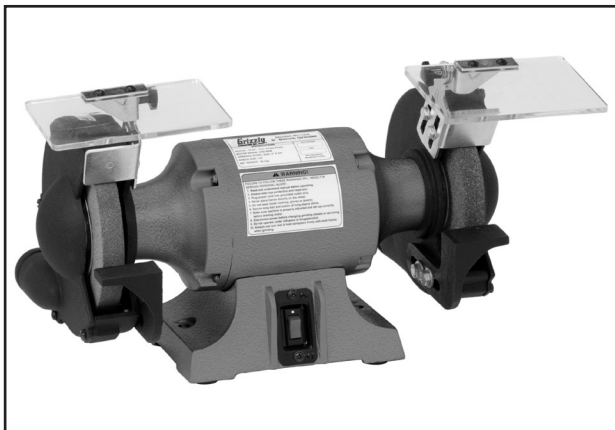




MODEL H8148/H8149/H8150 HEAVY DUTY BENCH GRINDERS OWNER'S MANUAL

MODEL H8148



MODEL H8149



MODEL H8150



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**WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.**

#BL8860 PRINTED IN CHINA



WARNING!

This manual provides critical safety instructions on the proper setup, operation, maintenance and service of this machine/equipment.

Failure to read, understand and follow the instructions given in this manual may result in serious personal injury, including amputation, electrocution or death.

The owner of this machine/equipment is solely responsible for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training and usage authorization, proper inspection and maintenance, manual availability and comprehension, application of safety devices, blade/cutter integrity, and the usage of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.



WARNING!

Some dust created by power sanding, sawing, grinding, drilling, and other construction activities contains 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.**

Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: Work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.

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INTRODUCTION

Foreword

We are proud to offer the Model H8148/H8149/H8150 Heavy Duty Bench Grinders. This machine is part of a growing Grizzly family of fine wood-working and metalworking machinery. When used according to the guidelines set forth in this manual, you can expect years of trouble-free, enjoyable operation and proof of Grizzly's commitment to customer satisfaction.

The specifications, drawings, and photographs illustrated in this manual represent the Model H8148/H8149/H8150 when the manual was prepared. However, owing to Grizzly's policy of continuous improvement, changes may be made at any time with no obligation on the part of Grizzly.

For your convenience, we always keep current Grizzly manuals available on our website at **www.grizzly.com**. Any updates to your machine will be reflected in these manuals as soon as they are complete. Visit our site often to check for the latest updates to this manual!

Contact Info

If you have any comments regarding this manual, please write to us at the address below:

Grizzly Industrial, Inc.
c/o Technical Documentation Manager
P.O. Box 2069
Bellingham, WA 98227-2069
Email: manuals@grizzly.com

We stand behind our machines. If you have any service questions or parts requests, please call or write us at the location listed below.

Grizzly Industrial, Inc.
1203 Lycoming Mall Circle
Muncy, PA 17756
Phone: (570) 546-9663
Fax: (800) 438-5901
E-Mail: techsupport@grizzly.com
Web Site: <http://www.grizzly.com>





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL H8148 1/2 HP 6" BENCH GRINDER

Design Type Bench Model

Overall Dimensions:

Height 8½"
Width 16"
Depth 8½"
Shipping Weight 35 lbs.
Net Weight 33 lbs.
Box Size 10" D x 17½" W x 9¼" H
Footprint 16" W x 8½" D
Arbor Diameter 1½"
Wheel Size 6" Dia. x 1½" to ¾" W
Wheel Type Type 1

Motor:

Type TEFC Capacitor-Start Induction
Horsepower ½ HP
Phase / Voltage Single-Phase / 110V
Amps 5A
Cycle / RPM 60 Hertz / 3450 RPM
Bearings Shielded & Permanently Lubricated

Features:

..... Wheel Flanges
..... Dual 1½" Dust Ports
..... Standard Tool Rest
..... Safety-Type Switch
..... Included 36 Grit Aluminum Oxide Grinding Wheel
..... Included 60 Grit Aluminum Oxide Grinding Wheel

Specifications, while deemed accurate, are not guaranteed.





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL H8149 3/4 HP 8" BENCH GRINDER

Design Type Bench Model

Overall Dimensions:

Height 11"
Width 18 $\frac{1}{4}$ "
Depth 10 $\frac{1}{4}$ "
Shipping Weight 56 lbs.
Net Weight 54 lbs.
Box Size 12 $\frac{1}{2}$ "D x 19 $\frac{1}{2}$ "W x 11"H
Footprint 18 $\frac{1}{4}$ " W x 10 $\frac{1}{4}$ " D
Arbor Diameter $\frac{5}{8}$ "
Wheel Size 8" Dia. x 1" W
Wheel Type Type 1

Motor:

Type TEFC Capacitor-Start Induction
Horsepower $\frac{3}{4}$ HP
Phase / Voltage Single-Phase / 110V
Amps 8A
Cycle / RPM 60 Hertz / 3450 RPM
Bearings Shielded & Permanently Lubricated

Features:

..... Wheel Flanges
..... Standard Tool Rest
..... Dual 2" Dust Ports
..... Safety-Type Switch
..... Included 36 Grit Aluminum Oxide Grinding Wheel
..... Included 60 Grit Aluminum Oxide Grinding Wheel

Specifications, while deemed accurate, are not guaranteed.





MACHINE DATA SHEET

Customer Service #: (570) 546-9663 • To Order Call: (800) 523-4777 • Fax #: (800) 438-5901

MODEL H8150 1½ HP 10" BENCH GRINDER

Design Type Bench Model

Overall Dimensions:

Height 15¼"
Width 22½"
Depth 13¼"
Shipping Weight 100 lbs.
Net Weight 97 lbs.
Box Size 16¼"D x 24¼"W x 14⅝" H
Footprint 22½" W x 13¼" D
Arbor Diameter 1"
Wheel Size 10" Dia. x 1" W
Wheel Type Type 1

Motor:

Type TEFC Capacitor-Start Induction
Horsepower 1½ HP
Phase / Voltage Single-Phase / 110V
Amps 10A
Cycle / RPM 60 Hertz / 1725 RPM
Bearings Shielded & Permanently Lubricated

Features:

..... Wheel Flanges
..... Standard Tool Rest
..... Dual 2½" Dust Ports
..... Toggle-Type Switch
..... Included 36 Grit Aluminum Oxide Grinding Wheel
..... Included 60 Grit Aluminum Oxide Grinding Wheel

Specifications, while deemed accurate, are not guaranteed.



Identification

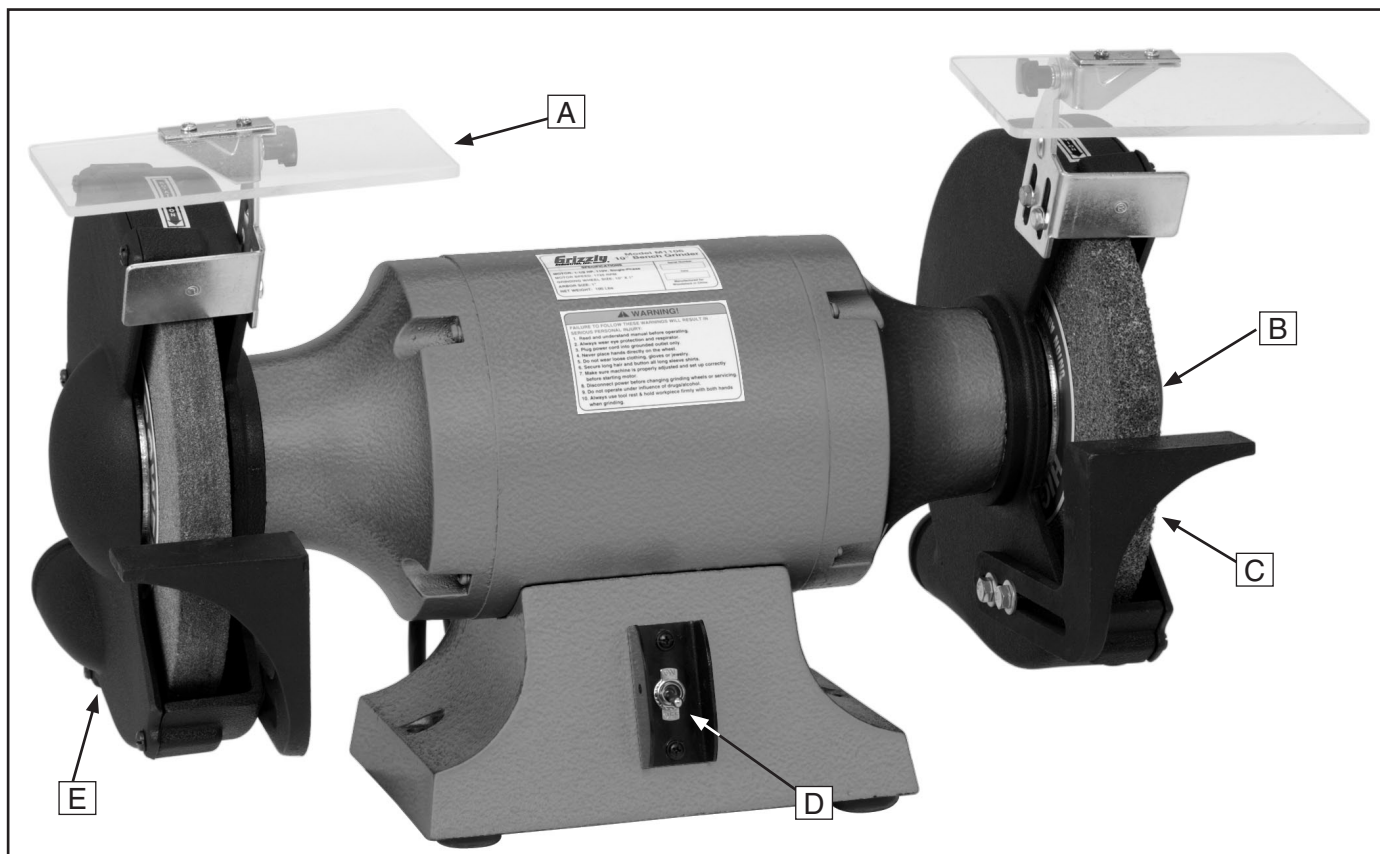


Figure 1. Identification, Model H8150.

- A.** Eye Shield (to be used WITH safety glasses)
- B.** Grinding Wheel
- C.** Tool Rest
- D.** ON/OFF Switch
- E.** Wheel Safety Guard



SECTION 1: SAFETY

WARNING

For Your Own Safety, Read Instruction Manual Before Operating this Machine

The purpose of safety symbols is to attract your attention to possible hazardous conditions. This manual uses a series of symbols and signal words intended to convey the level of importance of the safety messages. The progression of symbols is described below. Remember that safety messages by themselves do not eliminate danger and are not a substitute for proper accident prevention measures.



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



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



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

NOTICE

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

WARNING

Safety Instructions for Machinery

- 1. READ THE ENTIRE MANUAL BEFORE STARTING MACHINERY.** Machinery presents serious injury hazards to untrained users.
- 2. ALWAYS USE ANSI APPROVED SAFETY GLASSES WHEN OPERATING MACHINERY.** Everyday eyeglasses only have impact resistant lenses—they are NOT safety glasses.
- 3. ALWAYS WEAR A NIOSH APPROVED RESPIRATOR WHEN OPERATING MACHINERY THAT PRODUCES DUST.** Wood dust can cause severe respiratory illnesses.
- 4. ALWAYS USE HEARING PROTECTION WHEN OPERATING MACHINERY.** Machinery noise can cause permanent hearing loss.
- 5. WEAR PROPER APPAREL. DO NOT** wear loose clothing, gloves, neckties, rings, or jewelry that can catch in moving parts. Wear protective hair covering to contain long hair and wear non-slip footwear.
- 6. NEVER OPERATE MACHINERY WHEN TIRED OR UNDER THE INFLUENCE OF DRUGS OR ALCOHOL.** Be mentally alert at all times when running machinery.



WARNING

Safety Instructions for Machinery

7. **ONLY ALLOW TRAINED AND PROPERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY.** Make sure operation instructions are safe and clearly understood.
8. **KEEP CHILDREN AND VISITORS AWAY.** Keep all children and visitors a safe distance from the work area.
9. **MAKE WORKSHOP CHILDPROOF.** Use padlocks, master switches, and remove start switch keys.
10. **NEVER LEAVE WHEN MACHINE IS RUNNING.** Turn power **OFF** and allow all moving parts to come to a complete stop before leaving machine unattended.
11. **DO NOT USE IN DANGEROUS ENVIRONMENTS.** DO NOT use machinery in damp, wet locations, or where any flammable or noxious fumes may exist.
12. **KEEP WORK AREA CLEAN AND WELL LIGHTED.** Clutter and dark shadows may cause accidents.
13. **USE A GROUNDED EXTENSION CORD RATED FOR THE MACHINE AMPERAGE.** Grounded cords minimize shock hazards. Undersized cords create excessive heat. Always replace damaged extension cords.
14. **ALWAYS DISCONNECT FROM POWER SOURCE BEFORE SERVICING MACHINERY.** Make sure switch is in OFF position before reconnecting.
15. **MAINTAIN MACHINERY WITH CARE.** Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
16. **MAKE SURE GUARDS ARE IN PLACE AND WORK CORRECTLY BEFORE USING MACHINERY.**
17. **REMOVE ADJUSTING KEYS AND WRENCHES.** Make a habit of checking for keys and adjusting wrenches before turning machinery **ON**.
18. **CHECK FOR DAMAGED PARTS BEFORE USING MACHINERY.** Check for binding or misaligned parts, broken parts, loose bolts, and any other conditions that may impair machine operation. Repair or replace damaged parts before operation.
19. **USE RECOMMENDED ACCESSORIES.** Refer to the instruction manual for recommended accessories. Improper accessories increase risk of injury.
20. **DO NOT FORCE MACHINERY.** Work at the speed for which the machine or accessory was designed.
21. **SECURE WORKPIECE.** Use clamps or a vise to hold the workpiece when practical. A secured workpiece protects your hands and frees both hands to operate the machine.
22. **DO NOT OVERREACH.** Maintain stability and balance at all times.
23. **MANY MACHINES CAN EJECT WORKPIECES TOWARD OPERATOR.** Know and avoid conditions that cause the workpiece to "kickback."
24. **ALWAYS LOCK MOBILE BASES (IF USED) BEFORE OPERATING MACHINERY.**
25. **CERTAIN DUST MAY BE HAZARDOUS** to the respiratory systems of people and animals, especially fine dust. Be aware of the type of dust you are exposed to and always wear a respirator designed to filter that type of dust.



WARNING

Additional Safety Instructions for Grinders

- 1. EYE PROTECTION.** Grinding causes small particles to become airborne at a high rate of speed. ALWAYS wear safety glasses when using this machine.
- 2. MOUNTING TO BENCH/STAND.** An unsecured grinder may become dangerously out of control during operation. Make sure grinder is FIRMLY secured to a bench/stand before use.
- 3. WHEEL SPEED RATING.** Wheels operated at a faster speed than rated for may break or fly apart. Before mounting a new wheel, be sure the wheel RPM rating is equal to or higher than the speed of the grinder.
- 4. WHEEL FLANGES.** Only use the flanges included with the grinder when mounting wheels. Other flanges may not properly secure the wheel and cause an accident.
- 5. RING TEST.** Perform a “ring test” on grinding wheels before installation to ensure that they are safe to use. A wheel that does not pass the ring test may break or fly apart during operation.
- 6. STARTING GRINDER.** If a wheel IS damaged, it will usually fly apart shortly after start-up. To protect yourself, always stand to the side of the grinder when turning it ON, allow it to gain full speed and wait for at least 1 minute before standing in front of it.
- 7. LUNG PROTECTION.** Grinding produces hazardous dust, which may cause long-term respiratory problems if breathed. Always wear a NIOSH approved dust mask or respirator when grinding.
- 8. SIDE GRINDING.** Grinding on the side of wheels can cause them to break and fly apart—unless the wheel is rated for side grinding.
- 9. TOP GRINDING.** Grinding on the top of wheels greatly increases the risk of workpiece kickback. Always grind on the downward part of the wheel.
- 10. HAND/WHEEL CONTACT.** Grinding wheels have the capability of removing a lot of skin fast. Keep a firm grip on the workpiece and position your hands a safe distance away when grinding. Avoid wearing gloves as they may get caught in the grinding wheel and cause even more serious entanglement injuries.
- 11. TOOL REST POSITION.** If the tool rest is too far away from the wheel, the workpiece may be pulled down, causing loss of control and pulling your hand into the grinding wheel. Keep the tool rest within $\frac{1}{8}$ " from the wheel when operating.

WARNING

Like all machinery there is potential danger when operating this machine. Accidents are frequently caused by lack of familiarity or failure to pay attention. Use this machine with respect and caution to lessen the possibility of operator injury. If normal safety precautions are overlooked or ignored, serious personal injury may occur.

CAUTION

No list of safety guidelines can be complete. Every shop environment is different. Always consider safety first, as it applies to your individual working conditions. Use this and other machinery with caution and respect. Failure to do so could result in serious personal injury, damage to equipment, or poor work results.



SECTION 2: CIRCUIT REQUIREMENTS

110V Operation

! WARNING

Serious personal injury could occur if you 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.

Amperage Draw

The Model H8148/H8149/H8150 motor draws the following amps under maximum load:

Motor Draw (H8148)	5 Amps
Motor Draw (H8149)	8 Amps
Motor Draw (H8150)	10 Amps

Circuit Recommendations

We recommend connecting your machine to a dedicated and grounded circuit that is rated for the amperage given below. Never replace a circuit breaker on an existing circuit with one of higher amperage without consulting a qualified electrician to ensure compliance with wiring codes. **If you are unsure about the wiring codes in your area or you plan to connect your machine to a shared circuit, consult a qualified electrician.**

110V Circuit (H8148/H8149/H8150)..... 15 Amps

Plug/Receptacle Type

Included Plug Type..... NEMA 5-15

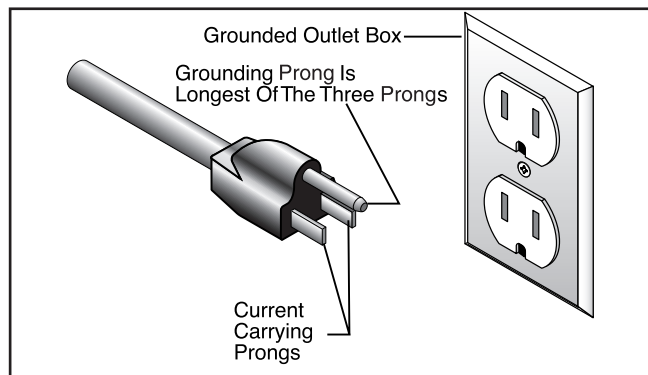
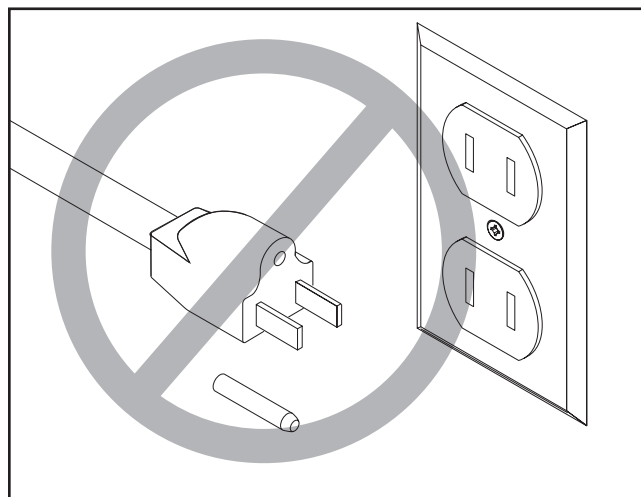
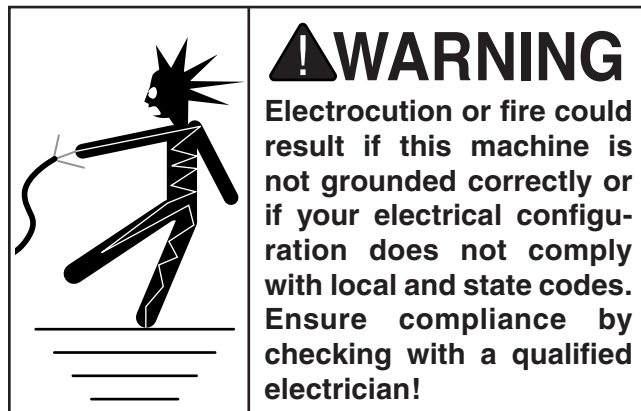


Figure 2. Typical type 5-15 plug and receptacle.



! CAUTION

This machine must have a ground prong in the plug to help ensure that it is grounded. **DO NOT** remove ground prong from plug to fit into a two-pronged outlet! If the plug will not fit the outlet, have the proper outlet installed by a qualified electrician.

Extension Cords

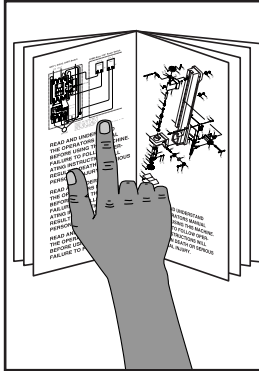
We do not recommend the use of extension cords, but if you find it absolutely necessary:

- Use at least a 14 gauge cord that does not exceed 50 feet in length!
- The extension cord must also contain a ground wire and plug pin.
- A qualified electrician **MUST** size cords over 50 feet long to prevent motor damage.



SECTION 3: SET UP

Set Up Safety



!WARNING

This machine presents serious injury hazards to untrained users. Read through this entire manual to become familiar with the controls and operations before starting the machine!



!WARNING

Wear safety glasses during the entire set up process!



!WARNING

The Model H8150 is a heavy machine. DO NOT over-exert yourself while unpacking or moving your machine—get assistance.

Items Needed for Setup

The following items are needed to complete the setup process, but are not included with your machine:

Description	Qty
• Safety Glasses (for each person)	1
• Wrench ½".....	1
• Wrench 10mm.....	1
• Phillips Head Screwdriver	1

Unpacking

The Model H8148/H8149/H8150 was carefully packed when it left our warehouse. If you discover the machine is damaged after you have signed for delivery, *please immediately call Customer Service at (570) 546-9663 for advice.*

Save the containers and all packing materials for possible inspection by the carrier or its agent. *Otherwise, filing a freight claim can be difficult.*

When you are completely satisfied with the condition of your shipment, inventory the contents.



Inventory

After all the parts have been removed from the box, you should have the following items:

Box Contents: (Figure 3 & 4)		Qty
A.	Heavy-Duty Bench Grinder Unit (Not Shown)	1
B.	Left Lens Hanger.....	1
	Right Lens Hanger (Not Shown)	1
C.	Left Spark Arrestor	1
	Right Spark Arrestor (Not Shown)	1
D.	Lens.....	2
E.	Nut Plates.....	2
F.	Left Tool Rest	1
	Right Tool Rest (Not Shown)	1
G.	Hardware and Tools (Not Shown):	Qty
	—Flange Screws M6-1 x 12mm (Eye Shield)	2
	—Lock Washers 7mm (Eye Shield)	2
	—Flat Washers 7mm (Eye Shield).....	2
	—Female Knobs M6-1.25 (Eye Shield)	2
	—Hex Bolts M6-1.25 x 10mm (Eye Shield) 4	
	—Flat Washers 7mm (Eye Shield).....	4
	—Phillips Head Screws #10-24 x 3/8" (Eye Shield)	4
	—Flat Washers 8mm (Tool Rest)	4
	—Hex Bolts 5/16"-18 x 3/4" (Tool Rest)	4

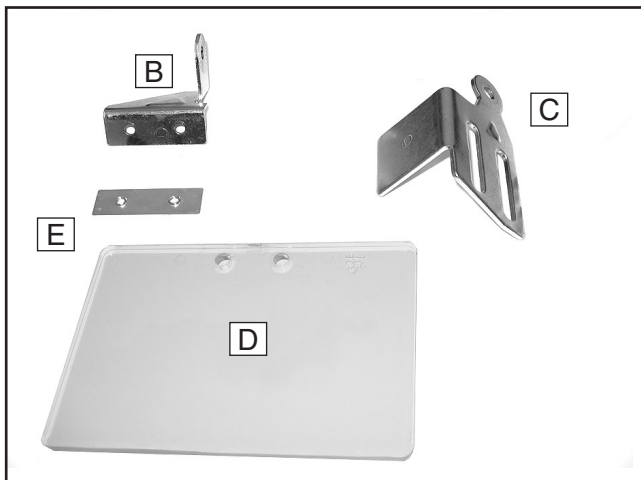


Figure 3. Left eye shield assembly.



Figure 4. Left tool rest

If any nonproprietary parts are missing (e.g. a nut or a washer), we will gladly replace them; or for the sake of expediency, replacements can be obtained at your local hardware store.

NOTICE

Some hardware/fasteners on the inventory list may arrive pre-installed. Check mounting locations before assuming that any items from the inventory list are missing.



Hardware Recognition Chart

USE THIS CHART TO MATCH UP
HARDWARE DURING THE ASSEMBLY
PROCESS.

MEASURE BOLT DIAMETER BY PLACING INSIDE CIRCLE

○ #10

○ 1/4"

○ 5/16"

○ 3/8"

○ 7/16"

○ 1/2"

○ 4mm

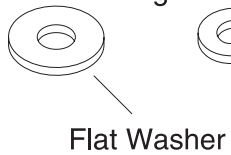
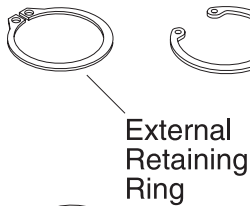
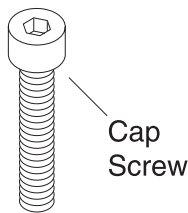
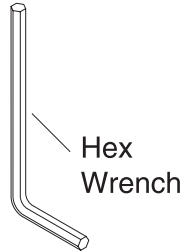
○ 6mm

○ 8mm

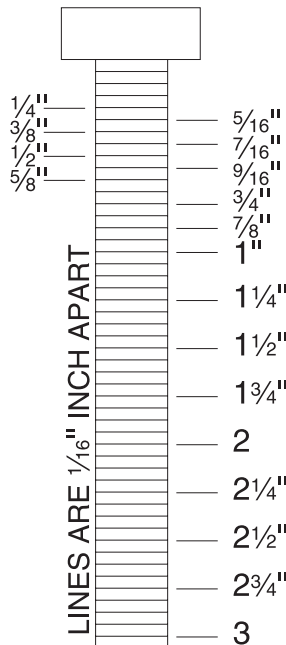
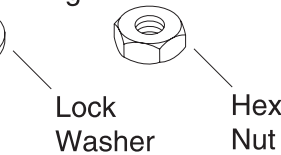
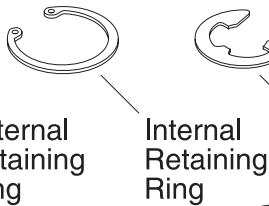
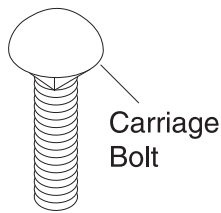
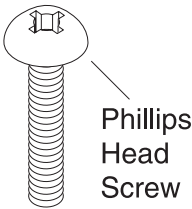
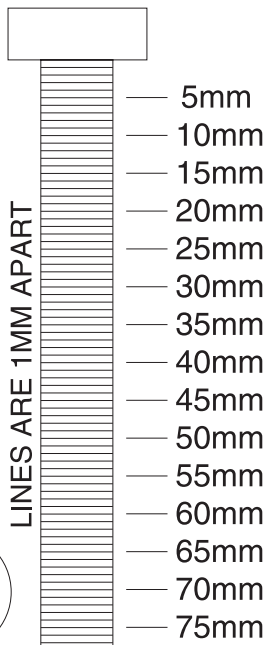
○ 10mm

○ 12mm

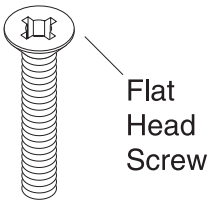
○ 16mm



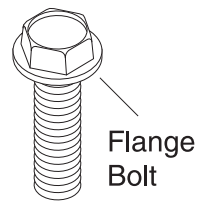
LINES ARE 1MM APART



Lock Nut



Flat Head Screw



Flange Bolt



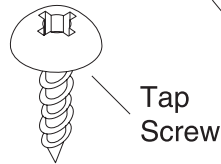
Setscrew



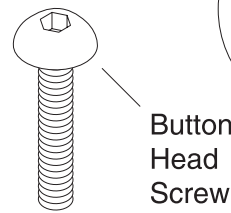
Hex Nut



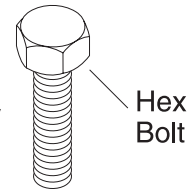
Wing Nut



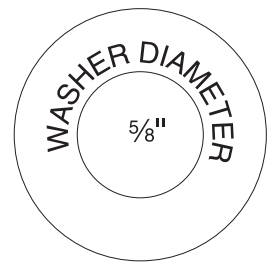
Tap Screw



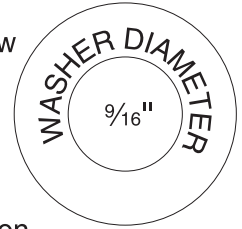
Button Head Screw



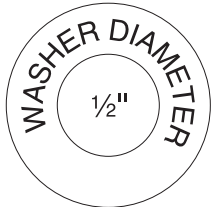
Hex Bolt



WASHER DIAMETER
5/8"



WASHER DIAMETER
9/16"



WASHER DIAMETER
1/2"



WASHER DIAMETER
7/16"



WASHER DIAMETER
3/8"



WASHER DIAMETER
5/16"



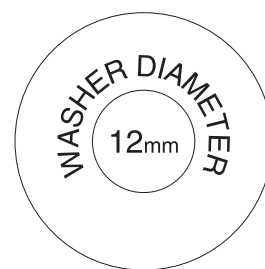
WASHER DIAMETER
1/4"



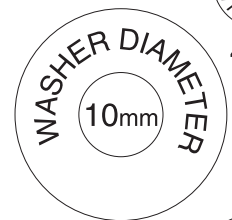
WASHER DIAMETER
8mm

#10

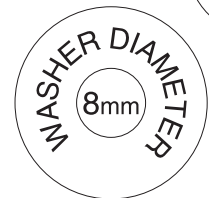
WASHERS ARE MEASURED BY THE INSIDE DIAMETER



WASHER DIAMETER
12mm



WASHER DIAMETER
10mm



WASHER DIAMETER
8mm



WASHER DIAMETER
4mm



WASHER DIAMETER
6mm



Site Considerations

Bench Load

Refer to the **Machine Data Sheet** for the weight and footprint specifications of your machine. Some workbenches may require additional reinforcement to support both the machine and the workpiece.

Placement Location

Consider existing and anticipated needs, size of material to be processed through each machine, and space for auxiliary stands, work tables or other machinery when establishing a location for your new machine. See **Figure 5** for the minimum working clearances.

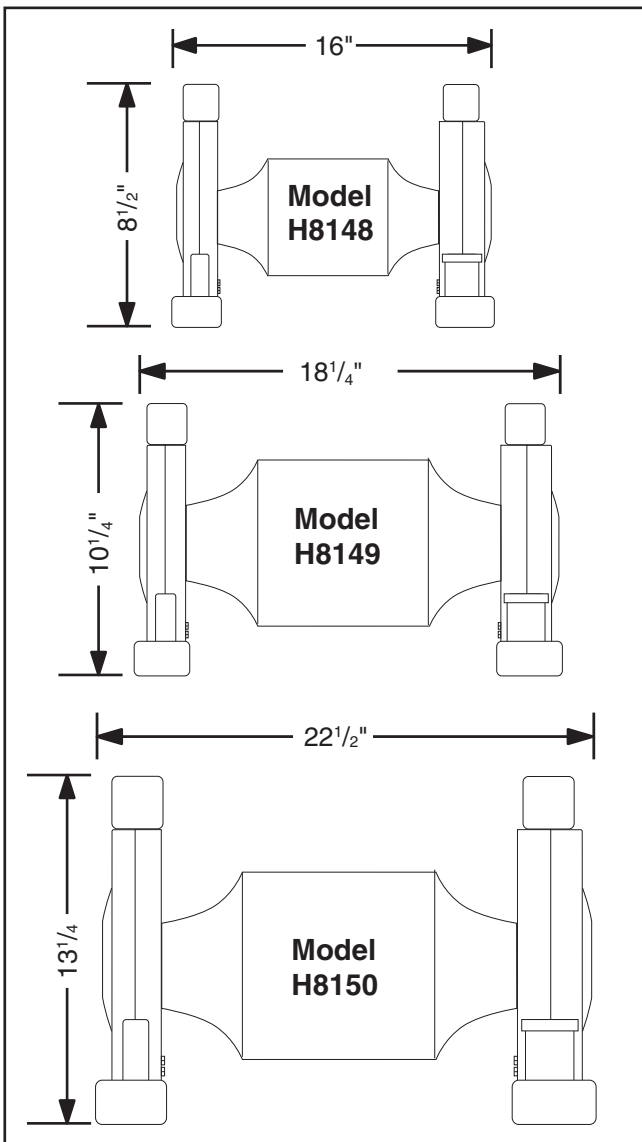
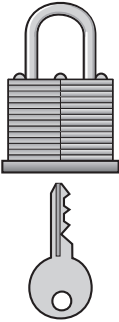


Figure 5. Minimum working clearances.



CAUTION

Children and visitors may be seriously injured if unsupervised. Lock all entrances to the shop when you are away. **DO NOT** allow unsupervised children or visitors in your shop at any time!

Mounting

The Heavy-Duty Bench Grinder must be mounted to a workbench to avoid accidental tipping. If you intend to use the grinder for portable applications, mount it to a heavy plywood base (at least 1" thick) that is wide enough to prevent tipping or rocking during use, then clamp the plywood base to the workbench or table.

To mount the Heavy-Duty Bench Grinder:

1. Once you have confirmed that your grinder is running properly, mount it to a workbench through the holes in the base using the dimensions in **Figure 6**. **DO NOT** overtighten the mounting bolts or you will crack the base.

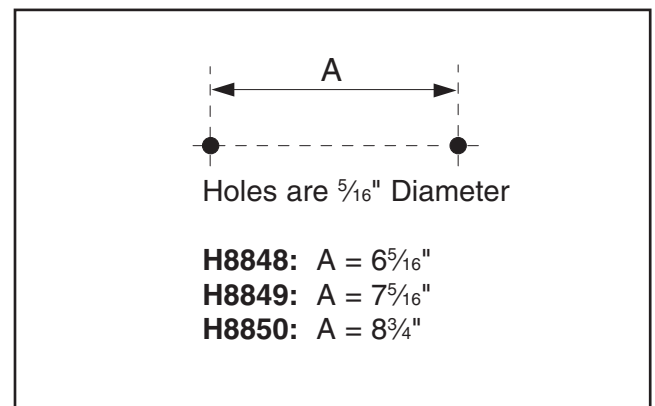


Figure 6. Bench grinder mounting bolt pattern.



The strongest mounting option is a "Through Mount" where holes are drilled all the way through the workbench, and hex bolts, washers, and hex nuts are used to secure the grinder to the workbench.

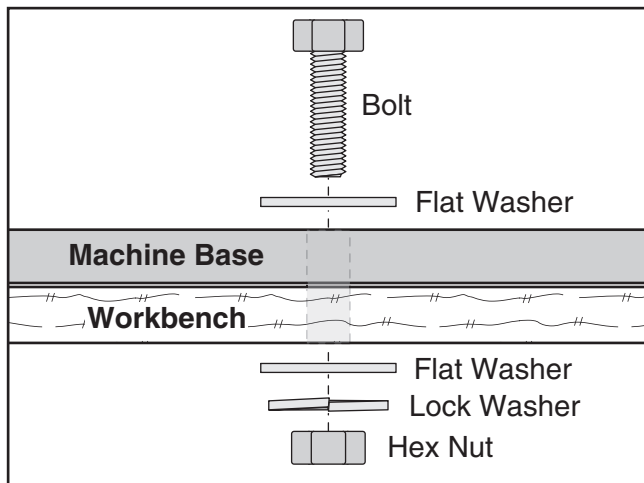


Figure 7. Example of a through mount setup.

Another option for mounting is a "Direct Mount" where the machine is simply secured to the workbench with a lag screw.

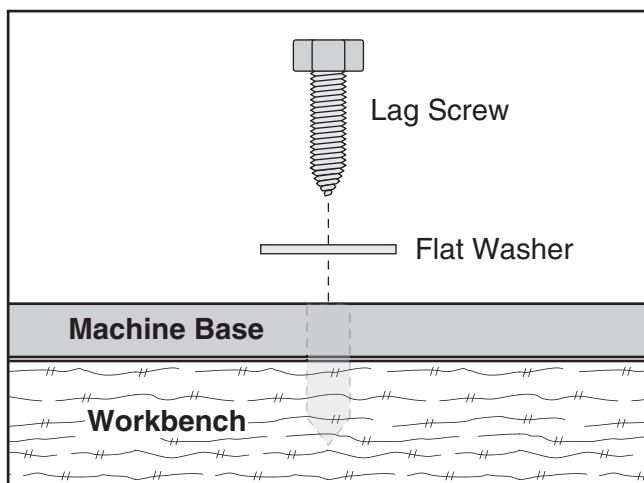


Figure 8. Example of a direct mount setup.

2. Check the stability of the mounted grinder to make sure it is stable enough to be used safely.
3. Always make sure the grinder is bolted or clamped to the workbench, table, or grinder stand before use.

Tool Rest and Eye Shield

The tool rest supports the workpiece during grinding. Certain types of grinding may require jigs or accessories to assure the proper angle of the workpiece against the wheel.

The eye shield must be installed and positioned between the grinding wheel and your face during grinding. The eye shield is NOT a substitute for safety glasses or a safety face shield. You must wear ANSI approved face and eye protection.

To assemble the tool rest and eye shield:

1. Using the hardware from the inventory list on **Page 12**, assemble the left tool rest and eye shield as shown in **Figures 9 & 10**.

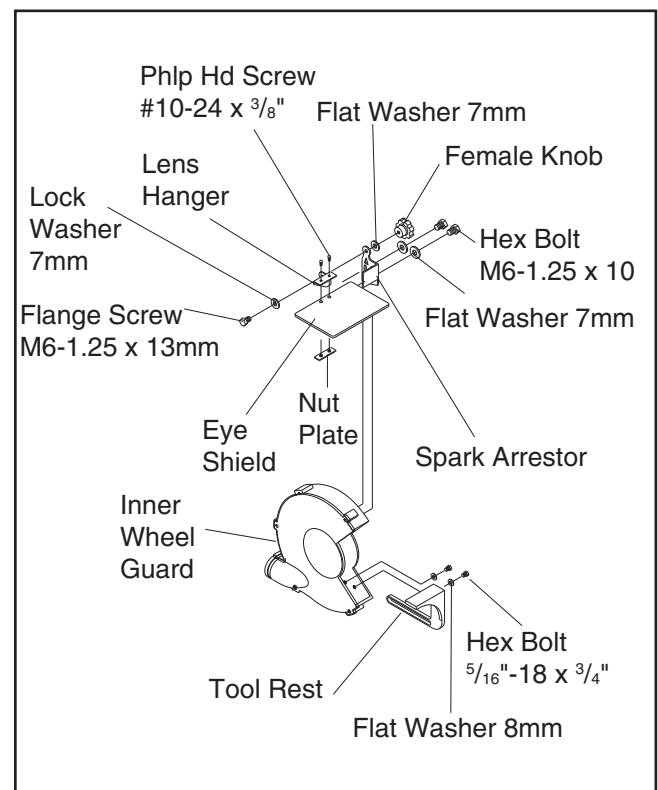


Figure 9. Left eye shield and tool rest assembly.



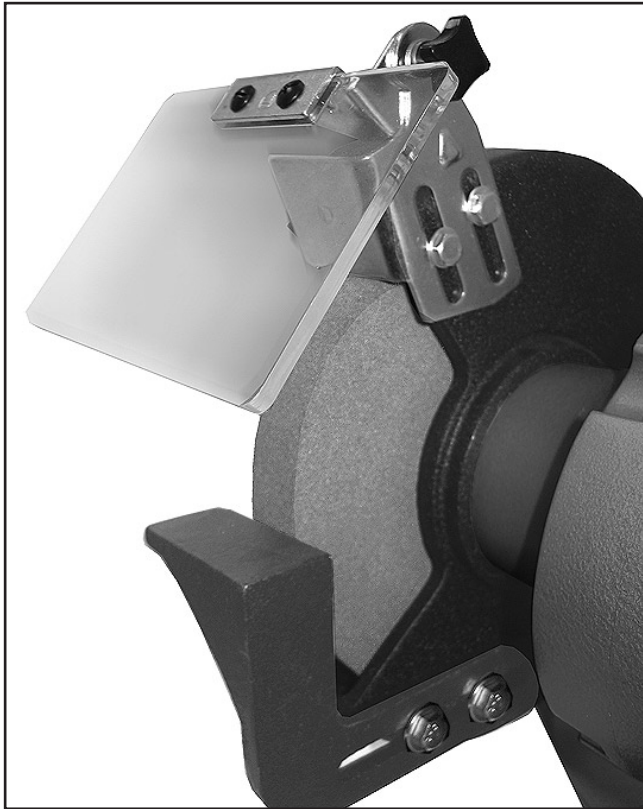


Figure 10. Left tool rest and eye shield assembly.

2. Assemble the right tool rest and eye shield in the same manner.

Test Run

Once your machine is mounted and assembly is complete, test run your machine to make sure it runs properly.

If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review the **Troubleshooting** on **Page 23**.

If you still cannot remedy a problem, contact our Tech Support at (570) 546-9663 for assistance.

To test run the machine:

1. Make sure the switch is in the OFF position.
2. Connect the grinder to the power source.

3. Make sure you have read the safety instructions at the beginning of the manual and that the grinder is setup properly.
4. Make sure all tools and objects used during set up are cleared away from the grinder.
5. Flip the switch up to turn the grinder **ON**. Make sure that your hand stays poised over the switch in case you need to quickly turn the machine **OFF**.
6. Listen to and watch for abnormal noises or actions. Under normal conditions, the grinder will make a humming noise, with only minor vibration.

—Strange or unusual noises should be investigated and corrected before operating the machine further. Always disconnect the machine from power before investigating or correcting potential problems.

7. Turn the grinder **OFF**.
8. On Model H8148 and H8149 remove the safety key (**Figure 11**) and attempt to turn the machine **ON**.

—If the grinder does not start, the switch disabling feature is working.

—If the grinder starts, stop it. The switch disabling feature is not working. This safety feature must work properly before proceeding. Call Tech Support for help.

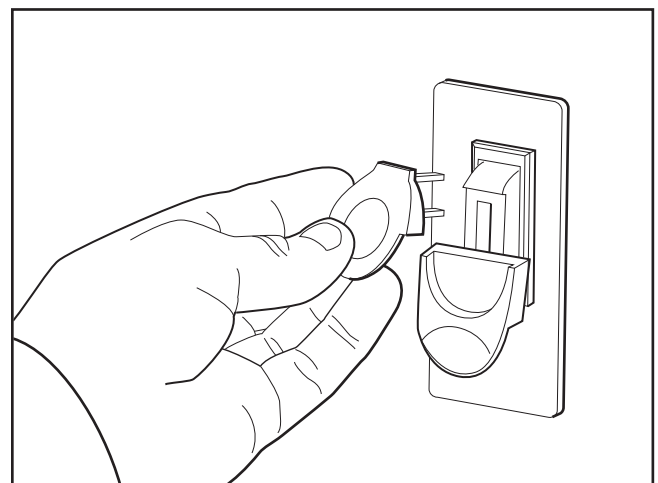


Figure 11. Disabling switch.

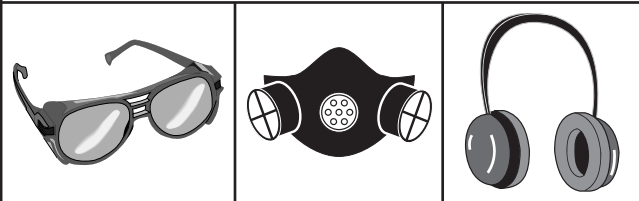


SECTION 4: OPERATIONS

Operation Safety

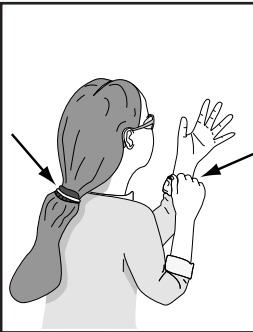
WARNING

Damage to your eyes, lungs, and ears could result from using this machine without proper protective gear. Always wear safety glasses, a respirator, and hearing protection when operating this machine.



WARNING

Loose hair and clothing could get caught in machinery and cause serious personal injury. Keep loose clothing and long hair away from moving machinery.



WARNING

DO NOT use this grinder with a liquid cooling system required for wet grinding wheel operations. The electrical system is not waterproof. Ignoring this warning can lead to electrocution.

NOTICE

If you have never used this type of machine or equipment before, **WE STRONGLY RECOMMEND** that you read books, trade magazines, or get formal training before beginning any projects. Regardless of the content in this section, Grizzly Industrial will not be held liable for accidents caused by lack of training.

Grinding Tips

The grinder is a safe tool when used properly. In addition to the safety instructions in this manual, the most important safety consideration is to use common sense at all times. What may be okay in one situation, may not be safe in another.

Here are some tips to keep in mind while grinding:

- Make sure all guards are in place.
- Remember that grinding often produces sparks. **DO NOT** allow anyone to stand in the path of the sparks. **DO NOT** grind near flammable materials.
- Maintain proper care of your wheels. Read the **Wheel Care** instructions on **Page 18** for ideas on how to do this.
- Wear the proper protective clothing. Particles flying off of a grinding wheel will be traveling very fast—prepare for this. Wear safety glasses/face shield, a dust mask, earplugs, a leather apron, and heavy leather boots.
- Grasp the workpiece firmly and properly support it on the tool rest during grinding. Maintain even pressure and control of the workpiece when grinding.
- Concentrate on the task at hand. **STOP** grinding if other people are distracting you or your mind is on something else.
- **DO NOT** grind on the side of the wheel. The wheels provided with the Model H8148/H8149/H8150 are not designed for side grinding.



Wheel Care

Your safety when grinding depends, in large part, on the condition of the wheel during grinding. A wheel in poor condition presents the possibility of breaking apart during rotation and injuring the operator and possibly causing property damage.

Here are some tips to help you avoid breaking the wheel:

- Always transport, store and handle wheels with care. Wheels may be damaged if they are dropped or if heavy objects are stacked on them.
- Select the right grinding wheel for the job. DO NOT grind material inappropriate for the wheel type.
- Select the right wheel for the machine. If a grinding wheel rotates faster than its RPM rating, it may fly apart.
- Mount the wheels properly. (See the **Wheel Replacement** instructions on **Page 19** for guidance.) Never use a wheel with the wrong arbor size for the grinder.
- Do not abuse the wheel by jamming the work into the grinding wheel with excessive force.
- Learn how to use the grinder and the grinding wheels properly. Ask a trusted person with experience or consult with your local library to learn more.
- Do not store wheels in damp or wet locations.
- Grinding on the side of the wheel may cause wheel damage.
- Replace wheels when the diameter becomes 2" smaller than its original size.

Wheel Selection

The Model H8148 only accepts Type 1 wheels with a 1/2" bore. The Model H8149 only accepts Type 1 wheels with a 5/8" bore. The Model H8150 only accepts Type 1 wheels with a 1" bore.

Aluminum oxide and silicon carbide wheels are marked in a somewhat uniform manner by all major manufacturers. Understanding these markings will help you understand the capabilities of various wheels. Always refer to the manufacturer's grinding recommendations when selecting a wheel for your project.

The basic format for wheel numbering is:

Prefix	Abrasive Type	Grit Size	Grade	Bond Type
1	A	60	L	V

The **Prefix** is the manufacturer's designation for a particular wheel type (eg, Type 1 wheels).

The most common **Abrasive Types** used are 'A' for Aluminum Oxide, 'C' for Silicon Carbide, and occasionally 'SG' for Seeded Gel.

The **Grit Size** is a number that refers to the size of the abrasive grain in the wheel. The lower the number, the coarser the wheel. Ten is a very coarse wheel for roughing and 220 is usually the upper range for fine finish work.

Grade is an indication of the hardness of the wheel—'A' being the softest and 'Z' being the hardest.

Bond Type refers to the type of bonding material used to hold the abrasive material. Most general purpose wheels will have a 'V' indicating Vitrified Clay is used. Vitified Clay provides high strength and good porosity. The other common bond type is 'B' for resin where synthetic resins are used. These are used to grind cemented carbide and ceramic materials.

Note: *There may be other numbers inserted that have meaning for a particular type of wheel. Refer to the manufacturer's technical data for a complete explanation.*



Wheel Inspection

Do not assume that a wheel is in sound condition just because it is new—often damage can occur in shipping, with age, or with exposure to moisture. Inspect every wheel for damage.

First, do a **Visual Inspection**. Look for any cracks, chips, nicks or dents in the surface of the wheel. If you see any of these, **DO NOT** use the wheel.

Second, do a **Ring Test**. This test will give you an indication of any internal damage that may not be obvious during a visual inspection.

To perform a Ring Test:

1. Make sure the wheel that you test is clean and dry; otherwise, you may get false results.
2. If size permits, balance the wheel with your finger in the hole. If this is not possible, hang the wheel in the air with a piece of cord or string looped through the hole in the center.
3. At the spots shown in **Figure 12**, gently tap the wheel with a light non-metallic device such as the handle of a screwdriver or a wooden mallet.

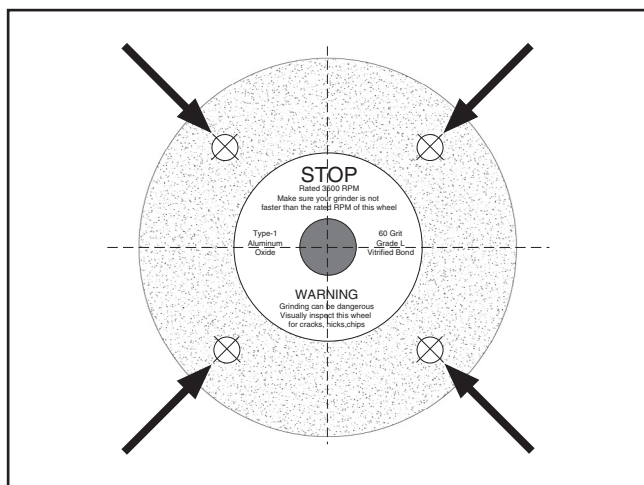


Figure 12. Tapping locations when performing a ring test.

4. An undamaged wheel will emit a clear metallic ring or “ping” sound in each of these spots. A damaged wheel will respond with a dull thud that has no clear tone.
5. If you determine from the ring test that the wheel is damaged, **DO NOT** use it!

Wheel Dressing

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

There are several different types of wheel dressing devices available on the market (see **Page 21**). Dressing restores the abrasive quality of the wheel surface and brings the wheel edge back to a square form.

Refer to the instructions that accompany your dressing accessory for complete details on how to properly dress a wheel.

Wheel Replacement

The wheel guard assembly must be removed in order to mount or dismount a grinding wheel.

To replace a grinding wheel:

1. **UNPLUG THE GRINDER!**
2. Remove the three Phillips head screws and nuts that go through the outer guard, and remove the outer guard.
3. Hold the wheel from turning, and remove the arbor nut which holds the wheel on.

Note: The arbor shaft and nut on the left hand side of the grinder is a left hand thread, so loosening it will require turning it clockwise.



4. Remove the outer wheel flange and the paper disc. Pull the wheel free from the arbor, but leave the paper disc and a wheel flange on the other side of the wheel.

! CAUTION

NEVER assemble a grinding wheel on the arbor without paper or fiber discs between the wheel and the flange. Omitting the discs can put uneven stress on the wheel, causing it to crack and possibly fly apart. **ALWAYS** “ring test” a wheel before assembly to make certain it has no cracks or flaws.

5. Mount the new wheel as shown in **Figure 13** and **14**. Always make certain there is a paper or fiber disc between the wheel flanges and the wheel itself. Tighten the arbor nut snugly but **DO NOT** over-tighten. Over-tightening can crack the wheel.

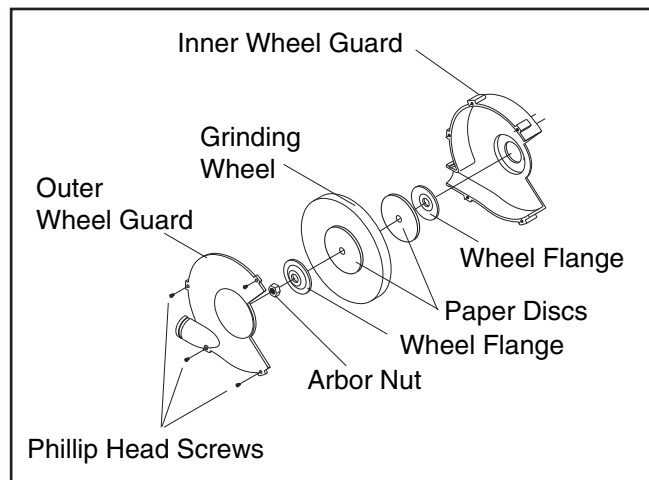


Figure 13. Assembly order for wheel installation.

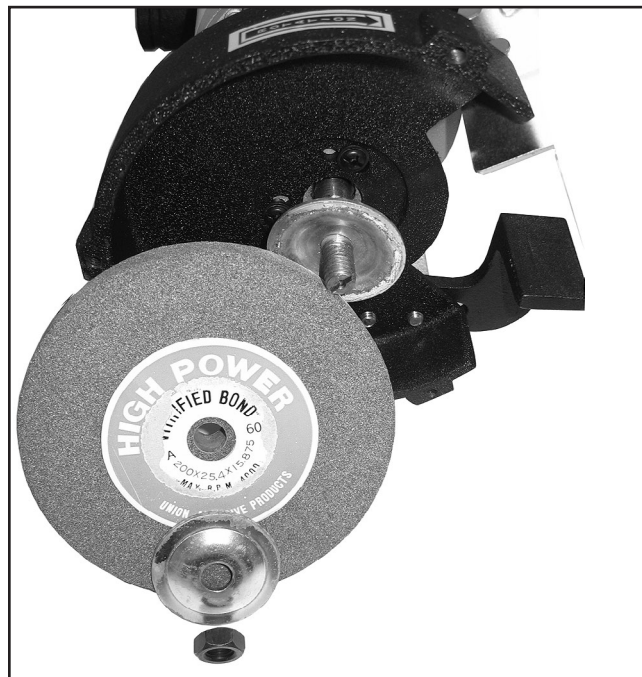


Figure 14. Grinding wheel installation order.

6. Run a new wheel for at least one minute while standing clear of the line of rotation. If a wheel does have defects it will generally fail as soon as it gets up to full speed.



SECTION 5: ACCESSORIES

G7120—Heavy Duty Grinder Stand

This is one of the most stable bench grinder stands on the market. Once you have one, you'll wonder how you ever got along without it. 32½" high. Universal mounting plate may require modifications for some bench grinders. Buffer/Sander not included. 49 lbs.



Figure 15. Model G7120.

H5891—½ Carat Diamond Dresser

H5892—¾ Carat Diamond Dresser

Industrial diamond for dressing grinding wheels. 8¼" long round body with knurled grip for maximum control. Includes protective rubber end cap.

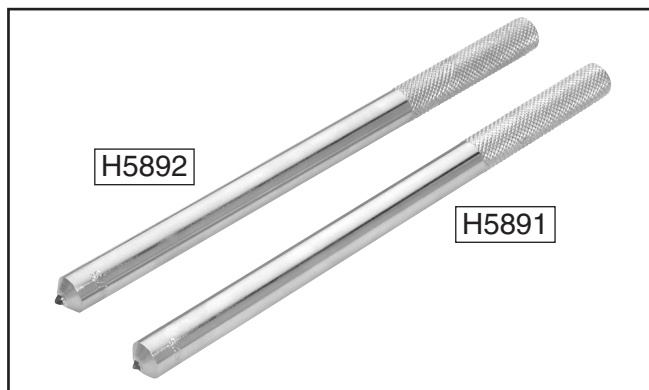


Figure 16. Diamond Dressers.

G7984—Face Shield

H1298—Dust Sealed Safety Glasses

H1300—UV Blocking, Clear Safety Glasses

H2347—Uvex® Spitfire Safety Glasses

H0736—Shop Fox® Safety Glasses

Safety Glasses are essential to every shop. If you already have a pair, buy extras for visitors or employees. You can't be too careful when it comes to shop safety!

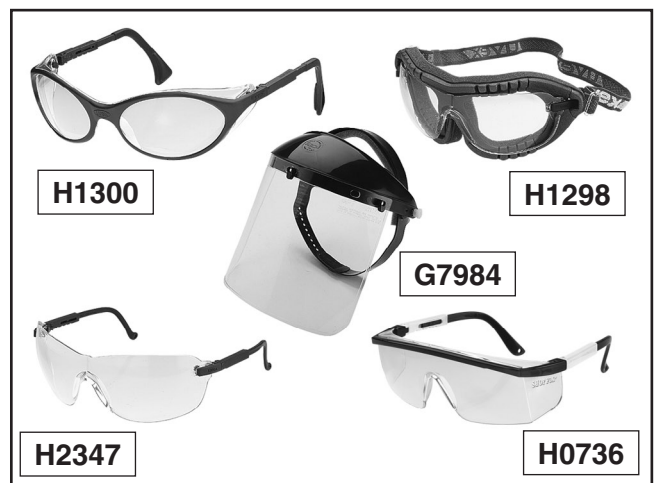


Figure 17. Our most popular safety glasses.

Type 1 Aluminum Oxide Replacement Wheels

G1979—6" Wheel, 36 Grit, ½ Bore

G1980—6" Wheel, 60 Grit, ½" Bore

G1982—8" Wheel, 36 Grit, ⅝ Bore

G1983—8" Wheel, 60 Grit, ⅝" Bore

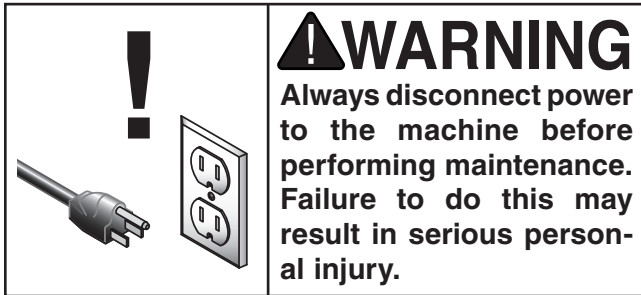
H8882—10" Wheel, 24 Grit, 1¼" Bore (1" w/ bushing installed)

H8883—10" Wheel, 36 Grit, 1¼" Bore (1" w/ bushing installed)

Call 1-800-523-4777 To Order



SECTION 6: MAINTENANCE



Schedule

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section. Routinely check the condition of the following items and repair or replace as necessary:

- Cracked or loose grinding wheel.
- Loose mounting bolts.
- Worn switch.
- Worn or damaged cords and plugs.
- Any other condition that could hamper the safe operation of this machine.

Grinding Wheels

The grinding wheel should be inspected before every use. Use the ring test method noted in **Wheel Inspection** on **Page 19** to verify the structural integrity. Take care in storing grinding wheels to keep them free from potential damage by being dropped, or having other items drop on them.

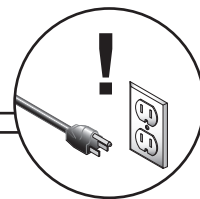
Replace the wheel when the wheel diameter is reduced to 2" smaller than its original size. Operating at anything less than this diameter does not allow the proper surface speed for grinding or spacing of the tool rest and the eye shield, and the grinding wheel may fly apart.



SECTION 7: SERVICE

Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then feel free to call our Technical Support at (570) 546-9663.

Troubleshooting



Motor & Electrical

Symptom	Possible Cause	Possible Solution
Motor will not start; fuses or circuit breakers blow.	1. Lockout key is at fault (H8148, H8149). 2. Open circuit in motor or loose connections. 3. Start capacitor is at fault. 4. Short circuit in motor or loose connections. 5. Incorrect fuses or circuit breakers in power supply.	1. Install/replace lockout key; replace switch. 2. Inspect/repair all lead connections on motor for loose or open connections. 3. Replace start capacitor. 4. Inspect all connections on motor for loose or shorted terminals or worn insulation. 5. Install correct fuses or circuit breakers.
Motor overheats, stalls (resulting in blown fuses or tripped circuit).	1. Motor overloaded. 2. Short circuit in motor or loose connections. 3. Depth of cut too great.	1. Reduce load on motor. 2. Inspect connections on motor for loose or shorted terminals or worn insulation. 3. Slow down rate of movement of workpiece.

Grinder Operations

Symptom	Possible Cause	Possible Solution
Wavy condition on surface of workpiece.	1. Machine vibrating. 2. Workpiece is not held in place firmly. 3. Wheel face uneven. 4. Wheel is too hard.	1. Make sure machine is securely mounted on a solid surface. 2. Use a holding device to firmly retain the workpiece. 3. Dress the grinding wheel. 4. Use softer wheel, or reduce the feed rate.
Lines on surface of workpiece.	1. Impurity on wheel surface. 2. Workpiece not being held tightly.	1. Dress the grinding wheel. 2. Use a holding device to firmly retain the workpiece.
Burning spots or cracks in the workpiece.	1. Improper type of grinding wheel. 2. Improper feed rate.	1. Try a wheel that is softer style or a coarser grit. 2. Slow down the rate of movement of the workpiece into wheel.
Wheel dulls quickly, grit falls off.	1. Depth of cut too great. 2. Wheel is too soft. 3. Wheel diameter too small. 4. Bad wheel dress. 5. Defective wheel bonding.	1. Slow down the rate of movement of the workpiece into wheel. 2. Wheel too soft for the material being ground, select harder bond. 3. Replace the wheel. 4. Dress the wheel. 5. Consult manufacturer of grinding wheel.
Wheel clogs and workpiece shows burn marks.	1. Wheel is too hard. 2. Feed rate too slow. 3. Bad wheel dress. 4. Wrong material is being ground.	1. Wheel too hard for the material being ground, select softer bond. 2. Increase the rate of movement of the workpiece into wheel. 3. Dress the wheel. 4. Grind ferrous metals only.



H8148 Wiring Diagram

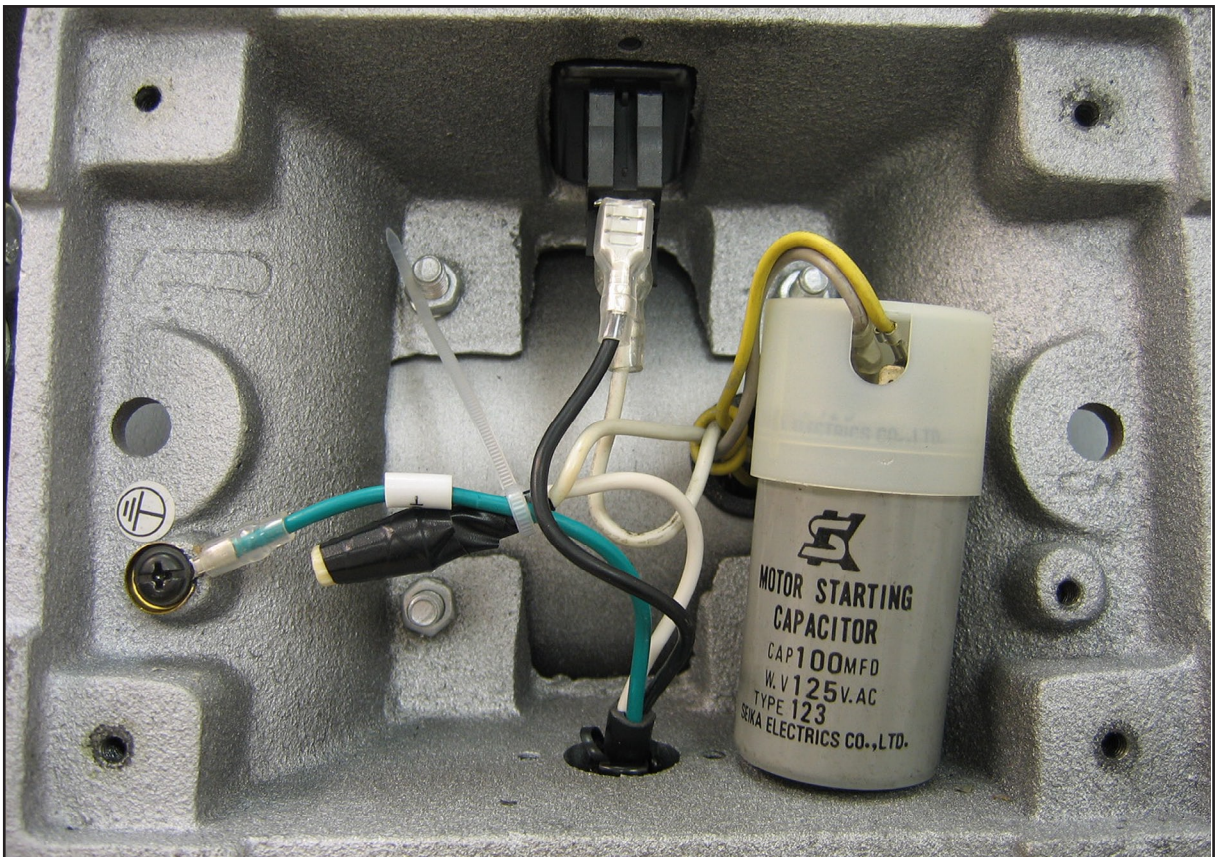
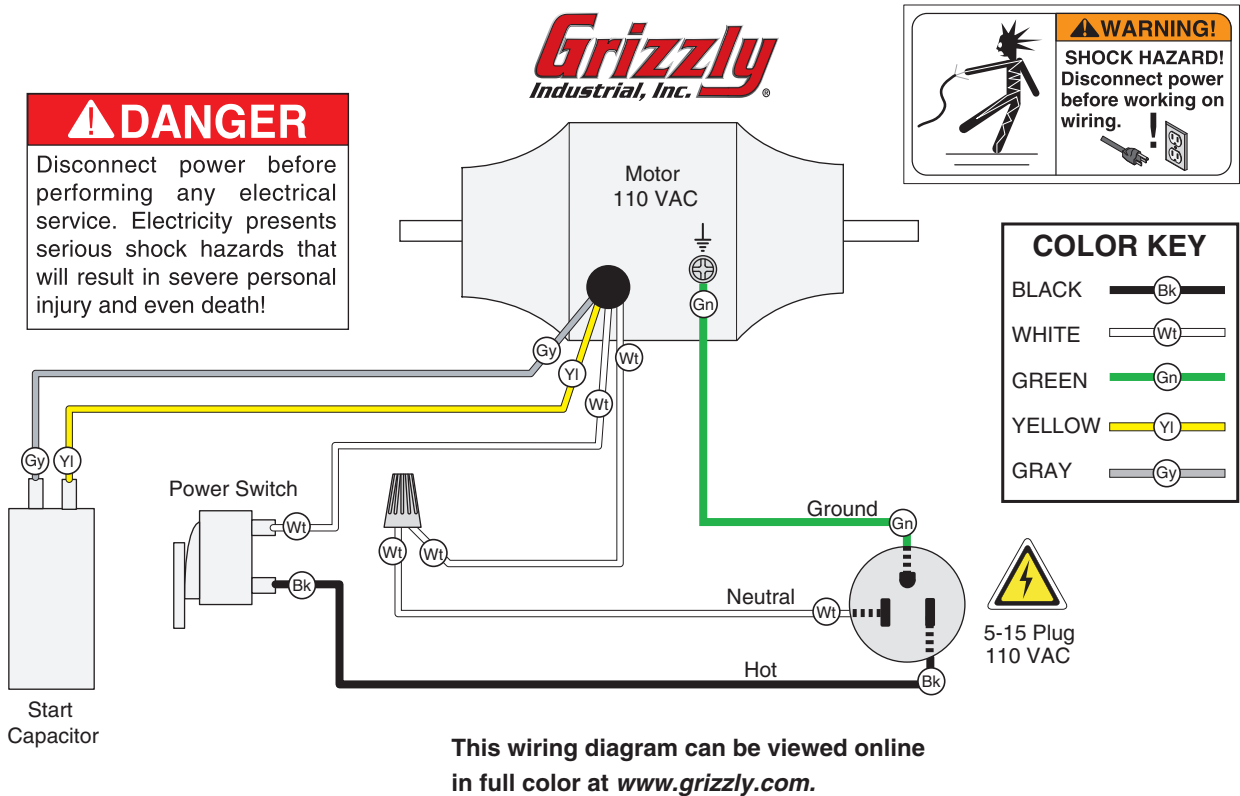
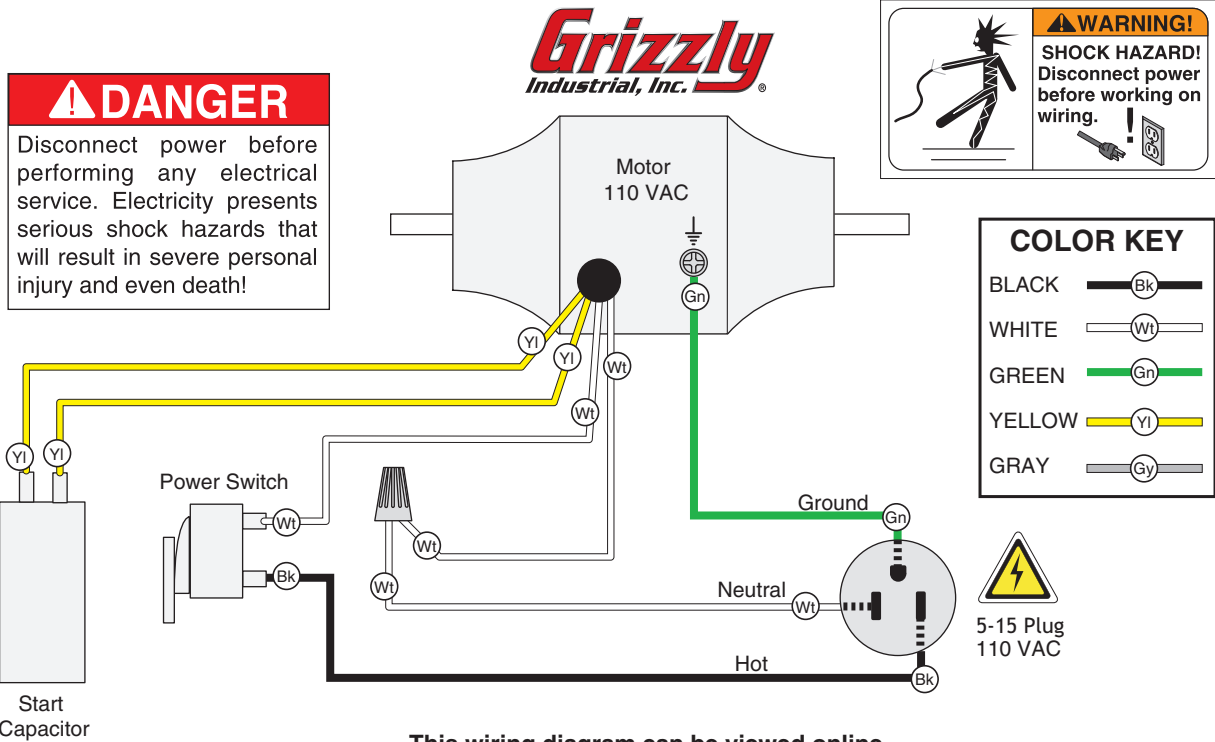


Figure 18. H8148 Wiring.



H8149 Wiring Diagram



This wiring diagram can be viewed online
in full color at www.grizzly.com.

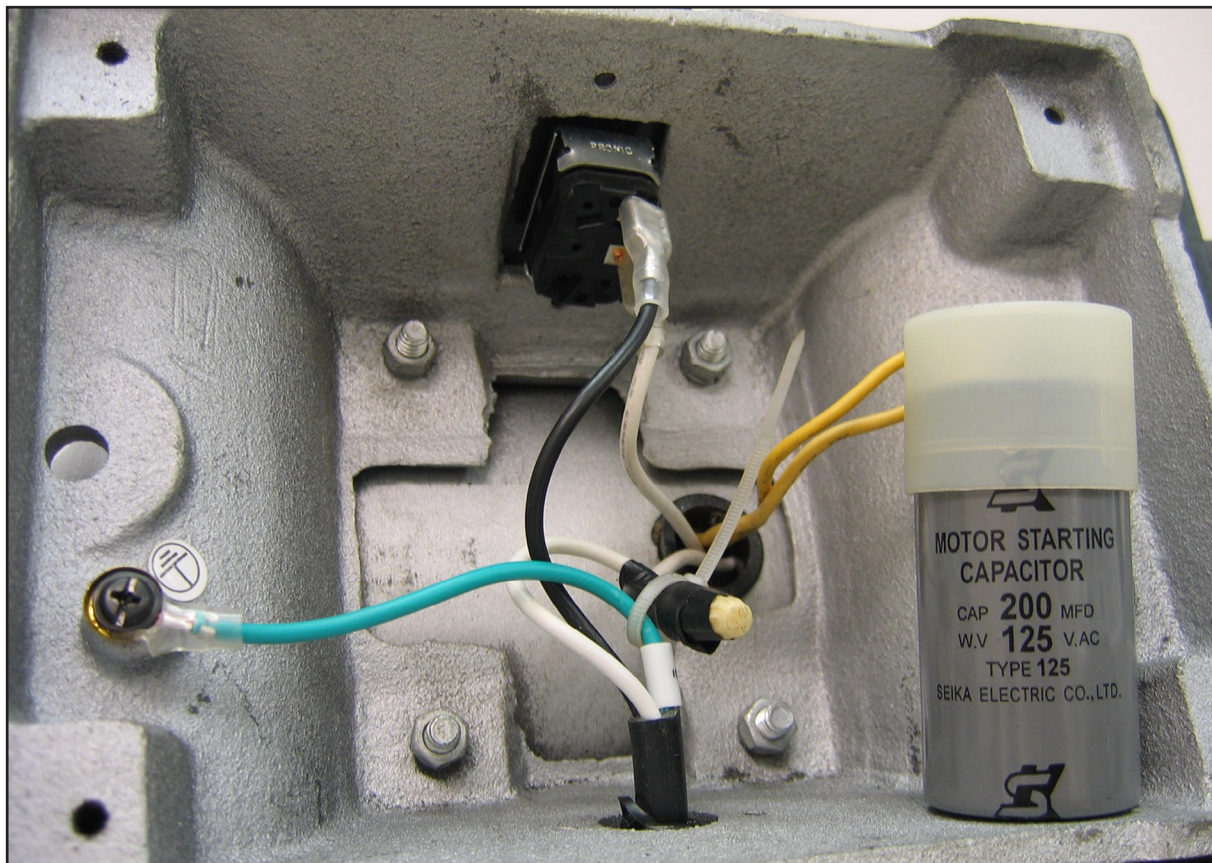


Figure 19. H8149 Wiring.



H8150 Wiring Diagram

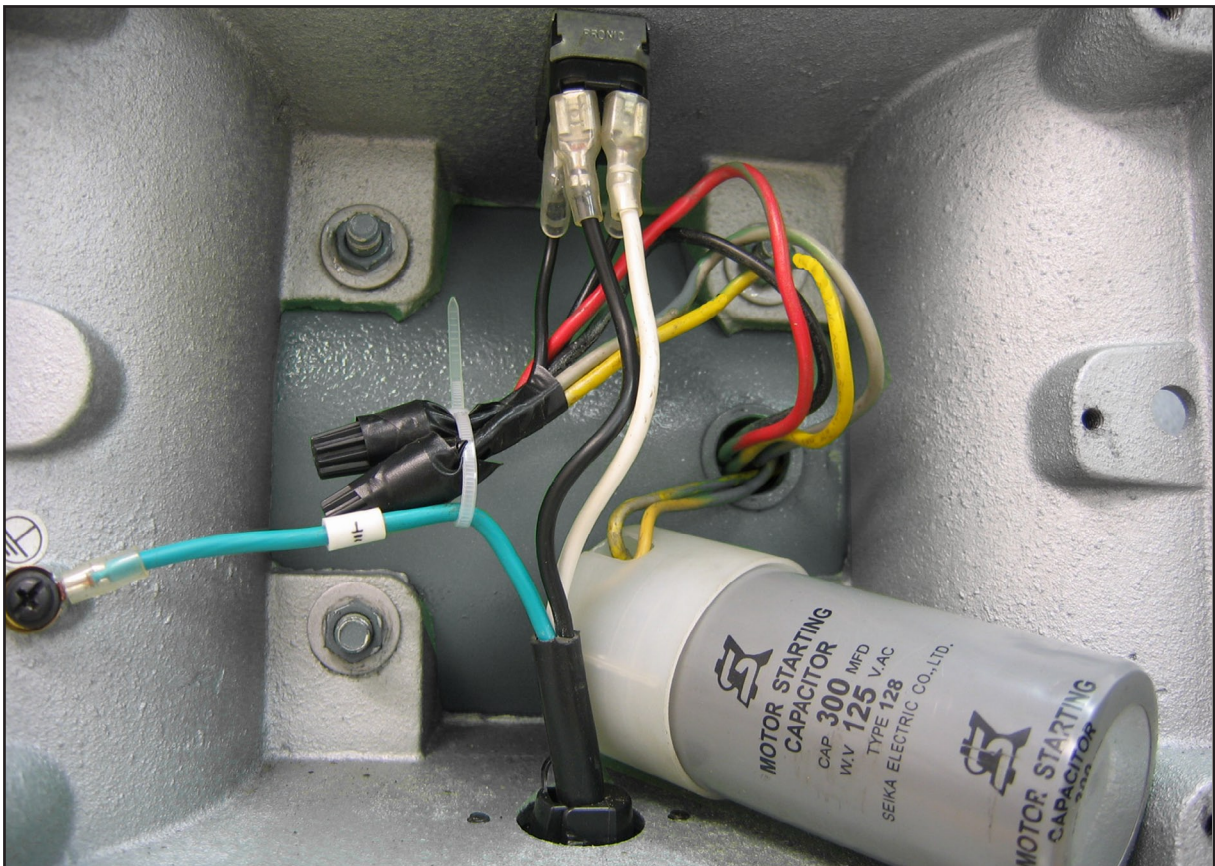
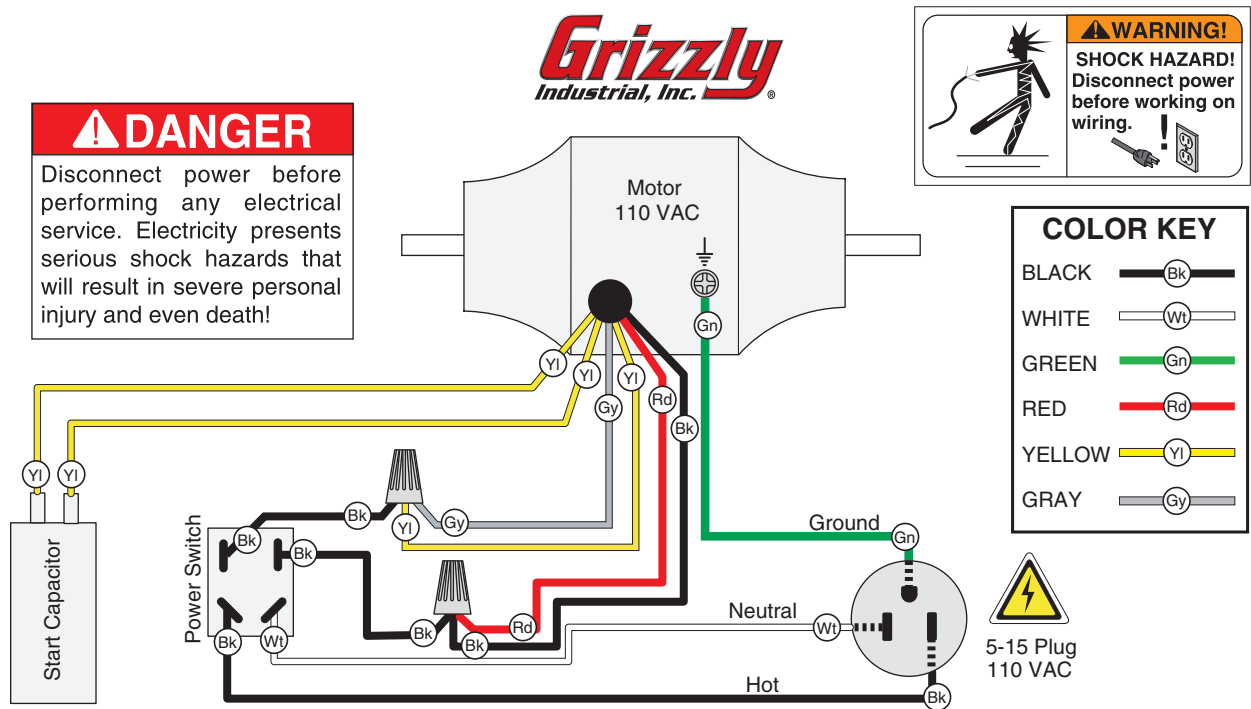
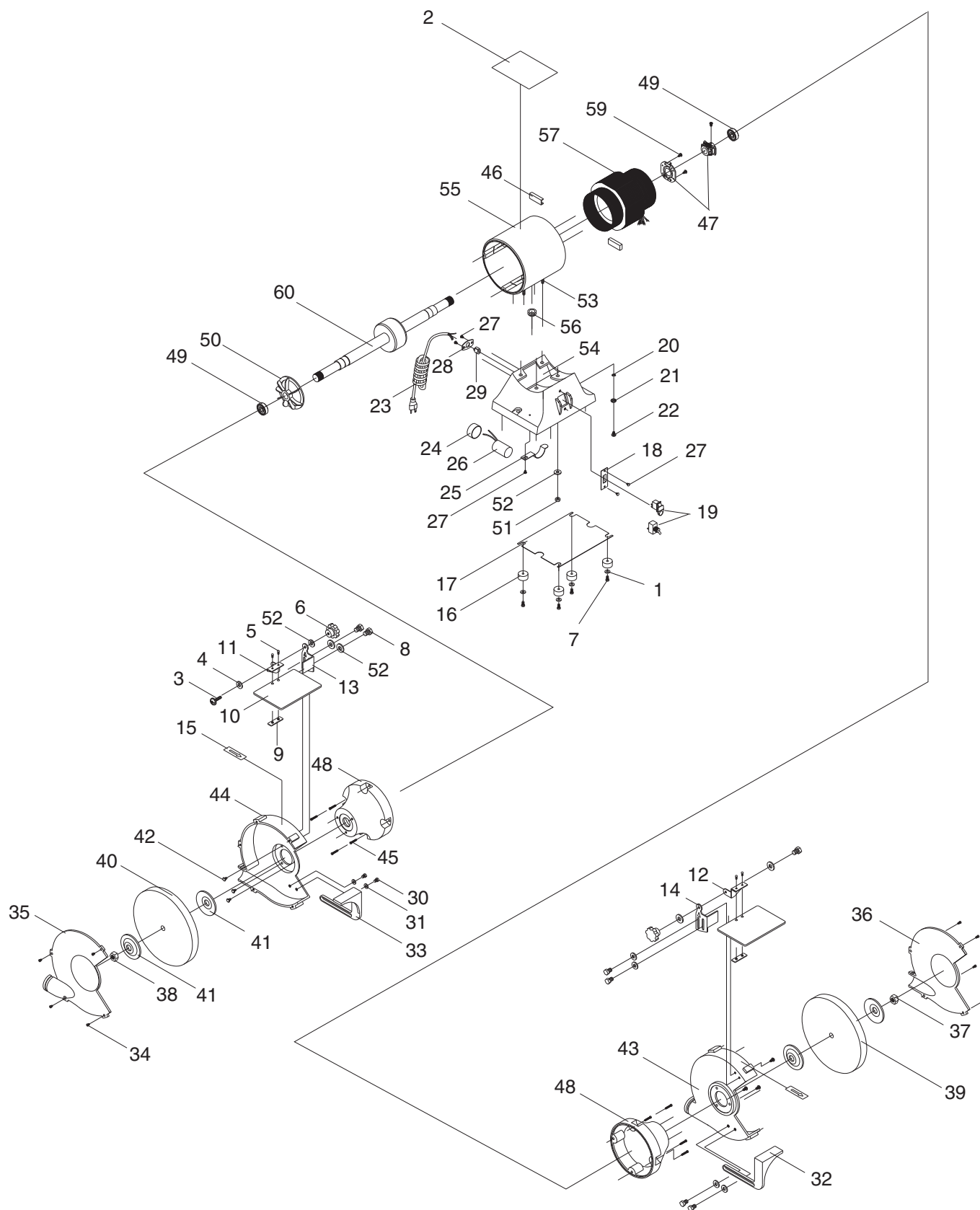


Figure 20. H8150 Wiring.



Parts Breakdown



Parts List

REF PART # DESCRIPTION

1	PH8148001	FLAT WASHER 5MM (H8148/H8149)
	PH8150001	FLAT WASHER 1/4 (H8150)
2	PH8148002	DATA/WARNING LABEL (H8148)
	PH8149002	DATA/WARNING LABEL (H8149)
	PH8150002	DATA/WARNING LABEL (H8150)
3	PFS02M	FLANGE SCREW M6-1 X 12
4	PLW17M	LOCK WASHER 7MM
5	PS06	PHLP HD SCR 10-24 X 3/8
6	PH8148006	FEMALE KNOB 1/4-20
7	PS18	PHLP HD SCR 10-24 X 1/4 (H8148/H8149)
	PS04	PHLP HD SCR 1/4-20 X 1/2 (H8150)
8	PB17M	HEX BOLT M6-1.25 X 10
9	PH8148009	NUTPLATE
10	PH8148010	EYESHIELD (H8148)
	PH8149010	EYESHIELD (H8149)
	PH8150010	EYESHIELD (H8150)
11	PH8148011	LEFT BRACKET (H8148/H8149)
	PH8150011	LEFT BRACKET (H8150)
12	PH8148012	RIGHT BRACKET (H8148/H8149)
	PH8150012	RIGHT BRACKET (H8150)
13	PH8148013	LEFT SPARK ARRESTOR (H8148/H8149)
	PH8150013	LEFT SPARK ARRESTOR (H8150)
14	PH8148014	RIGHT SPARK ARRESTOR (H8148/H8149)
	PH8150014	RIGHT SPARK ARRESTOR (H8150)
15	PH8148015	ARROW LABEL
16	PH8148016	RUBBER FOOT (H8148)
	PH8149016	RUBBER FOOT (H8149)
	PH8150016	RUBBER FOOT (H8150)
17	PH8148017	BASE PLATE (H8148)
	PH8149017	BASE PLATE (H8149)
	PH8150017	BASE PLATE (H8150)
18	PH8148018	SWITCH PLATE (H8148)
	PH8149018	SWITCH PLATE (H8149/H8150)
19	G8988	SAFETY PADDLE SWITCH (H8148/H8149)
	PH8150019	TOGGLE SWITCH RF-1001 (H8150)
20	PLW01M	LOCK WASHER 5MM
21	PH8148021	COPPER WASHER 5MM
22	PS18	PHLP HD SCR 10-24 X 1/4
23	PH8148023	POWER CORD 110V
24	PH8148024	CAPACITOR CAP (H8148/H8149)
	PH8150024	CAPACITOR CAP (H8150)
25	PH8148025	FIXTURE CLIP (H8148/H8149)
	PH8150025	FIXTURE CLIP (H8150)
26	PH8148026	CAPACITOR 100MFD 125V (H8148)
	PH8149026	CAPACITOR 200MFD 125V (H8149)
	PH8150026	CAPACITOR 300MFD 125V (H8150)
27	PS18	PHLP HD SCR 10-24 X 1/4

REF PART # DESCRIPTION

28	PH8148028	WIRE PLATE
29	PH8148029	STRAIN RELIEF
30	PB07	HEX BOLT 5/16-18 X 3/4
31	PW01M	FLAT WASHER 8MM
32	PH8148032	RIGHT TOOL REST (H8148)
	PH8149032	RIGHT TOOL REST (H8149)
	PH8150032	RIGHT TOOL REST (H8150)
33	PH8148033	LEFT TOOL REST (H8148)
	PH8149033	LEFT TOOL REST (H8149)
	PH8150033	LEFT TOOL REST (H8150)
34	PS04	PHLP HD SCR 1/4-20 X 1/2
35	PH8148035	LEFT OUTER WHEEL GUARD (H8148)
	PH8149035	LEFT OUTER WHEEL GUARD (H8149)
	PH8150035	LEFT OUTER WHEEL GUARD (H8150)
36	PH8148036	RIGHT OUTER WHEEL GUARD (H8148)
	PH8149036	RIGHT OUTER WHEEL GUARD (H8149)
	PH8150036	RIGHT OUTER WHEEL GUARD (H8150)
37	PH8148037	RIGHT 1/2" ARBOR NUT (H8148)
	PH8149037	RIGHT 5/8" ARBOR NUT (H8149)
	PH8150037	RIGHT 1" ARBOR NUT (H8150)
38	PH8148038	LEFT 1/2" ARBOR NUT (H8148)
	PH8149038	LEFT 5/8" ARBOR NUT (H8149)
	PH8150038	LEFT 1" ARBOR NUT (H8150)
39	PH8148039	1/2" BORE A60 GRINDING WHEEL (H8148)
	PH8149039	5/8" BORE A60 GRINDING WHEEL (H8149)
	PH8150039	1" BORE A60 GRINDING WHEEL (H8150)
40	PH8148040	1/2" BORE A36 GRINDING WHEEL (H8148)
	PH8149040	5/8" BORE A36 GRINDING WHEEL (H8149)
	PH8150040	1" BORE A36 GRINDING WHEEL (H8150)
41	PH8148041	1/2" WHEEL FLANGE (H8148)
	PH8149041	5/8" WHEEL FLANGE (H8149)
	PH8150041	1" WHEEL FLANGE (H8150)
42	PS04	PHLP HD SCR 1/4-20 X 1/2
43	PH8148043	RIGHT INNER WHEEL GUARD (H8148)
	PH8149043	RIGHT INNER WHEEL GUARD (H8149)
	PH8150043	RIGHT INNER WHEEL GUARD (H8150)
44	PH8148044	LEFT INNER WHEEL GUARD (H8148)
	PH8149044	LEFT INNER WHEEL GUARD (H8149)
	PH8150044	LEFT INNER WHEEL GUARD (H8150)
45	PS22	PHLP HD SCR 10-24 X 5/8
46	PH8148046	CENTRIFUGAL SWITCH PLATE (H8148)
	PH8149046	CENTRIFUGAL SWITCH PLATE (H8149)
	PH8150046	CENTRIFUGAL SWITCH PLATE (H8150)
47	PH8148047	CENTRIFUGAL SWITCH ASSY. (H8148)
	PH8149047	CENTRIFUGAL SWITCH ASSY. (H8149)
	PH8150047	CENTRIFUGAL SWITCH ASSY. (H8150)
48	PH8148048	MOTOR COVER (H8148)
	PH8149048	MOTOR COVER (H8149)
	PH8150048	MOTOR COVER (H8150)



REF	PART #	DESCRIPTION
49	P6202	BALL BEARING 6202ZZ (H8148)
	P6204	BALL BEARING 6204ZZ (H8149)
	P6206	BALL BEARING 6206ZZ (H8150)
50	PH8148050	FAN (H8148)
	PH8149050	FAN (H8149)
	PH8150050	FAN (H8150)
51	PN05	HEX NUT 1/4-20
52	PW09M	FLAT WASHER 7MM
53	PSS07	SET SCREW 1/4-20 X 1/2
54	PH8148054	BASE (H8148)
	PH8149054	BASE (H8149)
	PH8150054	BASE (H8150)

REF	PART #	DESCRIPTION
55	PH8148055	MOTOR HOUSING (H8148)
	PH8149055	MOTOR HOUSING (H8149)
	PH8150055	MOTOR HOUSING (H8150)
56	PH8148056	STRAIN RELIEF
57	PH8148057	STATOR (H8148)
	PH8149057	STATOR (H8149)
	PH8150057	STATOR (H8150)
59	PS06	PHLP HD SCR 10-24 X 3/8
60	PH8148060	ROTOR AND SHAFT (H8148)
	PH8149060	ROTOR AND SHAFT (H8149)
	PH8150060	ROTOR AND SHAFT (H8150)

WARNING

Safety labels warn about machine hazards and ways to prevent injury. The owner of this machine **MUST** maintain the original location and readability of the labels on the machine. If any label is removed or becomes unreadable, **REPLACE** that label before using the machine again. Contact Grizzly at (800) 523-4777 or www.grizzly.com to order new labels.



WARRANTY AND RETURNS

Grizzly Industrial, Inc. warrants every product it sells for a period of **1 year** to the original purchaser from the date of purchase. This warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence, accidents, repairs or alterations or lack of maintenance. This is Grizzly's sole written warranty and any and all warranties that may be implied by law, including any merchantability or fitness, for any particular purpose, are hereby limited to the duration of this written warranty. We do not warrant or represent that the merchandise complies with the provisions of any law or acts unless the manufacturer so warrants. In no event shall Grizzly's liability under this warranty exceed the purchase price paid for the product and any legal actions brought against Grizzly shall be tried in the State of Washington, County of Whatcom.

We shall in no event be liable for death, injuries to persons or property or for incidental, contingent, special, or consequential damages arising from the use of our products.

To take advantage of this warranty, contact us by mail or phone and give us all the details. We will then issue you a "Return Number," which must be clearly posted on the outside as well as the inside of the carton. We will not accept any item back without this number. Proof of purchase must accompany the merchandise.

The manufacturers reserve the right to change specifications at any time because they constantly strive to achieve better quality equipment. We make every effort to ensure that our products meet high quality and durability standards and we hope you never need to use this warranty.

Please feel free to write or call us if you have any questions about the machine or the manual.

Thank you again for your business and continued support. We hope to serve you again soon.





WARRANTY CARD

Name _____

Street _____

City _____ State _____ Zip _____

Phone # _____ Email _____ Invoice # _____

Model # _____ Order # _____ Serial # _____

The following information is given on a voluntary basis. It will be used for marketing purposes to help us develop better products and services. **Of course, all information is strictly confidential.**

1. How did you learn about us?

_____ Advertisement

_____ Friend

_____ Catalog

_____ Card Deck

_____ Website

_____ Other:

2. Which of the following magazines do you subscribe to?

_____ Cabinet Maker

_____ Popular Mechanics

_____ Today's Homeowner

_____ Family Handyman

_____ Popular Science

_____ Wood

_____ Hand Loader

_____ Popular Woodworking

_____ Wooden Boat

_____ Handy

_____ Practical Homeowner

_____ Woodshop News

_____ Home Shop Machinist

_____ Precision Shooter

_____ Woodsmith

_____ Journal of Light Cont.

_____ Projects in Metal

_____ Woodwork

_____ Live Steam

_____ RC Modeler

_____ Woodworker West

_____ Model Airplane News

_____ Rifle

_____ Woodworker's Journal

_____ Modeltec

_____ Shop Notes

_____ Other:

_____ Old House Journal

_____ Shotgun News

3. What is your annual household income?

_____ \$20,000-\$29,000

_____ \$30,000-\$39,000

_____ \$40,000-\$49,000

_____ \$50,000-\$59,000

_____ \$60,000-\$69,000

_____ \$70,000+

4. What is your age group?

_____ 20-29

_____ 30-39

_____ 40-49

_____ 50-59

_____ 60-69

_____ 70+

5. How long have you been a woodworker/metalworker?

_____ 0-2 Years

_____ 2-8 Years

_____ 8-20 Years

_____ 20+ Years

6. How many of your machines or tools are Grizzly?

_____ 0-2

_____ 3-5

_____ 6-9

_____ 10+

7. Do you think your machine represents a good value?

_____ Yes

_____ No

8. Would you recommend Grizzly Industrial to a friend?

_____ Yes

_____ No

9. Would you allow us to use your name as a reference for Grizzly customers in your area?

Note: We never use names more than 3 times.

_____ Yes

_____ No

10. Comments: _____

FOLD ALONG DOTTED LINE



Place
Stamp
Here



GRIZZLY INDUSTRIAL, INC.
P.O. BOX 2069
BELLINGHAM, WA 98227-2069



FOLD ALONG DOTTED LINE

Send a Grizzly Catalog to a friend:

Name_____

Street_____

City_____State_____Zip_____

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

grizzly.com

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