switch “OFF” when the sharpener is not in use.

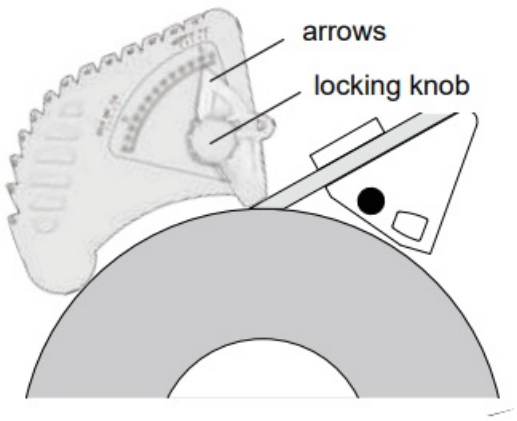
Here are some tips for using the sharpener water reservoir:

- Check the water level before every use and be sure the wheel is wet before you begin grinding. DO NOT use the sharpener without water.
- Leaving the grinding wheel stored in water will cause damage to the wheel and create potential hazards because the wheel will become unbalanced.
- Once any grinding process is complete, return the reservoir to the storage position to prevent prolonged water exposure to the wheel.
- Empty, rinse, and refill the reservoir regularly. This prevents metal and stone from accumulating in the reservoir.
- Place a magnet in the reservoir to catch and collect metal fillings. This will help prevent excessive metal accumulation on the grinding wheel.

Angle Guide

The sharpener comes with an angle guide to help identify and maintain the cutting angle on a variety of tools.

1. Mount the blade in the Grinding Jig and place the support arm in the mount.
2. Use the gauge on the outside of the angle guide to measure the bevel angle of the blade.
3. Loosen the locking knob on the angle guide and adjust the protractor so that the arrows are aligned with the correct grindstone diameter marking.
4. Then set the pointer to the required bevel angle on the blade and tighten the locking collar to lock in position.
5. Thread the grinding jig onto the support arm so that the blade rests against the grindstone.
6. Position the curved foot of the angle guide on the grindstone and the flat section of the pointer on the blade to be sharpened.
7. Use the Support Arm Height Adjuster to adjust the height of the support arm until the flat section on the angle guide pointer lies perfectly flat on the blade.
8. The grinding angle will now be correct.



Wheel Dressing

- Depending on the type of grinding you do, the grinding wheel may require periodic dressing.

- A variety of dressing tools are available (not included) and can be used to restore the abrasive quality of the wheel surface and bring the wheel edge back to the right form.
- Refer to the instructions that accompany your dressing accessory for complete details on how to properly dress a wheel.
- When grinding, metal objects become heated quickly. It is important to keep moving the object back and forth across the face of the grinding wheel and to cool the object frequently using the coolant tray.

Sharpening

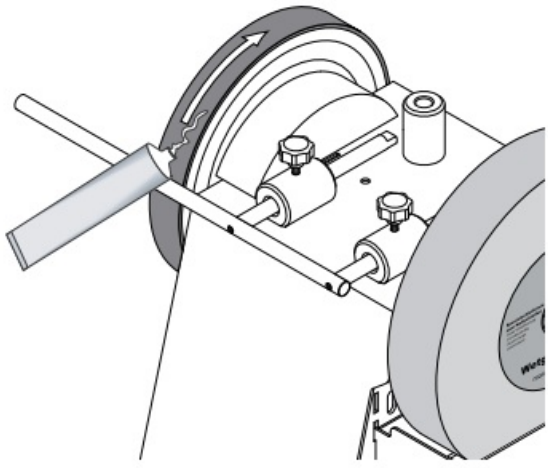
- The leather stropping wheel on the sharpener and the included abrasive stropping paste can be used to obtain a razor-sharp edge on many tools.
- Before use, the stropping wheel must be properly prepared.

NOTE:

- A slight wobble of the stopping wheel, when it is rotating, is normal and does not affect the performance.

To prepare the stropping wheel:

- Evenly apply a light machine oil to the leather wheel. Use enough oil to provide a thorough coating, but not so much as to saturate the leather and result in dripping.
- Apply a thin coat of abrasive honing paste the leather wheel using a wooden spreader or similar device. Distribute the paste evenly by hand-turning the wheel while spreading.
- Connect the machine to power, then turn the machine on and continue to distribute the paste, still using the wooden spreader. Move the spreader lightly in a circular motion across the wheel.
- Once the paste is evenly distributed, begin sharpening.
- These preparations will be sufficient for sharpening five to ten tools. If you notice a drop in sharpening performance or have sharpened more than ten tools, repeat the above steps.



MAINTENANCE

ROUTINE INSPECTION

- Before each use, inspect the general condition of the tool. If any of these following conditions exist, do not use until parts are replaced or the Sharpener is properly repaired.

Check for:

- • Loose hardware,
- • Misalignment or binding of moving parts,
- • Damaged cord/electrical wiring,
- • Cracked or broken parts, and
- • Any other condition that may affect its safe operation.

CLEANING & STORAGE

1. Keep the ventilation openings free from dust and debris to prevent the motor from overheating.
2. Use a vacuum or low-pressure compressed air to remove dust and debris from the tool surfaces, motor housing, and work area.
3. Wipe the tool surfaces clean with a soft cloth or brush. Make sure water does not get into the tool.
    - **CAUTION!** Most plastics are susceptible to damage from various types of commercial solvents. Do not use any solvents or cleaning products that could damage the plastic parts.
    - Some of these include but are not limited to gasoline, carbon tetrachloride, chlorinated cleaning solvents, and household detergents that contain ammonia.
4. Always empty the water reservoir and wait for the grinding wheel to dry completely before storage. Do not store the machine with a damp grinding wheel.
5. Store the tool in a clean and dry place away from the reach of children. Store in temperatures between 41° to 86°F.
6. Cover the tool to protect it from dust and moisture. It is preferable to store it in its original packaging with the instruction manual and all accessories.

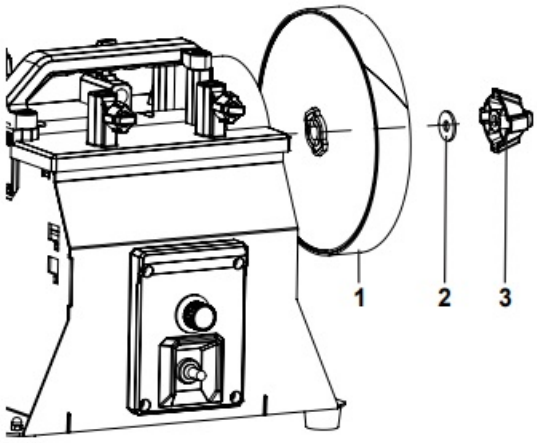
LUBRICATION

- Check the gearbox monthly and add a small amount of white-lithium grease if necessary.

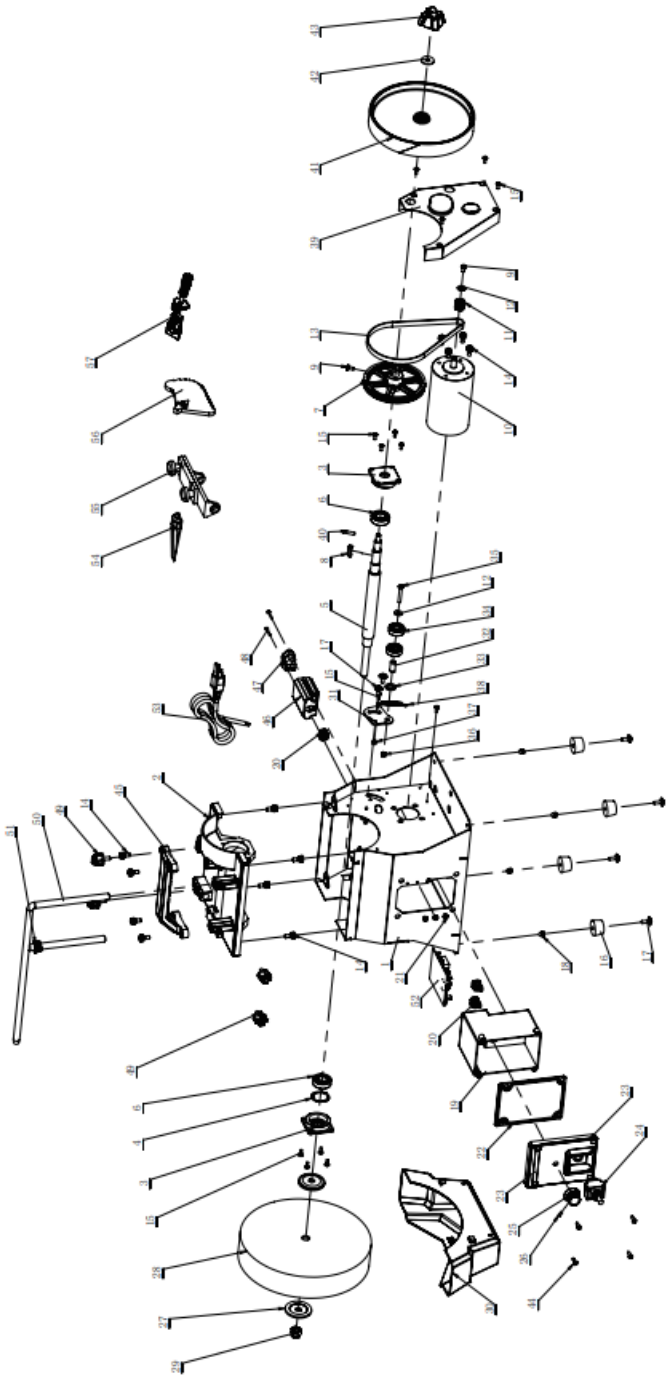
REPLACING THE STROPPING WHEEL

Inspect the leather stropping wheel for any damage or wear before each use.
If the leather stropping wheel becomes damaged or worn, replace it as follows.

1. Unscrew the locking knob (3).
2. Remove the outer flange (2) and stropping wheel (1) from the spindle. Install a new stropping wheel.
3. Re-install the outer flange and locking knob. Tighten the locking knob by hand.



EXPLODED VIEW



PARTS LIST

Item	Description	Qty
1	Base assy	1
2	Bearing housing	1
3	Bearing block	2
4	Wave washer D35	1
5	Main shaft	1
6	ball bearing 6003-2RZ	2
7	V-belt pulley	1
8	Flat key 5×5×25	1
9	Philips screw M5x10	2
10	Motor	1
11	Motor pulley	1
12	Big flat washer D5	2
13	V-belt	1
14	Philips screw M6x16	12
15	Philips screw M4x10	14
16	Rubber foot	4
17	Philips screw M5x20	6
18	Nut M5	4
19	Wire connection box	1
20	Power cord clip 6P4	3
21	Philips screw M4x7	2
22	Rubber mat	1
23	Switch plate	1
24	Power switch	1
25	Speed control knob	1
26	Bolt M4x8	1
27	Flange	2
28	Grinding wheel	1
29	Nut M12	1
30	Water reservoir	1

31	Bearing plate	1
32	Bearing shaft	1
33	Washer D10	1
34	Ball bearing 6200-2RS	2
35	Philips screw M5x35	1
36	Nut M5	1
37	Nut M4	1
38	Tension spring	1
39	Belt guard	1
40	Round pi6x22	1
41	Polishing wheel	1
42	Big flat washer A8	1
43	Lock knob M8	1
44	Philips screw ST4.2×16	4
45	Handle assy	1
46	Socket box	1
47	Socket	1
48	Philips screw M3x20	2
49	Lock knob M6x16	4
50	Universal support	1
51	adjustment nut	1
52	circuit board	1
53	Cord & plug	1
54	Honing compound	1
55	Grinding jig	1
56	Angle guide	1
57	Short knife jig	1

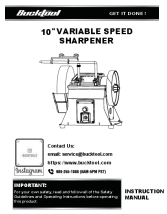
TROUBLESHOOTING

SYMPTOM	PROBABLE CAUSE	CORRECTIVE ACTION
The motor will not start.	Low voltage.	Check the power source for proper voltage.
	Open circuit in motor or loose connections.	Inspect all connections on the motor for loose or open connections. (Send for S ervicing.)
	Blown fuse or breaker.	Replace the fuse or reset the breaker.
Motor overheats.	Motor overloaded.	Reduce load on the motor.
	Extension cord to gauge (weight).	Utilize an extension cord of appropriate gauge and length or plug the tool directl y into an outlet.
Motor stalls (resulting in blow n fuses or tripped circuits).	Short circuit in motor or loose connec tions.	Inspect connections on the motor for loo se or shorted terminals or worn insulation. (Send for servicing)
	Low voltage.	Correct low voltage conditions (for exa mple: improper extension cord length a nd/or gauge).
	Belt loosen.	Tighten the drive belt.
	Motor overload.	Reduce the load on the motor.
The stropping wheel loses per formance	preparations	Prepare wheel.
	Wheel is damaged	Replace wheel.
Wavy condition on the surface of the workpiece.	Machine vibrating.	Make sure the machine is securely posi tioned on a level surface.
	The workpiece is not held in place fir mly.	Use a holding device to firmly retain the workpiece.
	Wheel face unevenly.	Dress the grinding wheel.

WARRANTY

- **TWO-YEAR LIMITED WARRANTY**
- **Having Problems?**
- **Give us a chance to help you before returning this product**
- **Email: service@bucktool.com**
- **https://www.bucktool.com**
- **909-255-1088 (8 AM-5 PM PST)**

Documents / Resources

	**Bucktool SCM8103 10 Inch Variable Speed Sharpening System** [pdf] Instruction Manual SCM8103 10 Inch Variable Speed Sharpening System, SCM8103, 10 Inch Variable Speed Sharpening System, Variable Speed Sharpening System, Speed Sharpening System, Sharpening System, System

References

- **BUCKTOOL Belt Disc Sander & Bench Grinder | Metal & Woodworking Tools**
- **User Manual**