



User Manual

Read and understand this manual before using machine.

8" VARIABLE SPEED BENCH GRINDER

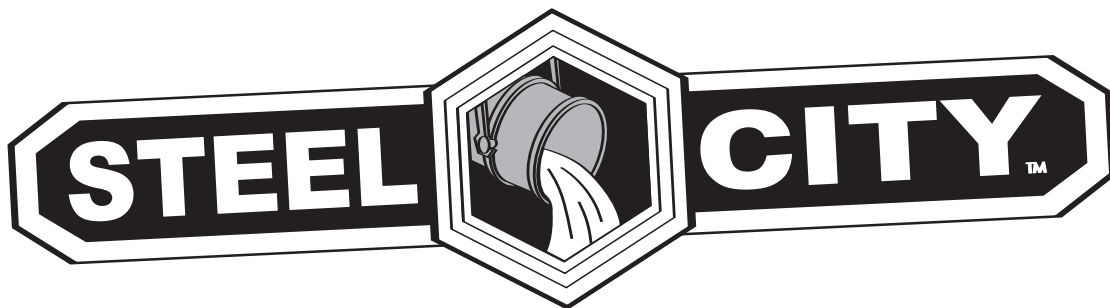


**Model Number
15420**



STEEL CITY TOOL WORKS
VER. 3.07

Manual Part No. OR71488



THANK YOU for purchasing your new Steel City Bench Grinder. This bench grinder has been designed, tested, and inspected with you, the customer, in mind. When properly assembled, used and maintained, your bench grinder will provide you with years of trouble free service, which is why it is backed by one of the longest machinery warranties in the business.

This bench grinder is just one of many products in the Steel City's family of woodworking machinery and is proof of our commitment to total customer satisfaction.

At Steel City we continue to strive for excellence each and every day and value the opinion of you, our customer. For comments about your bench grinder or Steel City Tool Works, please visit our web site at www.steelcitytoolworks.com .

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INTRODUCTION

This user manual is intended for use by anyone working with this machine. It should be kept available for immediate reference so that all operations can be performed with maximum efficiency and safety. Do not attempt to perform maintenance or operate this machine until you have read and understand the information contained in this manual.

The drawings, illustrations, photographs, and specifications in this user manual represent your machine at time of print. However, changes may be made to your machine or this manual at any time with no obligation to Steel City Tool Works.

WARRANTY

STEEL CITY TOOL WORKS 5 YEAR LIMITED WARRANTY

Steel City Tool Works, LLC (“SCTW”) warrants all “STEEL CITY TOOL WORKS” machinery to be free of defects in workmanship and materials for a period of 5 years from the date of the original retail purchase by the original owner. SCTW will repair or replace, at its expense and at its option, any SCTW machine, machine part, or machine accessory which in normal use has proven to be defective, provided that the customer returns the product, shipping prepaid, to an authorized service center with proof of purchase and provides SCTW with a reasonable opportunity to verify the alleged defect by inspection. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, or lack of maintenance, or to repairs or alterations made or specifically authorized by anyone other than SCTW. Normal wear components are also excluded under this coverage. Every effort has been made to ensure that all SCTW machinery meets the highest quality and durability standards. We reserve the right to change specifications at any time due to our commitment to continuous improvement of the quality of our products.

EXCEPT AS SET FORTH ABOVE, SCTW MAKES NO EXPRESS OR IMPLIED REPRESENTATIONS OR WARRANTIES WITH RESPECT TO ITS MACHINERY, OR ITS CONDITION, MERCHANTABILITY, OR FITNESS FOR ANY PARTICULAR PURPOSE OR USE. SCTW FURNISHES THE ABOVE WARRANTIES IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, WHICH ARE HEREBY SPECIFICALLY DISCLAIMED.

SCTW SHALL NOT BE LIABLE FOR ANY (A) SPECIAL, INDIRECT, INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING WITHOUT LIMITATION LOSS OF PROFITS, ARISING FROM OR RELATED TO THIS WARRANTY, THE BREACH OF ANY AGREEMENT OR WARRANTY, OR THE OPERATION OR USE OF ITS MACHINERY, INCLUDING WITHOUT LIMITATION DAMAGES ARISING FROM DAMAGE TO FIXTURES, TOOLS, EQUIPMENT, PARTS OR MATERIALS, DIRECT OR INDIRECT LOSS CAUSED BY ANY OTHER PARTY, LOSS OF REVENUE OR PROFITS, FINANCING OR INTEREST CHARGES, AND CLAIMS BY ANY THIRD PERSON, WHETHER OR NOT NOTICE OF SUCH POSSIBLE DAMAGES HAS BEEN GIVEN TO SCTW; (B) DAMAGES OF ANY KIND FOR ANY DELAY BY OR FAILURE OF SCTW TO PERFORM ITS OBLIGATIONS UNDER THIS AGREEMENT; OR (C) CLAIMS MADE A SUBJECT OF A LEGAL PROCEEDING AGAINST SCTW MORE THAN ONE (1) YEAR AFTER SUCH CAUSE OF ACTION FIRST AROSE.

The validity, construction and performance of this Warranty and any sale of machinery by SCTW shall be governed by the laws of the Commonwealth of Pennsylvania, without regard to conflicts of laws provisions of any jurisdiction. Any action related in any way to any alleged or actual offer, acceptance or sale by SCTW, or any claim related to the performance of any agreement including without limitation this Warranty, shall take place in the federal or state courts in Allegheny County, Pennsylvania.

STEEL CITY TOOL WORKS

WARRANTY CARD

Name _____
Street _____
Apt. No. _____
City _____ State _____ Zip _____
Phone Number _____
E-Mail _____

Product Description: _____
Model No.: _____
Serial No. _____

The following information is given on a voluntary basis and is strictly confidential.

1. Where did you purchase your STEEL CITY machine?
Store: _____
City: _____

2. How did you first learn of Steel City Tool Works?
 Advertisement Mail Order Catalog
 Web Site Friend
 Local Store Other _____

3. Which of the following magazines do you subscribe to?
 American Woodworker American How-To
 Cabinetmaker Family Handyman
 Fine Homebuilding Fine Woodworking
 Journal of Light Construction Old House Journal
 Popular Mechanics Popular Science
 Popular Woodworking Today's Homeowner
 WOOD Woodcraft
 WOODEN Boat Woodshop News
 Woodsmith Woodwork
 Woodworker Woodworker's Journal
 Workbench Other _____

4. Which of the following woodworking / remodeling shows do you watch?
 Backyard America The American Woodworker
 Home Time The New Yankee Workshop
 This Old House Woodwright's Shop
Other _____

5. What is your annual household income?
 \$20,000 to \$29,999 \$30,000 to \$39,999
 \$40,000 to \$49,999 \$50,000 to \$59,999
 \$60,000 to \$69,999 70,000 to \$79,999
 \$80,000 to \$89,999 \$90,000 +

6. What is your age group?
 20 to 29 years 30 to 39 years
 40 to 49 years 50 to 59 years
 60 to 69 years 70 + years

7. How long have you been a woodworker?
 0 to 2 years 2 to 8 years
 8 to 20 years over 20 years

8. How would you rank your woodworking skills?
 Simple Intermediate
 Advance Master Craftsman

9. How many Steel City machines do you own? _____

10. What stationary woodworking tools do you own?
Check all that apply.
 Air Compressor Band Saw
 Drill Press Drum Sander
 Dust Collection Horizontal Boring Machine
 Jointer Lathe
 Mortiser Panel Saw
 Planer Power Feeder
 Radial Arm Saw Shaper
 Spindle Sander Table Saw
 Vacuum Veneer Press Wide Belt Sander
Other _____

11. Which benchtop tools do you own? *Check all that apply.*
 Belt Sander Belt / Disc Sander
 Drill Press Band Saw
 Grinder Mini Jointer
 Mini Lathe Scroll Saw
 Spindle / Belt Sander Other _____

12. Which portable / hand held power tools do you own?
Check all that apply.
 Belt Sander Biscuit Jointer
 Dust Collector Circular Saw
 Detail Sander Drill / Driver
 Miter Saw Orbital Sander
 Palm Sander Portable Thickness Planer
 Saber Saw Reciprocating Saw
 Router Other _____

13. What machines / accessories would you like to see added to the STEEL CITY line?

14. What new accessories would you like to see added?

15. Do you think your purchase represents good value?
 Yes No

16. Would you recommend STEEL CITY products to a friend?
 Yes No

17. Comments:

CUT HERE

FOLD ON DOTTED LINE

PLACE
STAMP
HERE

Steel City Tool Works
P.O. Box 10529
Murfreesboro, TN 37129

FOLD ON DOTTED LINE

PRODUCT SPECIFICATIONS

Motor

Type	Induction, Ball Bearing
Horsepower	Continuous Duty 1/2HP
Amps	5.0
Voltage	120V
Phase	Single
Hertz	60
RPM	1725 RPM to 3450 RPM (no load speed)
Grinding Wheel Size	8" x 1" x 5/8"
Grinding Wheel Grit	60 (gray), 120 (white)
Lamp	120V, 40 watt or less medium base (not included)
Tool Rests	Left and Right
Eye Shield Assembly	Left and Right (clear lexan)
Spark Arrestors	Left and Right
Quench Tray	8-1/4" x 2-3/4" x 1"
Power Switch	On/Off (removable)
Variable Speed Knob	Adjustable

Product Dimensions:

Length	17"
Width	13"
Height	14"
Weight	43 lbs.

Shipping Dimensions:

Carton Type	Cardboard Box
Length	19"
Width	14-1/2"
Height	17-1/2"
Gross Weight	47 Lbs.

ACCESSORIES AND ATTACHMENTS

There are a variety of accessories available for your Steel City Product. For more information on any accessories associated with this and other machines, please contact your nearest Steel City distributor, or visit our website at: www.steelcitytoolworks.com.

DEFINITION OF TERMS

Inner Wheel Guard - Covers the grinding wheel and protects against accidental contact.

Wheel Dresser - Used to clean and smooth front surface of the grinding wheels.

Flexible Work Light - Provides light to the operator during set-up and grinding operations.

Spark Arrestor - Prevents hot sparks and debris from contacting the operator.

Quick Release Knob - Allows the quick change wheel cover to be removed.

Quick Change Wheel Cover - Covers the grinding wheel and provides quick access for routine maintenance.

Grinding Wheels (60 and 120 grit) - Used to remove lighter and heavier material from workpiece.

Adjustable Tool Rests - Used to support the workpiece at selected angles.

Removable On/Off Switch - Used to provide power (may be removed for safety).

Variable Speed Knob - Permits grinding wheel speed changes.

Quench Tray - Used to cool workpiece after grinding.

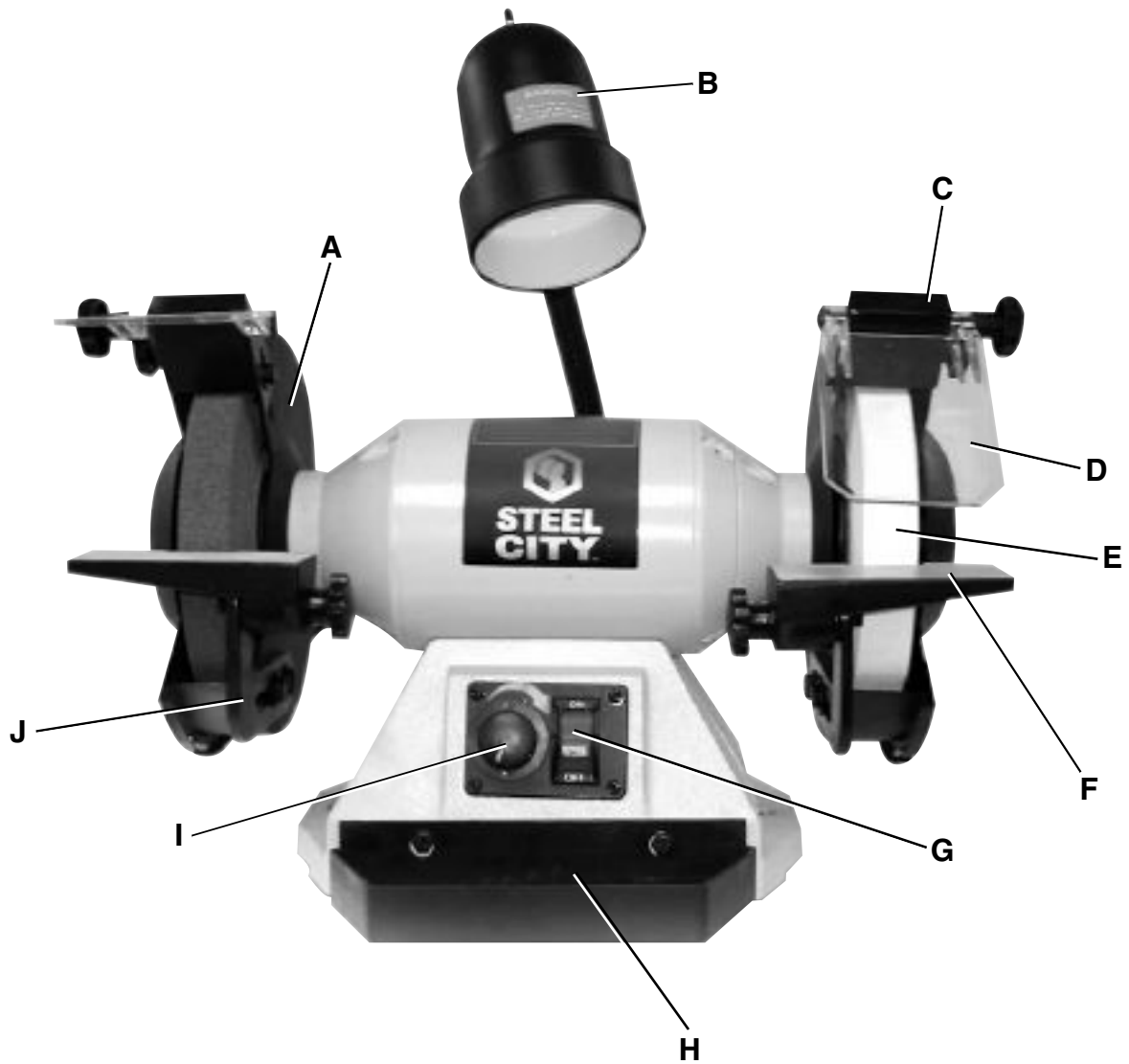
Adjustable Tool Rest Supports - Allows for repositioning of wheels as they wear smaller

Eyeshields - Protective Lexan see-thru shields to prevent any loose debris from contacting operator.

Flanges - Used to distribute the load of the hex lock nuts in securing grinding wheels.

Arbor Hex Nut - Used to secure the grinding wheels to the grinder.

FEATURE IDENTIFICATION



- A. Inner Wheel Guard
- B. Flexible Work Light
- C. Spark Arrestor
- D. Lexan Eye Shield
- E. Grinding Wheel
- F. Tool Rest
- G. On/Off Switch (with removable key)
- H. Quench Tray
- I. Variable Speed Knob
- J. Adjustable Tool Rest Support

GENERAL SAFETY

WARNING

TO AVOID serious injury and damage to the machine, read and follow all Safety and Operating Instructions before assembling and operating this machine.

This manual is not totally comprehensive. It does not and can not convey every possible safety and operational problem which may arise while using this machine. The manual will cover many of the basic and specific safety procedures needed in an industrial environment.

All federal and state laws and any regulations having jurisdiction covering the safety requirements for use of this machine take precedence over the statements in this manual. Users of this machine must adhere to all such regulations.

Below is a list of symbols that are used to attract your attention to possible dangerous conditions.



This is the international safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

DANGER

Indicates an imminently hazardous situation which, if not avoided, **WILL** result in death or serious injury.

WARNING

Indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation, if not avoided, **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.

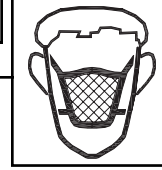
CAUTION

CAUTION used without the safety alert symbol indicates a potentially hazardous situation which, if not avoided, may result in property damage.

NOTICE

This symbol is used to alert the user to useful information about proper operation of the machine.

WARNING



Exposure to the dust created by power sanding, sawing, grinding, drilling and other construction activities may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. The dust may contain chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

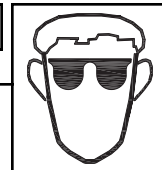
Some examples of these chemicals are:

- Lead from lead-based paints.
- Crystalline silica from bricks, cement and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Always operate tool in well ventilated area and provide for proper dust removal. Use a dust collection system along with an air filtration system whenever possible. Always use properly fitting NIOSH/OSHA approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.

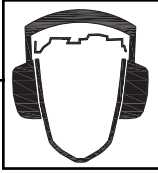
1. To avoid serious injury and damage to the machine, read the entire User Manual before assembly and operation of this machine.

WARNING



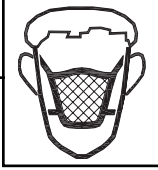
2. **ALWAYS** wear eye protection. Any machine can throw debris into the eyes during operations, which could cause severe and permanent eye damage. Everyday eyeglasses are **NOT** safety glasses. **ALWAYS** wear Safety Goggles (that comply with ANSI standard Z87.1) when operating power tools.

▲ WARNING



3. **ALWAYS** wear hearing protection. Plain cotton is not an acceptable protective device. Hearing equipment should comply with ANSI S3.19 Standards.

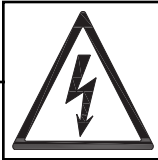
▲ WARNING



4. **ALWAYS** wear a NIOSH/OSHA approved dust mask to prevent inhaling dangerous dust or airborne particles.

5. **ALWAYS** keep the work area clean, well lit, and organized. **DO NOT** work in an area that has slippery floor surfaces from debris, grease, and wax.
6. **ALWAYS** unplug the machine from the electrical receptacle before making adjustments, changing parts or performing any maintenance.
7. **AVOID ACCIDENTAL STARTING.** Make sure that the power switch is in the "OFF" position before plugging in the power cord to the electrical receptacle.

▲ WARNING



8. **AVOID** a dangerous working environment. **DO NOT** use electrical tools in a damp environment or expose them to rain or moisture.

▲ WARNING



9. **CHILDPROOF THE WORKSHOP AREA** by removing switch keys, unplugging tools from the electrical receptacles, and using padlocks.

10. **DO NOT** use electrical tools in the presence of flammable liquids or gasses.


11. **DO NOT FORCE** the machine to perform an operation for which it was not designed. It will do a safer and higher quality job by only performing operations for which the machine was intended.
12. **DO NOT** stand on a machine. Serious injury could result if it tips over or you accidentally contact any moving part.
13. **DO NOT** store anything above or near the machine.
14. **DO NOT** operate any machine or tool if under the influence of drugs, alcohol, or medication.
15. **EACH AND EVERY** time, check for damaged parts prior to using any machine. Carefully check all guards to see that they operate properly, are not damaged, and perform their intended functions. Check for alignment, binding or breakage of all moving parts. Any guard or other part that is damaged should be immediately repaired or replaced.
16. Ground all machines. If any machine is supplied with a 3-prong plug, it must be plugged into a 3-contact electrical receptacle. The third prong is used to ground the tool and provide protection against accidental electric shock. **DO NOT** remove the third prong.
17. Keep visitors and children away from any machine. **DO NOT** permit people to be in the immediate work area, especially when the machine is operating.
18. **KEEP** protective guards in place and in working order.
19. **MAINTAIN** your balance. **DO NOT** extend yourself over the tool. Wear oil resistant rubber soled shoes. Keep floor clear of debris, grease, and wax.
20. **MAINTAIN** all machines with care. **ALWAYS KEEP** machine clean and in good working order. **KEEP** all blades and tool bits sharp.
21. **NEVER** leave a machine running, unattended. Turn the power switch to the OFF position. **DO NOT** leave the machine until it has come to a complete stop.
22. **REMOVE ALL MAINTENANCE TOOLS** from the immediate area prior to turning the machine ON.
23. **SECURE** all work. When it is possible, use clamps or jigs to secure the workpiece. This is safer than attempting to hold the workpiece with your hands.
24. **STAY ALERT**, watch what you are doing, and use common sense when operating any machine. **DO NOT** operate any machine tool while tired or under the influence of drugs, alcohol, or medication. A moment of inattention while operating power tools may result in serious personal injury.

25. **USE ONLY** recommended accessories. Use of incorrect or improper accessories could cause serious injury to the operator and cause damage to the machine. If in doubt, **DO NOT** use it.
26. **THE USE** of extension cords is not recommended for 230V equipment. It is better to arrange the placement of your equipment and the installed wiring to eliminate the need for an extension cord. If an extension cord is necessary, refer to the chart in the Grounding Instructions section to determine the minimum gauge for the extension cord. The extension cord must also contain a ground wire and plug pin.
27. Wear proper clothing, **DO NOT** wear loose clothing, gloves, neckties, or jewelry. These items can get caught in the machine during operations and pull the operator into the moving parts. Users must wear a protective cover on their hair, if the hair is long, to prevent it from contacting any moving parts.
28. **SAVE** these instructions and refer to them frequently and use them to instruct other users.
29. Information regarding the safe and proper operation of this tool is also available from the following sources:
 - Power Tool Institute
1300 Summer Avenue
Cleveland, OH 44115-2851
www.powertoolinstitute.org
 - National Safety Council
1121 Spring Lake Drive
Itasca, IL 60143-3201
 - American National Standards Institute
25 West 43rd St, 4th Floor
New York, NY. 10036
ANSI 01.1 Safety Requirements
For Woodworking Machines
WWW.ANSI.ORG
 - U.S. Department of Labor Regulations
OSHA 1910.213 Regulations
WWW.OSHA.GOV

GENERAL SAFETY

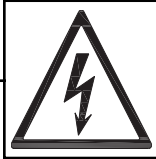
1. Serious personal injury may occur if normal safety precautions are overlooked or ignored. Accidents are frequently caused by lack of familiarity or failure to pay attention. Obtain advice from supervisor, instructor, or another qualified individual who is familiar with this machine and its operations.
2. Every work area is different. Always consider safety first, as it applies to your work area. Use this machine with respect and caution. Failure to do so could result in serious personal injury and damage to the machine.
3. Prevent electrical shock. Follow all electrical and safety codes, including the National Electrical Code (NEC) and the Occupational Safety and Health Regulations (OSHA). All electrical connections and wiring should be made by qualified personnel only.
6. Safety decals are on this machine to warn and direct you to how to protect yourself or visitors from personal injury. These decals **MUST** be maintained so that they are legible. **REPLACE** decals that are not legible.
7. **DO NOT** leave the unit plugged into the electrical outlet. Unplug the unit from the outlet when not in use and before servicing, performing maintenance tasks, or cleaning.
8. **ALWAYS** turn the power switch "OFF" before unplugging the bench grinder.

⚠ WARNING



4. **TO REDUCE** the risk of electrical shock. **DO NOT** use this machine outdoors. **DO NOT** expose to rain or moisture. Store indoors in a dry area.

⚠ WARNING



9. **DO NOT** handle the plug or bench grinder with wet hands.

5. **STOP** using this machine, if at any time you experience difficulties in performing any operation. Contact your supervisor, instructor or machine service center immediately.
10. **USE** accessories only recommended by Steel City.
11. **DO NOT** pull the bench grinder by the power cord. **NEVER** allow the power cord to come in contact with sharp edges, hot surfaces, oil or grease.
12. **DO NOT** unplug the bench grinder by pulling on the power cord. **ALWAYS** grasp the plug, not the cord.
13. **REPLACE** a damaged cord immediately. **DO NOT** use a damaged cord or plug. **DO NOT** use if the bench grinder is not operating properly, or has been damaged, left outdoors or has been in contact with water.

14. **DO NOT** use the bench grinder as a toy. **DO NOT** use near or around children.
15. **ALWAYS** wear eye protection. The operation of any grinder can result in debris being thrown into your eyes, causing severe eye damage. Everyday glasses are not safety glasses. Wear safety glasses that comply with ANSI standard Z87.1
16. **ALWAYS** use the eye shields and wheel guards provided with the grinder.
17. **REPLACE** a cracked or damaged grinding wheel immediately. A damaged wheel can discharge debris at a high velocity towards the operator. Carefully handle the grinding wheel since it is abrasive. Prior to replacing a grinding wheel, check it for cracks. Do not remove the labels from a grinding wheel. Tighten the spindle nut just enough to hold the grinding wheel firmly to the bench grinder. Do not overtighten, excessive clamping force can damage the grinding wheel. Only use the wheel flanges provided with the grinder. When selecting a replacement grinding wheel, verify that the grinding wheel has a higher RPM rating than the maximum RPM of the bench grinder.
18. **BE AWARE** that the diameter of a grinding wheel will decrease with use. Adjust the tool rests and spark arrestors to maintain a distance of 1/16" from the wheel.
19. **DO NOT** stand in front of the bench grinder when starting it. Stand to one side and turn the bench grinder ON. Wait at the side for one minute until the grinder comes up to full speed. There is always a possibility that debris from a damaged grinding wheel may be discharged toward the operator.
20. Sparks and debris are normally produced during grinding operations. **BE SURE** that there are not any flammable materials in the vicinity. Frequently clean grinding dust from the back of bench grinder.
21. **NEVER** force the workpiece against a grinding wheel, especially if the wheel is cold. Apply the workpiece slowly, allowing the grinding wheel an opportunity to warm up. This will minimize the chance of wheel breakage. **DO NOT** grind using the sides of the grinding wheels. **DO NOT** apply coolant directly to the grinding wheel.
22. **NEVER** use the bench grinder with the wheel guards removed.
23. **ALWAYS** keep the tool rests firmly tightened.
24. **ALWAYS** use the supplied wheel dresser to re-surface the grinding wheel faces.

ELECTRICAL REQUIREMENTS

TO PREVENT electrical shock, follow all electrical and safety codes, including the National Electrical Code (NEC) and the Occupational Safety and Health Regulations (OSHA). All electrical connections and wiring should be made by qualified personnel only.

TO REDUCE the risk of electrical shock, **DO NOT** use machine outdoors. **DO NOT** expose to rain or moisture. Store indoors in a dry area.

DO NOT connect the machine to the power source before you have completed the set up process.

DO NOT connect the machine to the power source until instructed to do so.

This motor in this machine is designed to run at 120V.

GROUNDING INSTRUCTIONS

⚠ WARNING



This machine **MUST BE GROUNDED** while in use to protect the operator from electric shock.

In the event of a malfunction or breakdown, **GROUNDING** provides the path of least resistance for electric current and reduces the risk of electric shock. The plug **MUST** be plugged into a matching electrical receptacle that is properly installed and grounded in accordance with **ALL** local codes and ordinances.

If a plug is provided with your machine **DO NOT** modify the plug. If it will not fit your electrical receptacle, have a qualified electrician install the proper connections to meet all electrical codes local and state. All connections must also adhere to all of OSHA mandates.

IMPROPER ELECTRICAL CONNECTION of the equipment-grounding conductor can result in risk of electric shock. The conductor with the green insulation (with or without yellow stripes) is the equipment-grounding conductor. **DO NOT** connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or service personnel if you do not completely understand the grounding instructions, or if you are not sure the tool is properly grounded.

Fig. A

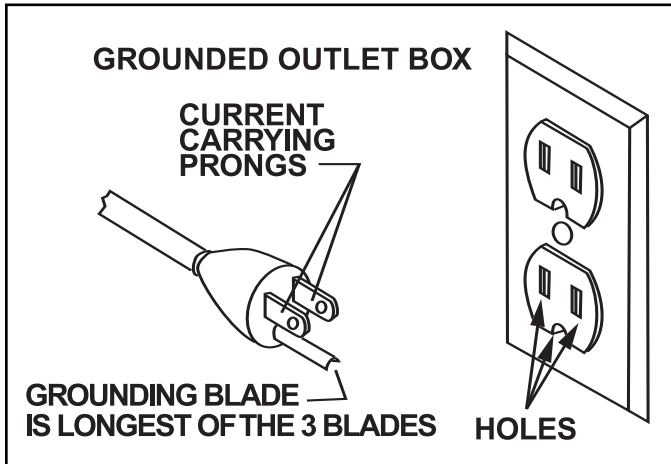
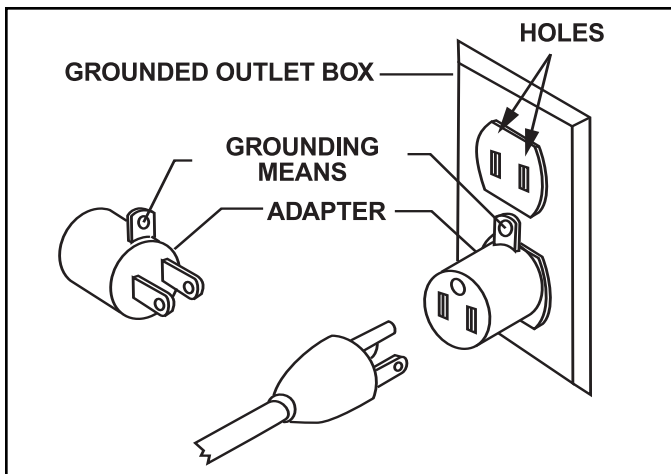


Fig. B



PLUGS/RECEPTACLES

⚠ WARNING



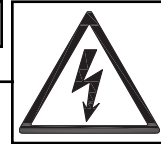
- Electrocutation or fire could result if this machine is not grounded properly or if the electrical configuration does not comply with local and state electrical codes.
- **MAKE CERTAIN** the machine is disconnected from power source before starting any electrical work.
- **MAKE SURE** the circuit breaker does not exceed the rating of the plug and receptacle.

The motor supplied with your machine is a 120 volt, 60 hertz, single phase motor. Never connect the green or ground wire to a live terminal.

A machine with a 120 volt plug should only be connected to an outlet having the same configuration as the plug.

EXTENSION CORDS

⚠ WARNING



To reduce the risk of fire or electrical shock, use the proper gauge of extension cord. When using an extension cord, be sure to use one heavy enough to carry the current your machine will draw.

The smaller the gauge-number, the larger the diameter of the extension cord is. If in doubt of the proper size of an extension cord, use a shorter and thicker cord. An undersized cord will cause a drop in line voltage resulting in a loss of power and overheating.

⚠ CAUTION

USE ONLY a 3-wire extension cord that has a 3-prong grounding plug and a 3-pole receptacle that accepts the machine's plug.

If you are using an extension cord outdoors, be sure it is marked with the suffix "W-A" ("W" in Canada) to indicate that it is acceptable for outdoor use.

Make certain the extension cord is properly sized, and in good electrical condition. Always replace a worn or damaged extension cord immediately or have it repaired by a qualified person before using it.

Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

MINIMUM RECOMMENDED GAUGE FOR EXTENSION CORDS (AWG)				
120 VOLT OPERATION ONLY				
	25' LONG	50' LONG	100' LONG	150' LONG
0 to 6 Amps	18 AWG	16 AWG	16 AWG	14 AWG
6 to 10 Amps	18 AWG	18 AWG	14 AWG	12 AWG
10 to 12 Amps	16 AWG	16 AWG	14 AWG	12 AWG

UNPACKING & INVENTORY

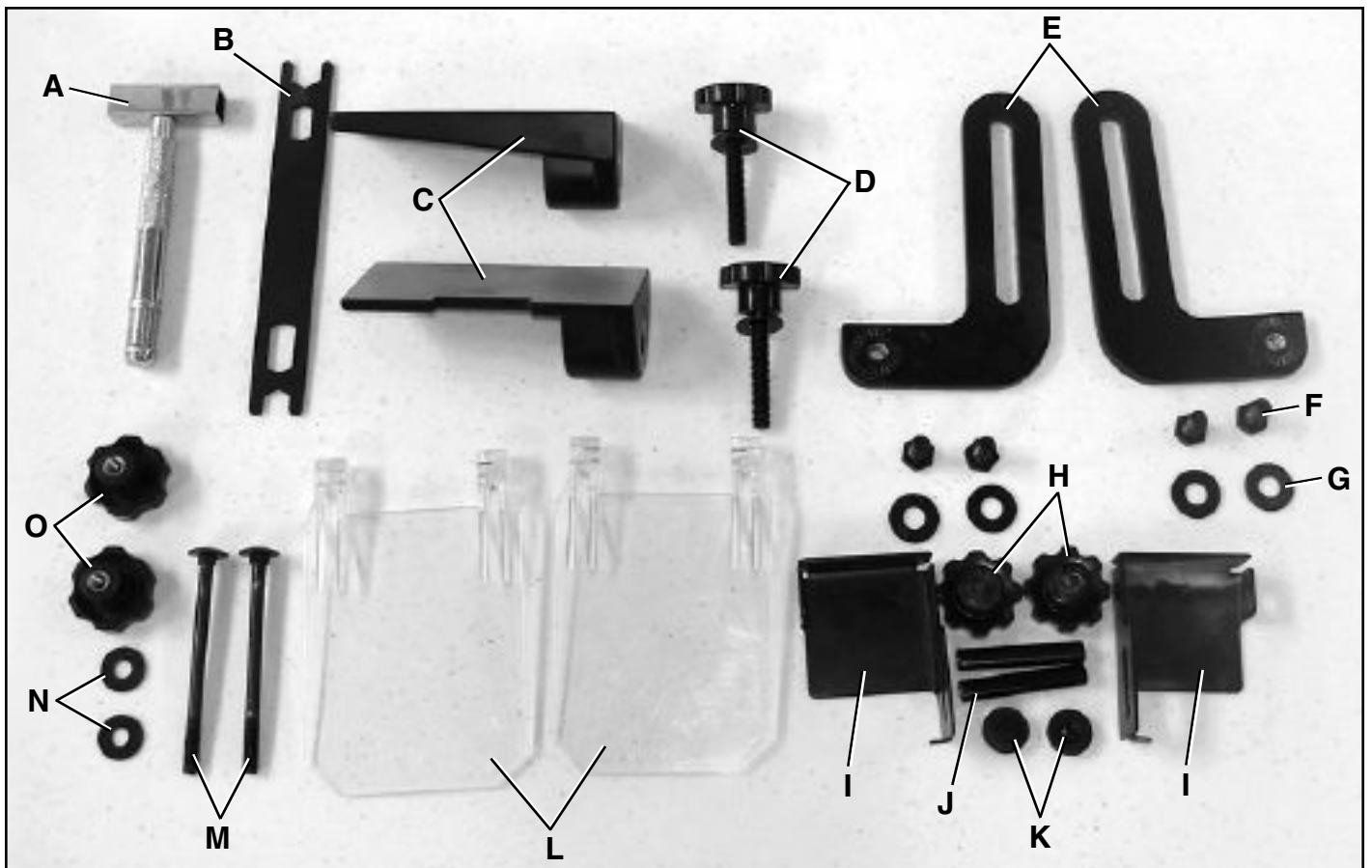
Check shipping carton and machine for damage before unpacking. Carefully remove packaging materials, parts and machine from shipping carton. Always check for and remove protective shipping materials around motors and moving parts. Lay out all parts on a clean work surface.

Remove any protective materials and coatings from all of the parts and the table saw. The protective coatings can be removed by spraying WD-40 on them and wiping it off with a soft cloth. This may need redone several times before all of the protective coatings are removed completely.

Compare the items to inventory figures; verify that all items are accounted for before discarding the shipping box.

⚠ WARNING

If any parts are missing, do not attempt to plug in the power cord and turn "ON" the machine. The machine should only be turned "ON" after all the parts have been obtained and installed correctly. For missing parts, contact Steel City at 1-877-SC4-TOOL.



- A. Wheel dresser
- B. Custom wrench
- C. Tool rests (2)
- D. Tool rest screws and knobs w/washers (2)
- E. Tool rest supports (2)
- F. Hex head screws 1/4-20x1/4" (4)
- G. Flat washers 1/4" (4)
- H. Spark arrestor knobs (2)
- I. Spark arrestors (2)
- J. Spacers (2)
- K. Hex Screws with washers (2)
- L. Eye shields (2)
- M. Carriage head screws (2)
- N. Flat washers M6 (2)
- O. Eye shield knobs (2)

ASSEMBLY

⚠ WARNING

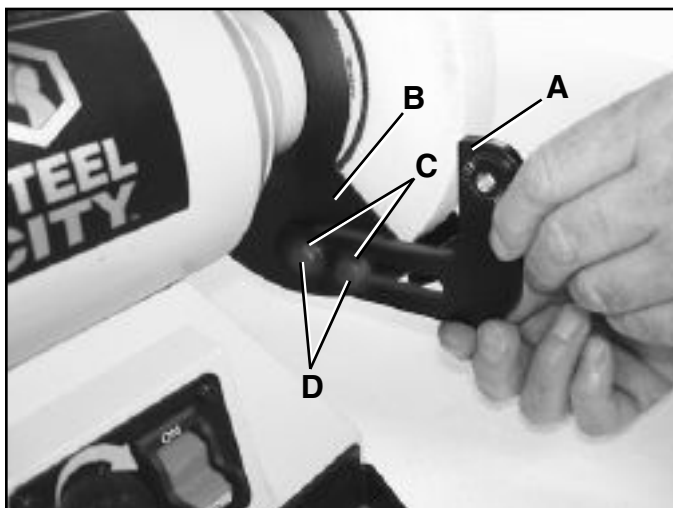
MAKE CERTAIN THAT THE BENCH GRINDER IS DISCONNECTED FROM THE POWER SOURCE.

- **DO NOT** assemble the bench grinder until you are sure the tool is not plugged in.
- **DO NOT** assemble the bench grinder until you are sure the power switch is in the OFF position.
- **DO NOT** assemble the bench grinder until you are sure the grinding wheels are firmly tightened to the bench grinder.

TOOL RESTS

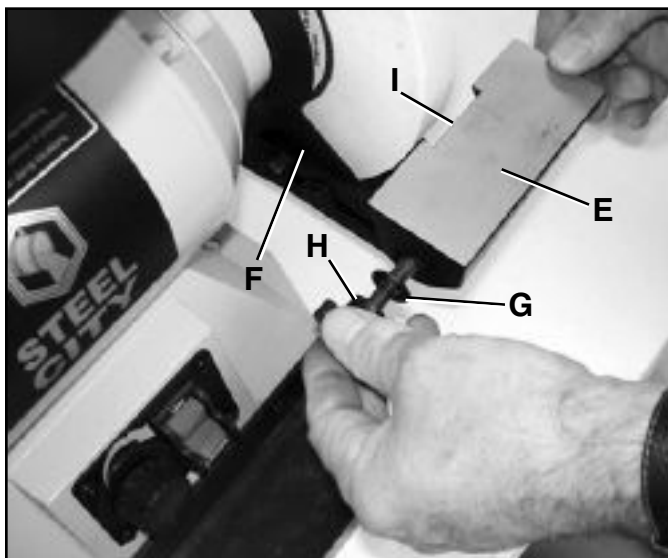
The bench grinder is provided with two different tool rest assemblies. The left and right tool rests are completely flat.

Fig. 5



1. Assemble the tool rest supports (A) to the inside surface of the wheel covers (B) with flat washers (C) and hex screws (D) as shown. **SEE FIG. 5.**
2. Assemble the tool rests (E) to the tool rest supports (F) with the flat washers (G) and adjustment knobs (H), as shown. **SEE FIG. 6.**
3. Adjust each tool rest until its inside edge (I) is 1/16" from the grinding wheel. Firmly tighten the hex head screws holding the tool rest supports.

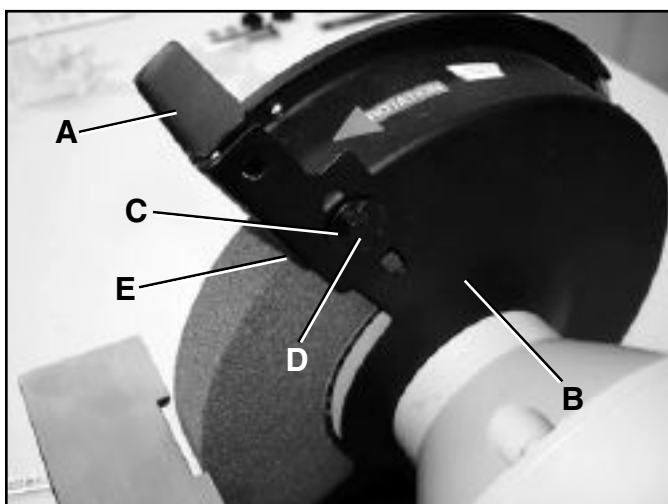
Fig. 6



SPARK ARRESTORS

1. Assemble the spark arrestors (A) to the inside surface of the wheel covers (B) with the flat washers (C) and hex screws (D) as shown. **SEE FIG. 7.**
2. Adjust each spark arrestor until the lower edge (E) is 1/16" from the grinding wheel. Firmly tighten the hex head screws (D).

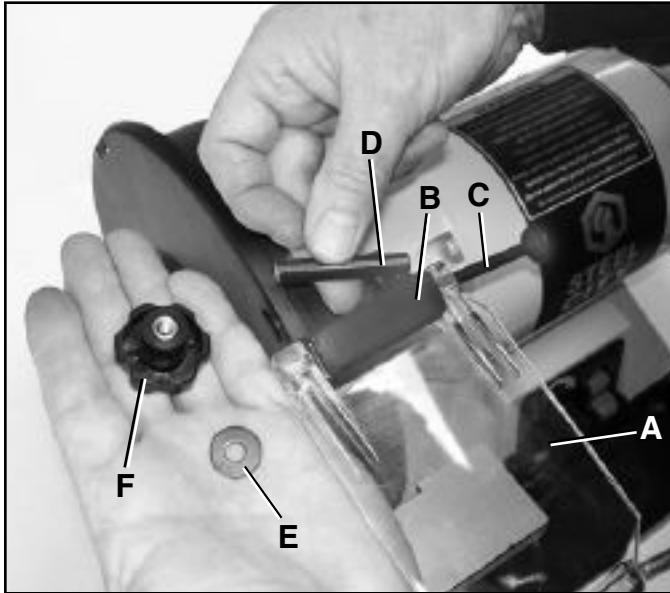
Fig. 7



EYESHIELDS

1. Assemble the eyeshield (A) to the spark arrester (B). Insert carriage head screw (C) through eyeshield, spark arrester, and the spacer (D). **SEE FIG. 8.**
2. Install the flat washer (E) and lock knob (F) to the carriage head screw and tighten until the eyeshield remains in the desired position.

Fig. 8



WORK LIGHT

- The bench grinder is provided with a flexible work light to assist in visibility of the work piece.
- The bench grinder is **NOT** provided with a light bulb for the flexible work light.

⚠ WARNING

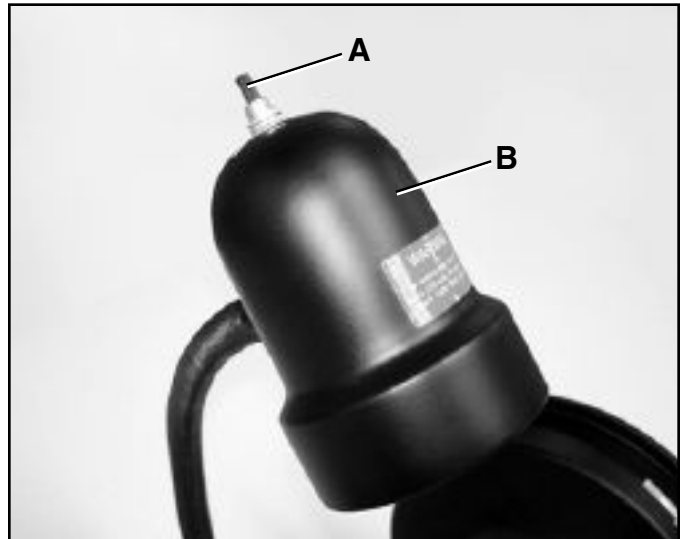
To reduce the risk of fire, use a 120 volt, 40 watt or less medium base or equivalent (not included). **DO NOT** use a light bulb that extends past the end of the light housing.

1. The flexible work light may be turned ON or OFF by using the rotary switch (A) on the top surface of the housing (B). The switch can be rotated in the clockwise direction only. **SEE FIG. 9.**

NOTE: The flexible work light can be operated independent of the bench grinder.

CAUTION: The flexible work light housing will remain hot for a few minutes after turning it OFF. Avoid contact with housing until it is cool.

Fig. 9



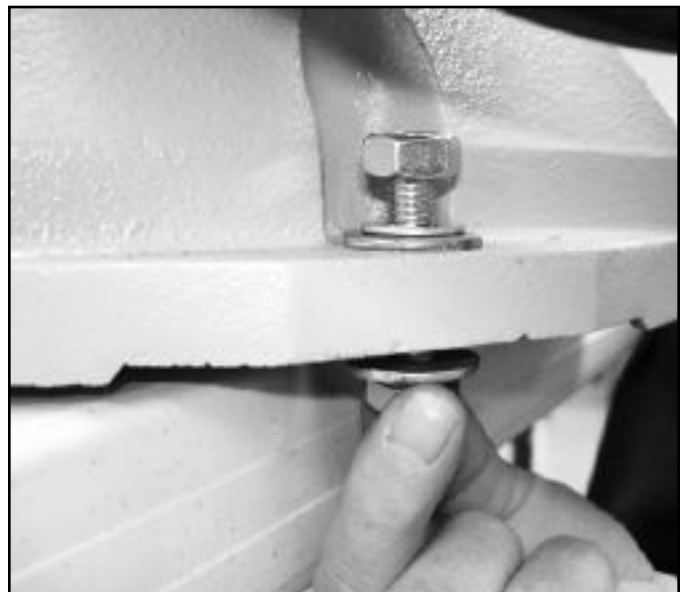
PERMANENT MOUNTING

⚠ WARNING

To avoid serious injury, secure the bench grinder to a solid work surface. If the bench grinder is not securely mounted, it will have the ability to move or tip over during grinding operations and possibly cause the operator's fingers to contact the grinding wheels.

1. Use the mounting holes in the base of the grinder to firmly attach grinder to a solid work surface (hardware not included). **SEE FIG. 10.**

Fig. 10

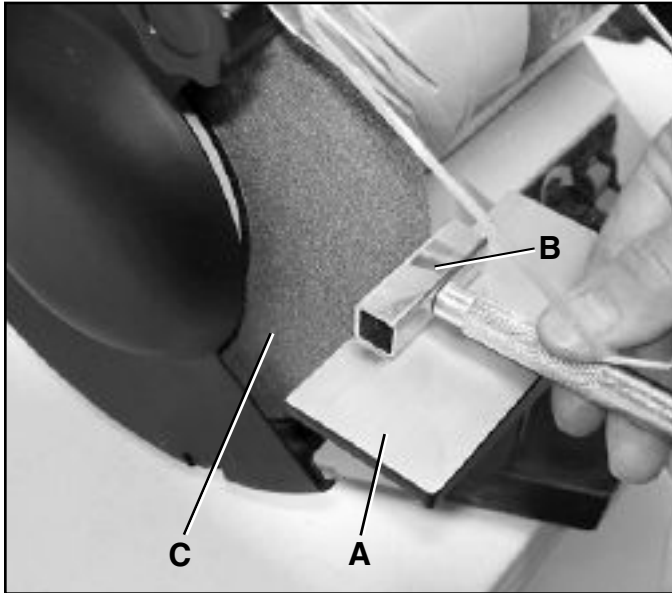


ADJUSTMENTS

USING THE WHEEL DRESSER

The wheel dresser is to be used on the grinding wheels. It will remove buildup of material on the grinding wheel, remove imperfections, and make the corners of the grinding wheel square. **DO NOT** use the wheel dresser on the wire wheel!

Fig. 11



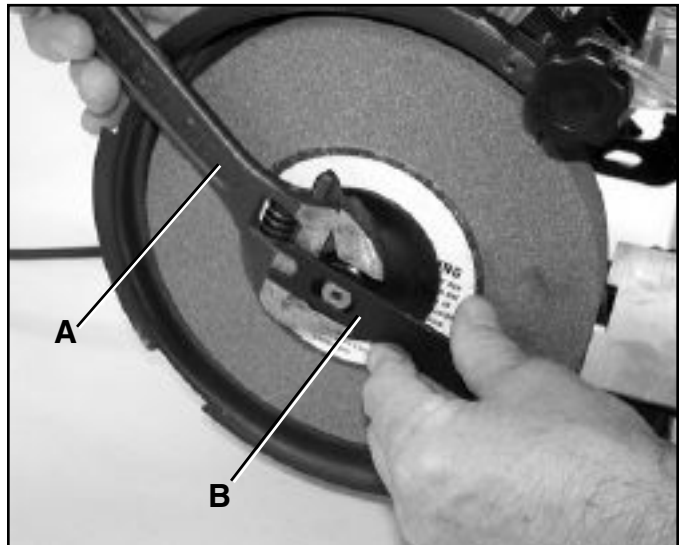
1. Adjust the right side tool rest (A) until it is in the level horizontal position as shown and 1/16" away from the grinding wheel. **SEE FIG. 11.**
2. Turn ON the bench grinder, then turn the variable speed knob clockwise until solid resistance is felt. Let the grinding wheel get up to a steady speed for one minute.
3. After the grinding wheel has gotten to a steady speed, place the wheel dresser (B) flat on the tool rest with diamond surface facing the grinding wheel.
4. Firmly hold onto the wheel dresser handle.
5. Move the wheel dresser forward until the diamond surface comes in contact with the grinding wheel (C). After contact has been made, slide the wheel dresser side to side across the tool rest to DRESS the grinding wheel until the edges are square and the surface is clean.
6. After the operator has completed dressing the grinding wheel, turn OFF the bench grinder and let the grinding wheel come to a complete stop.
7. Inspect the grinding wheel for any damage.
8. The grinding wheel may now be slightly smaller in diameter after dressing. Readjust the tool rests and spark arrestors to maintain a 1/16" clearance to the grinding wheel.

CHANGING THE GRINDING WHEEL

Due to normal wear, grinding wheels will occasionally need replaced.

1. Turn the power switch OFF and unplug the power cord from the power source.
2. Rotate the eye shields up to access the tool rest.
3. Loosen the tool rest knob and rotate the tool rest away from the grinding wheel.
4. Turn the quick release knob counter-clockwise to remove knob from guard assembly.
5. Rotate the quick change wheel cover back about 1/4" to release it from the inner wheel guard.

Fig. 12



6. Place a crescent wrench (A) (not included) on the arbor hex nut. Place the box end of the custom wrench (B) onto the flats of the arbor shaft. **SEE FIG. 12.**
7. Remove the outer wheel flange and then the abrasive wheel from the arbor shaft.

NOTE: The left hand arbor hex nut is a left hand thread and is loosened by rotating it counter-clockwise.

CAUTION: The new abrasive wheel must have a higher RPM rating than the grinder (3450 RPM). The new abrasive wheel must have the correct outer wheel diameter and bore diameter as the original wheel. The label on the abrasive wheel must stay on.

8. Replace the abrasive wheel, outer wheel flange, and arbor hex nut. Remember (1) the left arbor hex nut is a left hand thread and is tightened by rotating it counter-clockwise (2) the right arbor hex nut is a right hand thread and is tightened by rotating it clockwise.

CAUTION: Do not over-tighten the arbor hex nut as this may damage the abrasive wheel and cause serious injury.

NOTE: A wire wheel or a buffing wheel can be used with your grinder. Depending on the thickness of the wheel, you will need to add one or more spacers to

allow the arbor hex nut to tighten correctly. These spacers are identical to each other.

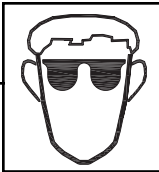
One spacer should always go onto the arbor shaft first. The second spacer, if needed, will go on next to the arbor hex nut. Always use the wheel flanges that come with the grinder (for wire wheel or buffing wheel).

OPERATIONS

⚠ WARNING

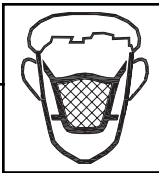
MAKE CERTAIN THAT THE BENCH GRINDER IS DISCONNECTED FROM THE POWER SOURCE.

⚠ WARNING



ALWAYS wear eye protection. Any machine can throw debris into the eyes during operations, which could cause severe and permanent eye damage. Everyday eyeglasses are **NOT** safety glasses. **ALWAYS** wear Safety Goggles (that comply with ANSI standard Z87.1) when operating power tools.

⚠ WARNING



ALWAYS wear a NIOSH/OSHA approved dust mask to prevent inhaling dangerous dust or airborne particles.

NOTICE

The following section was designed to give instructions on the basic operations of this bench grinder. However, it is in no way comprehensive of every grinder application. It is strongly recommended that you read books, trade magazines, or get formal training to maximize the potential of your grinder and to minimize the risks.

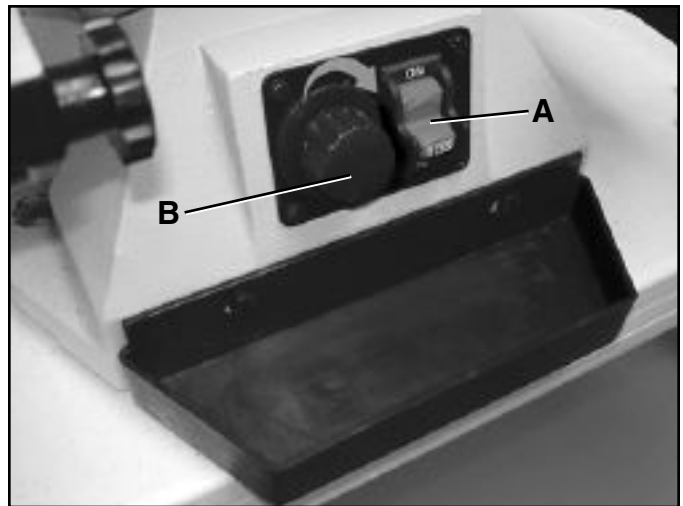
The bench grinder is designed for hand held grinding, sharpening, and cleaning operations.

ALWAYS wear eye protection. Hot sparks are produced during grinding operations.

GRINDING SPEED CHART

<u>Low speed 1725 RPM</u>	<u>High Speed 3450 RPM</u>
Light Duty Operations	Heavy Duty/Normal Operations
Light grinding	Heavy grinding
Sharpening	Stock removal
Rust and paint removal	Deburring
Lowered grinding temperature	Buffing

Fig. 13



1. The power switch (A) must be in the OFF position and the variable speed knob (B) must be turned to the slowest setting (turn to the left until solid resistance is felt). **SEE FIG. 13.**
2. Stand to the side of bench grinder and plug in the power cord to a suitable power source.
3. Remain to the side of the bench grinder and turn it ON by moving the power switch (A) to the up position.

4. Allow the grinding wheels to come up to a steady speed for at least a minute. The RPM of the bench grinder can now be increased to the desired speed for the particular grinding operation by rotating the variable speed knob clockwise.
5. The flexible work light may be turned ON, if desired.
6. Adjust the eye shields. Place the workpiece on the appropriate tool rest for the desired operation.
7. Move the workpiece towards the grinding wheel until it lightly touches the wheel. Move the workpiece back and forth across the front surface of the grinding wheel, removing the amount of material desired.
8. The operator may place the hot end of the workpiece into the water in the quench tray to cool it.
9. After completing the grinding operations, turn OFF the bench grinder by pushing down on the power switch (A). **CAUTION:** it will take a few minutes for the grinding wheels to come to a complete stop.
10. Turn the variable speed knob counter-clockwise to return it to the slowest setting.
11. Turn OFF the flexible work light. Caution, the flexible work light housing will remain hot for a few minutes after turning it off.
12. Avoid contact with grinder housing until it is cool. Unplug the bench grinder from the power source.

⚠ WARNING

TO AVOID SERIOUS INJURY, NEVER GRIND ON THE SIDES OF THE GRINDING WHEELS.

NOTE: To prevent unauthorized use of the bench grinder, the power switch has a removable locking key. With the power switch in the OFF position, pull the locking key out. The bench grinder cannot be turned ON with the key removed. Insert the locking key to resume grinding operations.

MAINTENANCE

⚠ WARNING

TURN THE POWER SWITCH OFF AND UNPLUG THE POWER CORD FROM ITS POWER SOURCE PRIOR TO ANY MAINTENANCE.

CAUTION: Replace the abrasive wheels if there is any damage at all. **FAILURE** to replace a damaged wheel can cause serious injury to the operator.

CAUTION: Do not use flammable materials to clean the bench grinder. A clean dry rag or brush is all that is needed to remove dust and debris buildup.

LUBRICATION

The bench grinder has sealed, lubricated bearings in the motor housing that do not require any additional lubrication by the operator.

CLEANING

With the bench grinder unplugged, rotate the abrasive wheels slowly and inspect for any damaged or trapped shavings.

⚠ WARNING

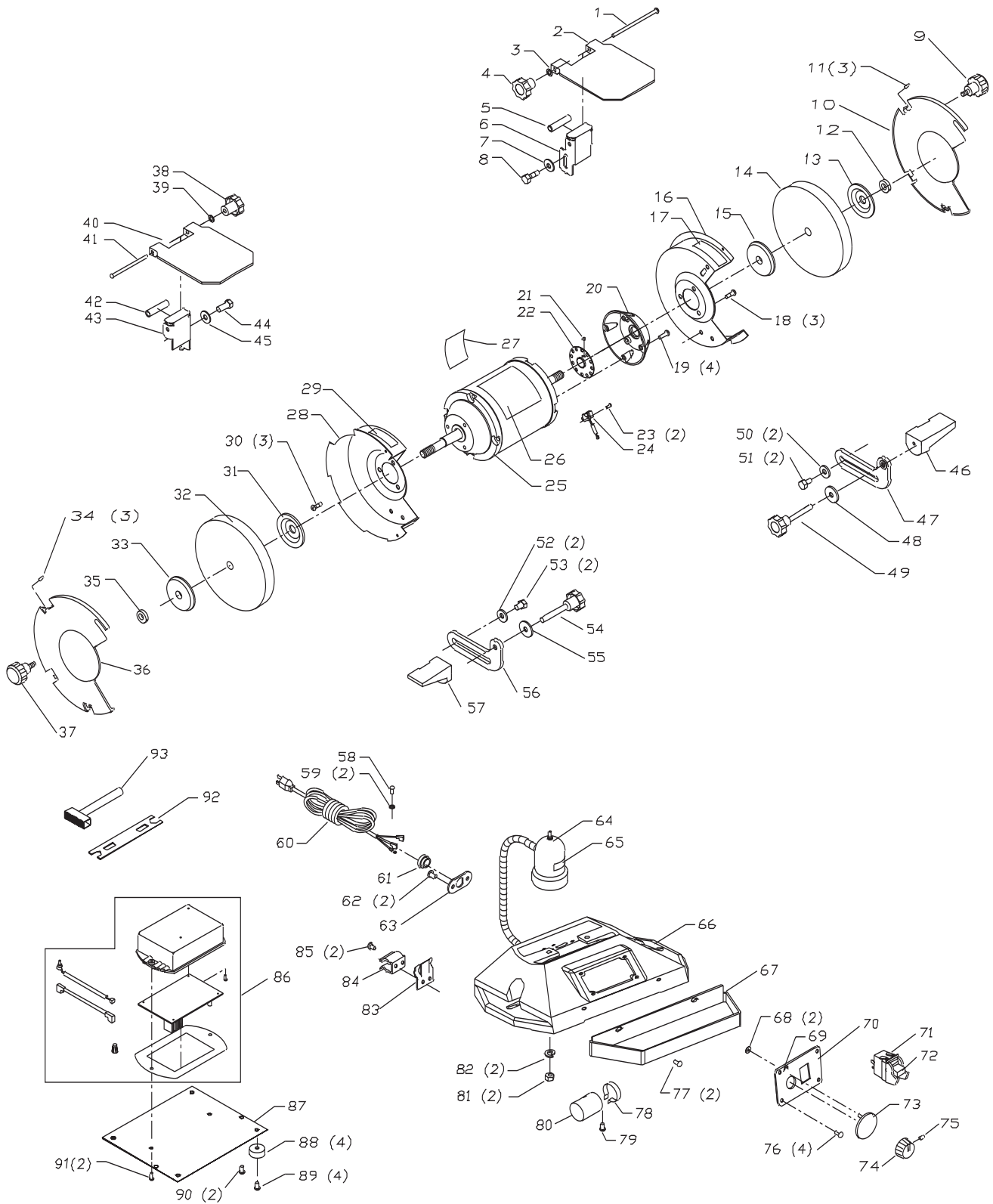
Repairs to the bench grinder should be performed by trained personnel only. Unauthorized repairs or replacements with non-factory parts could cause serious injury to the operator and damage to the bench grinder.

TROUBLESHOOTING GUIDE

To prevent injury to yourself or damage to the bench grinder, turn the switch to the OFF position and unplug the power cord from the electrical receptacle before making any adjustments.

PROBLEM	LIKELY CAUSE(S)	SOLUTION
Motor does not run.	<ol style="list-style-type: none"> 1. Machine not plugged in. 2. Power switch in OFF position. 3. Power cord is faulty. 4. Fuses or circuit breaker is open. 5. Damaged motor. 	<ol style="list-style-type: none"> 1. Plug power cord into electrical receptacle. 2. Lift switch to ON position. 3. Replace power cord. 4. Overloaded electrical circuit. 5. Return to SCTW distributor.
Motor does not come up to full power.	<ol style="list-style-type: none"> 1. Incorrect line voltage. 2. Damaged motor. 	<ol style="list-style-type: none"> 1. Have a qualified electrician check line for proper voltage. 2. Return to SCTW distributor.
Motor runs hot.	<ol style="list-style-type: none"> 1. Motor is overloaded. 2. Poor air circulation around motor. 	<ol style="list-style-type: none"> 1. Reduce pressure on workpiece. 2. Remove any blockage around motor.
Motor stalls or runs slow.	<ol style="list-style-type: none"> 1. Motor is overloaded. 2. Incorrect line voltage. 3. Capacitor has failed. 	<ol style="list-style-type: none"> 1. Reduce pressure on workpiece. 2. Have a qualified electrician check line for proper voltage. 3. Replace capacitor.
Fuse blows or circuit breaker trips.	<ol style="list-style-type: none"> 1. Motor overloaded. 2. Overloaded electrical circuit breaker. 3. Wrong fuse or circuit breaker. 4. Undersized or excessive length of extension cord, see manual. 5. Grinding wheels are blocked. 	<ol style="list-style-type: none"> 1. Reduce pressure on workpiece. 2. Reduce the amount of items on circuit. 3. Replace with correct fuse or circuit breaker. 4. Use correct size. 5. Unplug machine and remove obstruction.

PARTS



KEY NO.	PART NO.	DESCRIPTION	QTY.	KEY NO.	PART NO.	DESCRIPTION	QTY.
1	OR90430	M6 x 80mm CARRIAGE HD SCREW	1	50	OR90064	5/16" FLAT WASHER	2
2	OR71460	EYESHIELD	1	51	OR90151	5/16-18 x 1/2" HEX HD SCREW	2
3	OR90059	M6mm FLAT WASHER	1	52	OR90064	5/16" FLAT WASHER	2
4	OR90001	M6mm KNOB	1	53	OR90151	5/16-18 x 1/2" HEX HD SCREW	2
5	OR71464	SPACER	1	54	OR90011	5/16-18 KNOB	1
6	OR71461	SPARK ARRESTOR-R.H	1	55	OR90064	5/16" FLAT WASHER	1
7	OR90060	1/4" FLAT WASHER	1	56	OR90203	TOOL REST BRACKET LEFT	1
8	OR90150	1/4-20 x 1/4" HEX HD SCREW	1	57	OR90204	TOOL REST LEFT	1
9	OR71462	#10-24 KNOB	1	58	OR90062	#10-24 x 1/4" TRUSS HD SCREW	1
10	OR71463	COVER-R.H	1	59	OR90053	#10 EXT TOOTH WASHER	2
11	OR71465	RUBBER BUSHING	3	60	OR71474	POWER CORD	1
12	OR90370	5/8-11 HEX NUT-R.H	1	61	OR90166	STRAIN RELIEF	1
13	OR71467	FLANGE	1	62	OR90063	#10-24 x 3/8" TRUSS HD SCREW	2
14	OR71466	8" GRINDING WHEEL 120 GRIT	1	63	OR71475	CORD MOUNTING PLATE	1
15	OR71467	FLANGE	1	64	OR71480	LIGHT ASSY, INCL	1
16	OR71468	WHEEL GUARD-R.H	1	65	OR90544	WARNING LABEL	1
17	OR71469	ROTATION LABEL	1	66	OR71478	BASE	1
18	OR90371	1/4-20 x 1/2" TRUSS HD SCREW	3	67	OR71479	QUENCH TRAY	1
19	OR90062	#10-24 x 3/8" TRUSS HD SCREW	4	68	OR71493	RETAINING NUT	2
20	OR71491	END BELL-R.H	1	69	OR71481	VARIABLE SPEED LABEL	1
21	OR90507	M5 x 8mm PAN HD SCREW	1	70	OR71482	SWITCH PLATE	1
22	OR71492	PLATE	1	71	OR90037	SWITCH, INCL	1
23	OR90057	M3 x 6mm ROUND HD SCREW	2	72	OR90038	SWITCH KEY	1
24	OR71470	SENSOR ASSY	1	73	OR71485	SCALE	1
25	OR70421	MOTOR ASSY, INCL	1	74	OR90039	KNOB, INCL	1
26	OR70368	STEEL CITY LABEL	1	75	OR90056	M4 x 8mm HEX SOC SET SCREW	1
27	OR70315	SPEC PLATE	1	76	OR90063	#10-24 x 3/8" TRUSS HD SCREW	4
28	OR71472	WHEEL GUARD-L.H	1	77	OR90333	M6 x 10mm HEX HD SCREW	2
29	OR71469	ROTATION LABEL	1	78	OR71483	CAPACITOR CLAMP	1
30	OR90371	1/4-20 x 1/2" TRUSS HD SCREW	3	79	OR90063	#10-24 x 3/8" TRUSS HD SCREW	1
31	OR71467	FLANGE	1	80	OR93209	CAPACITOR<60uf 250V.AC>	1
32	OR90189	8" GRINDING WHEEL 60 GRIT	1	81	OR90071	1/4-20 HEX NUT	2
33	OR71467	FLANGE	1	82	OR90070	1/4" LOCK WASHER	2
34	OR71465	RUBBER BUSHING	3	83	OR71477	WRENCH HOLDER	1
35	OR90377	5/8-11 HEX NUT-L.H	1	84	OR71476	DRESSER HOLDER	1
36	OR71473	COVER-L.H	1	85	OR90346	M4X8mm PAN HD SCREW	2
37	OR71462	#10-24 KNOB	1	86	OR71484	CIRCUIT BOARD ASSY	1
38	OR90001	M6mm KNOB	1	87	OR71487	BASE COVER	1
39	OR90059	M6mm FLAT WASHER	1	88	OR71486	RUBBER PAD	4
40	OR71460	EYESHIELD	1	89	OR90063	#10-24 x 3/8" TRUSS HD SCREW	4
41	OR90430	M6 x 80mm CARRIAGE HD SCREW	1	90	OR90062	#10-24 x 1/4" TRUSS HD SCREW	2
42	OR71464	SPACER	1	91	OR90716	M4.2 x 12mm PAN HD TAP SCREW	2
43	OR71471	SPARK ARRESTOR-L.H	1	92	OR93199	SPECIAL WRENCH	1
44	OR90150	1/4-20 x 1/4" HEX HD SCREW	1	93	OR71440	WHEEL DRESSER	1
45	OR90060	1/4" FLAT WASHER	1	94	OR90218	BEARING 6203ZZ (NOT SHOWN)	2
46	OR90192	TOOL REST RIGHT	1	95	OR71488	OWNERS MANUAL (NOT SHOWN)	1
47	OR90191	TOOL REST BRACKET RIGHT	1	96	OR71489	OWNERS MANUAL SPANISH (NOT SHOWN)	1
48	OR90064	5/16" FLAT WASHER	1	97	OR71490	OWNERS MANUAL FRENCH (NOT SHOWN)	1
49	OR90011	5/16-18 KNOB	1				

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STEEL CITY TOOL WORKS

www.steelcitytoolworks.com

1-877-SC4-TOOL

(1-877-724-8665)

5 Year Warranty

