

## MODEL H8192 1" BELT/8" DISC COMBINATION SANDER

**OWNER'S MANUAL** 



COPYRIGHT © AUGUST, 2007 BY GRIZZLY INDUSTRIAL, INC.
WARNING: NO PORTION OF THIS MANUAL MAY BE REPRODUCED IN ANY SHAPE
OR FORM WITHOUT THE WRITTEN APPROVAL OF GRIZZLY INDUSTRIAL, INC.
#TS9703 PRINTED IN CHINA



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.



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.

## **Table of Contents**

INTRODUCTION	
Foreword	2
Contact Info	2
Machine Data Sheet	
Identification	4
SECTION 1: SAFETY	5
Safety Instructions for Machinery	
Additional Safety Instructions for Belt and Disc Sanders	
·	
SECTION 2: CIRCUIT REQUIREMENTS	8
110V Operation	8
SECTION 3: SETUP	0
Setup SafetyItems Needed for Setup	
Unpacking	
Inventory	
Clean Up	
Site Considerations	
Assembly	
Test Run	
Mounting Sander	
Dust Collection	
SECTION 4: OPERATIONS	
Operation Safety	
Disc Sanding	
Belt Sanding	20
SECTION 5: ACCESSORIES	21
SECTION 6: MAINTENANCE	
Schedule	
Cleaning	
Lubrication	
Sanding Belt Tracking	
Changing the Sanding Belt	
Changing the Sanding Disc	23
SECTION 7: SERVICE	24
Troubleshooting	
Squaring the Sanding Disc Table	
Tensioning/Replacing V-Belt	
Electrical Components & Wiring Diagram	
Sanding Belt & Motor Breakdown	
Sanding Disc Breakdown	
Label Placement	
WARRANTY AND RETURNS	33

## INTRODUCTION

#### **Foreword**

We are proud to offer the Model H8192 1" Belt/8" Disc Combination Sander. This machine is part of a growing Grizzly family of fine woodworking 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 H8192 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 H8192** 1" BELT/8" COMBINATION DISC SANDER

Design Type	Bench Model
Overall Dimensions:	
	21"L x 13"W x 15"H
	11" x 18½"
	1" x 42"
Dust Ports	
Motor:	
Type	TEFC Capacitor-Start Induction
Horsepower	
Voltage / Phase	110V / Single-Phase
	4A
	60 Hz / 1725 RPM
	Toggle-Type with Safety Disabling Key
	NEMA 5-15
Bearings	
Operational Information:	
Sanding Belt Speed	3000 FPM
	1725 RPM

#### Features:

**Dual Cast Iron Tables with Miter Slots** Tables Tilt to 45° Two 2" Dust Ports Single Knob Belt Tracking



#### Identification

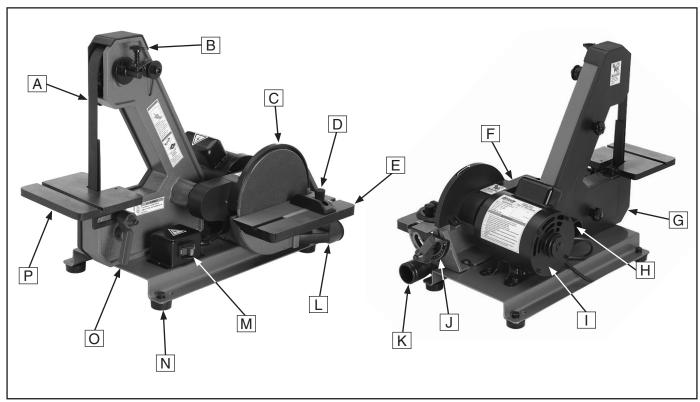


Figure 1. Model H8192 identification.

- A. Sanding Belt 1" x 42"
- B. Sanding Belt Tracking Knob
- C. Sanding Disc 8"
- D. Miter Gauge
- E. Disc Table
- F. V-Belt Safety Cover
- G. Sanding Belt Safety Cover
- H. Sanding Belt Dust Port

- I. Motor
- J. Disc Table Angle Scale
- K. Disc Table Lock Handle
- L. Disc Dust Port
- M. ON/OFF Switch with Disabling Key
- N. Rubber Machine Feet
- O. Sanding Belt Table Lock Handle
- P. Sanding Belt Table

#### **SECTION 1: SAFETY**

#### **AWARNING**

## 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.

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

**A**CAUTION

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.

# **A**WARNING Safety Instructions for Machinery

- ONLY ALLOW TRAINED AND PROP-ERLY SUPERVISED PERSONNEL TO OPERATE MACHINERY. Make sure operation instructions are safe and clearly understood.
- 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.

### **AWARNING**

## Additional Safety Instructions for Belt and Disc Sanders

- RESPIRATOR AND SAFETY GLASSES.
   Always wear a respirator and safety glasses while operating the sander. Dust and chips are created when sanding. Some debris will be ejected, becoming hazards to the eyes and lungs.
- 2. AVOIDING ENTANGLEMENT. DO NOT wear loose clothing articles, gloves, or jewelry while operating this machine. Button long sleeves and tie back long hair.
- 3. HAND PROTECTION. DO NOT place hands near, or in contact with, sanding belt/disc during operation. DO NOT allow fingers to get pinched between the workpiece and sanding table. This may pull the operator's hand into the machine and cause serious injury.
- 4. INSPECTING WORKPIECES. Always inspect workpiece for nails, staples, knots, and other objects that could be dislodged and thrown from the machine during sanding operations.
- 5. REPLACING SANDPAPER. Replace sanding paper when it becomes worn or torn. DO NOT operate the sander with damaged or badly worn sandpaper.

- **6. UNATTENDED OPERATION.** Never leave the machine running attended.
- 7. **DUST COLLECTION SYSTEM.** Always operate the sander with an adequate dust collection system in place and running.
- 8. FEEDING STOCK. Firmly grasp the workpiece in both hands and ease it into the sandpaper with light pressure. DO NOT jam the workpiece into the machine during operations. Feed the workpiece against the direction of sandpaper travel. DO NOT sand tapered or pointed stock with the point facing the direction of sandpaper travel. Never sand more than one piece of stock at a time.
- 9. MAINTENANCE AND ADJUSTMENTS.
  Perform machine inspections and maintenance service promptly when called for. Disconnect power before performing maintenance or adjustments on the sander, with the exception of sanding belt tracking.
- 10. EXPERIENCING DIFFICULTIES. If at any time you are experiencing difficulties performing the intended operation, stop using the machine! Contact our Technical Support Department at (570) 546-9663.

#### **AWARNING**

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

## **A**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

## **AWARNING**

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 H8192 motor draws the following amps under maximum load:

Motor Draw ......4 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.

#### Plug/Receptacle Type

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

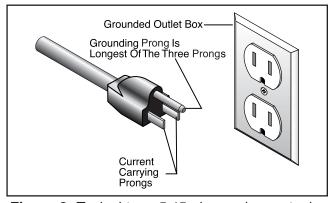
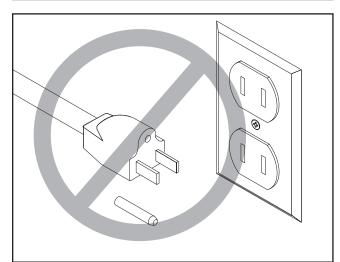


Figure 2. Typical type 5-15 plug and receptacle.



#### **AWARNING**

Electrocution or fire could result if this machine is not grounded correctly or if your electrical configuration does not comply with local and state codes. Ensure compliance by checking with a qualified electrician!



## **A**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.

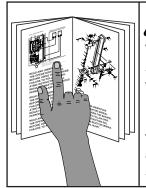
#### **Extension Cords**

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

- Use at least a 16 gauge cord that does not exceed 50 feet in length!
- The extension cord must also contain a ground wire and ground prong.
- A qualified electrician MUST size cords over 50 feet long to prevent motor damage.

## **SECTION 3: SETUP**

#### **Setup Safety**



#### AWARNING

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 setup process!

## Items Needed for Setup

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

Des	scription	Qty
•	Safety Glasses (for each person)	1
•	Phillips Head Screwdriver	1
•	Wrench 14mm	1
•	Wrenches 13mm	2
•	Dust Collection System	1
•	2" Dust Hoses (length as needed)	2
•	2" Hose Clamps	2

#### Unpacking

Your machine was carefully packaged for safe transportation. Remove the packaging materials from around your machine and inspect it. If you discover the machine is damaged, 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**

The following is a description of the main components shipped with your machine. Lay the components out to inventory them.

**Note:** If you can't find an item on this list, check the mounting location on the machine or examine the packaging materials carefully. Occasionally we pre-install certain components for shipping purposes.

Inv	entory: (Figures 3–4)	Qty
A.	Motor and Base	1
B.	Belt Housing Assembly	1
C.	Belt Table	
D.	Sandpaper Disc 8"	1
E.	Aluminum Sanding Disc	1
F.	Disc Table	
G.	V-Belt Safety Cover	1
H.	V-Belt Rear Cover	1
I.	Disc Dust Port 2"	1
J.	Table Lock Handles	2
K.	Miter Gauge	1
L.	Hex Wrench 2.5mm	1
M.	Hex Wrench 8mm	1
N.	Disc Dust Cover	1
Haı	rdware (not shown):	Qty
•	Disc Table Scale Pointer	1
•	Cap Screws M10-1.5 x 20	2
•	Phillips Head Screw M6-1 x 15	1
•	Phillips Head Screw M47 x 40	1
•	Phillips Head Screws M47 x 10	
•	Set Screw M58 x 5	1
•	Flat Washers 10mm	
•	Flat Washers 4mm	5
•	Lock Washers 10mm	2
•	Wing Nut M47	1

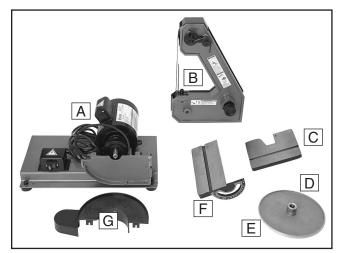


Figure 3. Model H8192 inventory items A-G.

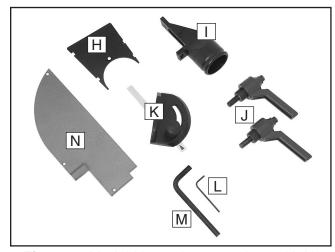
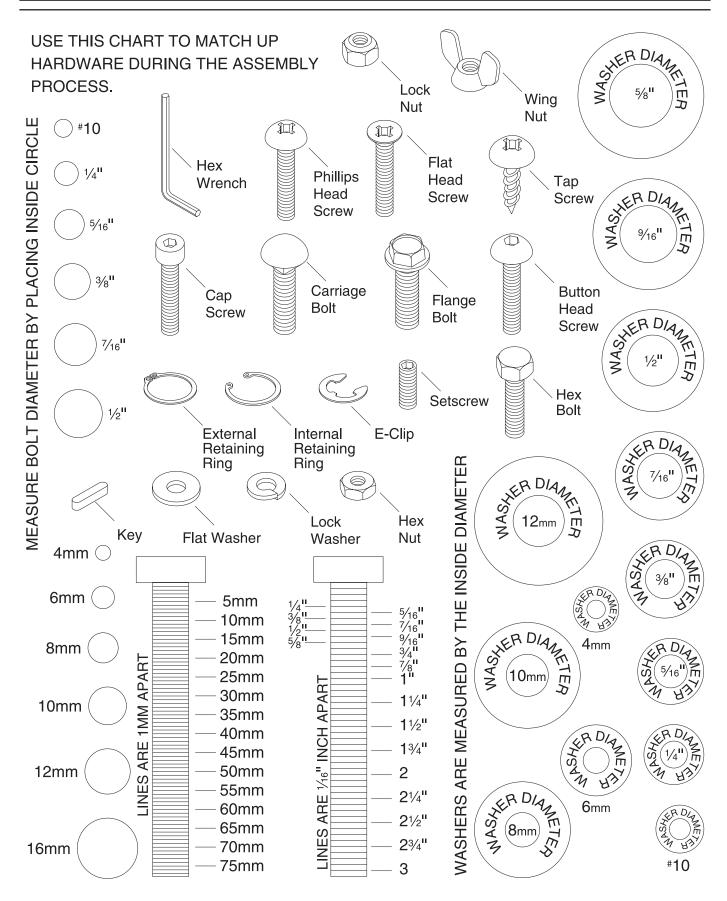


Figure 4. Model H8192 inventory items H-N.

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.

## **Hardware Recognition Chart**



-11-

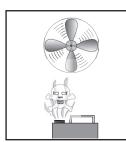
#### Clean Up

The unpainted surfaces are coated with a waxy oil to prevent corrosion during shipment. Remove this protective coating with a solvent cleaner or citrus-based degreaser such as Grizzly's G7895 Citrus Degreaser. To clean thoroughly, some parts must be removed. For optimum performance from your machine, clean all moving parts or sliding contact surfaces. Avoid chlorine-based solvents, such as acetone or brake parts cleaner that may damage painted surfaces. Always follow the manufacturer's instructions when using any type of cleaning product.



#### WARNING

Gasoline and petroleum products have low flash points and can explode or cause fire if used to clean machinery. DO NOT use these products to clean the machinery.



#### **A**CAUTION

Many cleaning solvents are toxic if inhaled. Minimize your risk by only using these products in a well ventilated area.

#### G7895—Grizzly Citrus Degreaser

This natural, citrus-based degreaser is a great solution for removing export grease, and it's much safer to work around than nasty solvents.



Figure 1. Grizzly citrus degreaser.

#### **Site Considerations**

#### **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 combo sander.

We recommend placing the machine at the corner of a benchtop so that both the sanding belt and disc can be accessed without having to move the sander.

See **Figure 5** for the minimum working clearances.

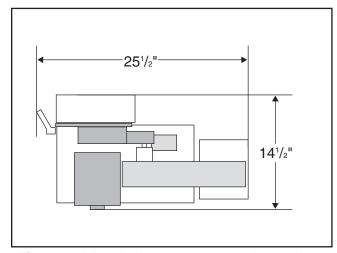
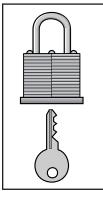


Figure 5. Model H8192 placement dimensions.



### **ACAUTION**

Children and visitors may be seriously injured if unsupervised around this machine. Lock entrances to the shop or disable start switch or power connection to prevent unsupervised use.

#### **Assembly**

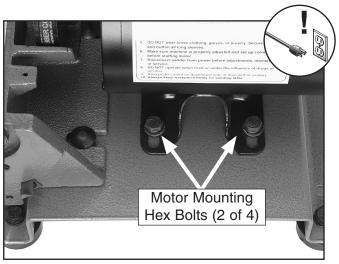


#### **▲**WARNING

To avoid risk of serious injury, DO NOT connect the sander to power until told to do so in the *Test Run* subsection.

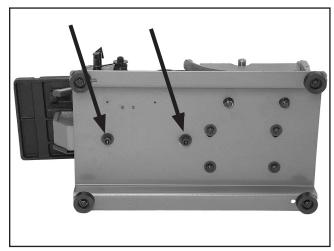
#### To assemble your combo sander:

 Using 13mm wrenches, loosen the four motor mount hex bolts (Figure 6) so you can adjust the motor position in the next steps.



**Figure 6.** Motor mounting hex bolts (2 of 4, viewed from top).

- With assistance, position the belt housing assembly on the left side of the base, taking care not to pinch the power cords between the assembly and the base.
- 3. Place the V-belt around both pulleys, and secure the belt housing assembly with the two M10-1.5 x 20 cap screws, lock washers, and flat washers (see **Figures 7 & 8**)—do not fully tighten the fasteners for now.



**Figure 7.** Cap screws securing the belt housing assembly (viewed from underneath the base).

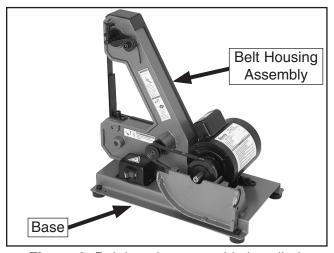


Figure 8. Belt housing assembly installed.

**4.** Center the motor arbor in the cutout of the cast iron disc guard (see **Figure 9**), then re-tighten the motor mount hex bolts.

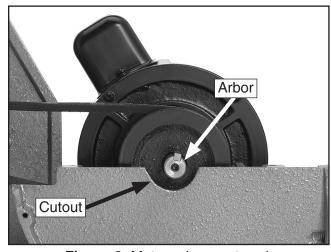


Figure 9. Motor arbor centered.

5. Position the belt housing assembly so there is about 1/4" V-belt deflection when moderate pressure is applied to the V-belt between the pulleys (see Figure 10)—then fully tighten the cap screws to secure the belt housing assembly in place.

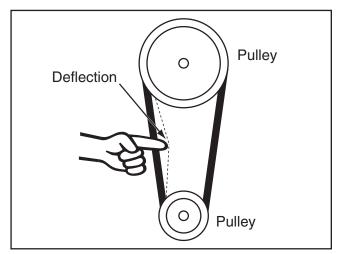


Figure 10. Measuring V-belt deflection.

6. Insert one M4-.7 x 10 Phillips head screw and flat washer into the left inside mounting bracket of the V-belt safety cover (see Figure 11). Then hold it in place with a screwdriver as you slide the cover over the V-belt and tighten the fastener into the cast iron disc guard.

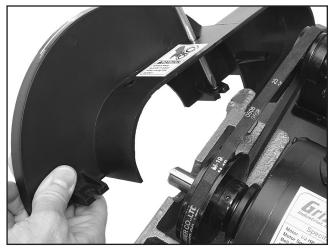
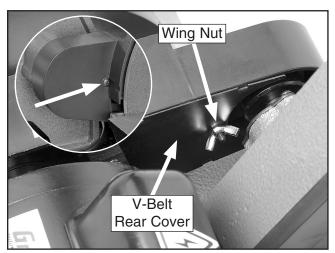


Figure 11. Holding V-belt cover mounting fastener in place.

- Secure the right side of the V-belt cover with one M4-.7 x 10 Phillips head screw and flat washer.
- **8.** Position the V-belt rear cover, as shown in **Figure 12**, and secure it in place with the M4-.7 x 40 Phillips head screw and wingnut.



**Figure 12.** V-belt rear cover installed (inset shows front location of screw).

- **9.** Peel the backing from the 8" sandpaper disc and apply it to the aluminum disc.
- **10.** Thread the M5-.8 x 5 set screw into the aluminum disc shaft.
- Slide the aluminum disc onto the motor arbor, making sure to align the arbor key with the disc keyway.
- **12.** Rotate the disc until you can see the set screw through the hole on the back of the V-belt safety cover (see **Figure 13**).



Figure 13. Securing the sanding disc set screw.

- **13.** Using the 2.5mm hex wrench, tighten the set screw to secure the disc to the motor arbor.
- **14.** Install the disc dust cover, as shown in **Figure 14**, with three M4-.7 x 10 Phillips head screws and flat washers.

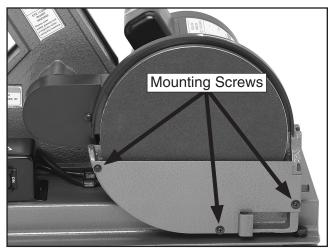
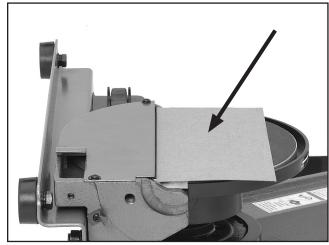


Figure 14. Disc dust cover installed.

15. Lay the sander down on a flat surface, as shown in **Figure 15**, and place a thin piece of cardboard approximately ½6" thick over the sanding disc. This piece of carboard will act as a spacer when you install the disc table.



**Figure 15.** Using thin cardboard (approximately ½16" thick) for table and sanding disc clearance quage.

16. Keeping the cardboard in place, align the half-arc key of the disc table with the indented keyway on the disc guard (see the inset of Figure 16). Then secure the table with a table lock handle, and remove the cardboard.

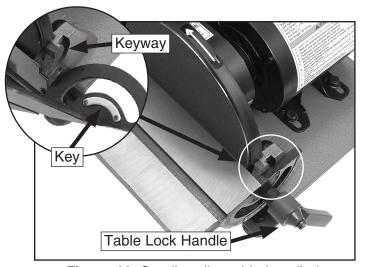


Figure 16. Sanding disc table installed.

17. Secure the dust port, as shown in Figure 17, with the M6-1 x 15 Phillips head screw and flatwasher.

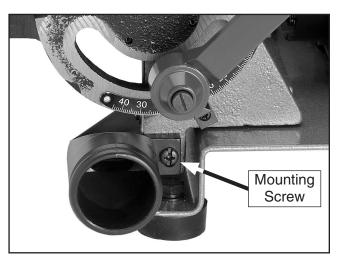
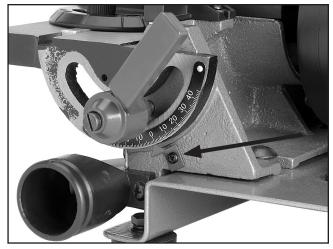


Figure 17. Disc dust port installed.

**Note:** Make sure the dust port covers the entire opening in the dust cover.

- **18.** Square the disc table to the sanding disc (refer to **Squaring Disc Table** on **Page 25**).
- **19.** Using the M4-.7 x 10 Phillips head screw, align the red scale pointer with the "0" mark on the table angle scale (see **Figure 18**).



**Figure 18.** Sanding disc table angle scale pointer installed.

20. Install the belt table with a ½6" clearance from the sanding belt, and secure it in place with the table lock handle (see **Figure 19**).

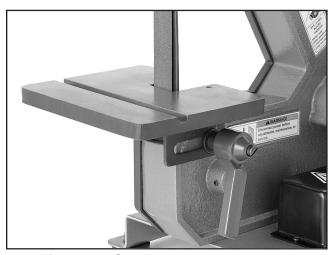


Figure 19. Sanding belt table installed.

21. Loosen the cap screw shown in **Figure 20**, adjust the belt support approximately  $\frac{1}{16}$ " away from the sanding belt, then re-tighten the cap screw.

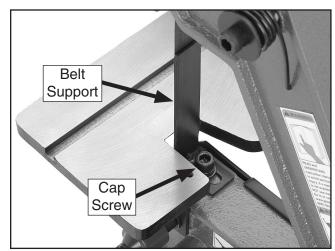


Figure 20. Sanding belt support.

#### **Test Run**

Once the assembly is complete, test run your sander to make sure it runs properly and is ready for regular operation.

The test run consists of verifying the following:

1) The motor powers up and runs correctly, and
2) the switch disabling mechanism on the switch works correctly.

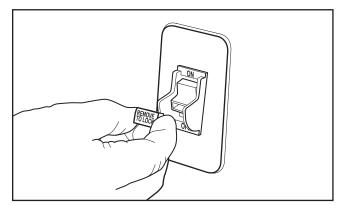
If, during the test run, you cannot easily locate the source of an unusual noise or vibration, stop using the machine immediately, then review **Troubleshooting** on **Page 24**.

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

#### To test run the sander:

- 1. Make sure you have read the safety instructions at the beginning of the manual and that the machine is setup properly.
- **2.** Make sure all tools and objects used during setup are cleared away from the machine.
- **3.** Connect the machine to the power source.
- **4.** Verify that the machine is operating correctly by turning the machine *ON*.
  - —When operating correctly, the machine runs smoothly with little or no vibration or rubbing noises.
  - —Investigate and correct strange or unusual noises or vibrations before operating the machine further. Always disconnect the machine from power when investigating or correcting potential problems.

- 5. Turn the machine **OFF**.
- **6.** Remove the switch disabling key, as shown in **Figure 21**.



**Figure 21.** Removing disabling key from the toggle switch.

- **7.** Flip the toggle switch to the *ON* position.
  - —If the machine does not start, the switch disabling feature is working as designed.
  - —If the machine starts, immediately stop the machine. The switch disabling feature is not working correctly. This safety feature must work properly before proceeding with regular operations. Call Tech Support for help.
- 8. When the **Test Run** has been successfully completed, check the tracking of the sanding belt and make adjustments if necessary (refer to **Sanding Belt Tracking** on **Page 22**).

#### **Mounting Sander**

Once you have confirmed that your machine is running properly, mount it to a workbench.

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

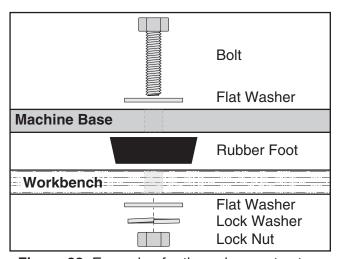


Figure 22. Example of a through mount setup.

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

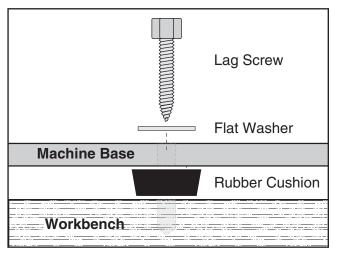


Figure 23. Example of a direct mount setup.

**Note:** To reduce vibration when operating, keep the rubber cushion included with your sander between the machine base and the workbench.

#### **Dust Collection**

#### **A**CAUTION

DO NOT operate the Model H8192 without an adequate dust collection system. This sander creates substantial amounts of wood dust while operating. Failure to use a dust collection system can result in short and long-term respiratory illness.

#### Recommended CFM at EACH Dust Port: 100 CFM

Do not confuse this CFM recommendation with the rating of the dust collector. To determine the CFM at the dust port, you must consider these variables: (1) CFM rating of the dust collector, (2) hose type and length between the dust collector and the machine, (3) number of branches or wyes, and (4) amount of other open lines throughout the system. Explaining how to calculate these variables is beyond the scope of this manual. Consult an expert or purchase a good dust collection "how-to" book.

#### To connect a dust collection hose:

- 1. Fit a 2" dust hose from the dust collection system over each dust port, and secure them in place with a 2" hose clamp.
- 2. Tug the hoses to make sure they do not come off.

**Note:** A tight fit is necessary for proper performance.

## **SECTION 4: OPERATIONS**

### **Operation Safety**

#### WARNING

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







#### AWARNING

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

#### **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.

#### **Disc Sanding**

#### **ACAUTION**

Always keep the workpiece on the left side of the wheel that rotates down toward the table. This will keep the workpiece from flying out of your hands due to kickback.

#### To use the sanding disc:

- DISCONNECT THE SANDER FROM POWER!
- **2.** Adjust the angles of the disc sanding table and the miter gauge for your operation.
- **3.** Connect the sander to power, turn it *ON*, and allow it to reach full speed.
- **4.** Place the workpiece on the table and firmly against the miter gauge.

Continued on next page ———

 Slowly, and with light pressure, move the workpiece into the left side of the sanding disc. See Figures 24–26 for examples of disc sanding.

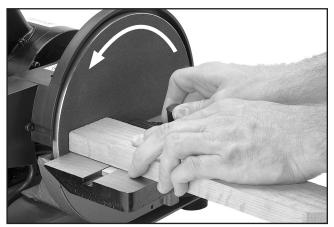


Figure 24. Example of 90° disc sanding.



Figure 25. Example of miter sanding.

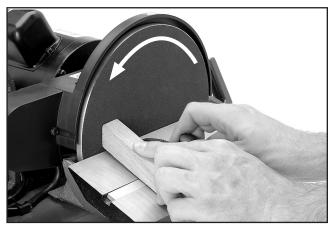


Figure 26. Example of angle sanding.

**Note:** To prevent burning the workpiece and overloading the sanding disc, move the workpiece slowly back and forth from the left side of the sanding disc to the center.

#### **Belt Sanding**

Use the sanding belt for the long, flat surfaces of the workpiece.

### **A**CAUTION

To avoid the risk of kickback and personal injury, always keep the workpiece firmly on the table, and never sand the short side of the workpiece with the sanding belt.

#### To use the sanding belt:

- DISCONNECT THE SANDER FROM POWER!
- 2. Using a protractor or other angle measuring tool, set the correct angle of the sanding belt table for your operation.
- **3.** Connect the sander to power, turn it *ON*, and allow it to reach full speed.
- **4.** Place the workpiece on the sanding belt table, then slowly, and with light pressure, move the workpiece into the sanding belt.

**Note:** Hold the workpiece firmly on the table, but keep your fingers away from the sanding surface, as shown in **Figure 27**.

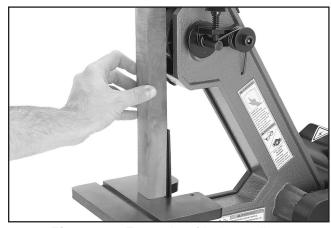


Figure 27. Example of belt sanding.

## **SECTION 5: ACCESSORIES**

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!

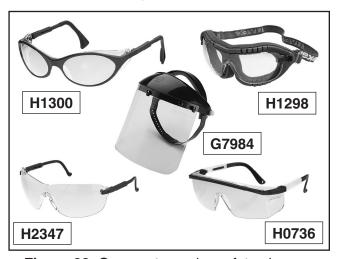


Figure 28. Our most popular safety glasses.

#### PRO-STICK® Abrasive Surface Cleaners

Extend the life of your sanding discs and belts! Choose the Pro-Stick® with a handle for greater control or without a handle for more usable area.

<u>Size</u>	<u>Model</u>
1½" X 1½" X 8½"	.G1511
2" X 2" X 12"	.G1512
1½" X 1½" X 9" with Handle	.G2519
2" X 2" X 11" with Handle	.G2520



Figure 29. PRO-STICK® abrasive cleaners.

H2499—Small Half-Mask Respirator

H3631—Medium Half-Mask Respirator

H3632—Large Half-Mask Respirator

#### H3635—Disposable Cartridge Filter Pair P100

Wood dust is now considered a known carcinogen and has been linked to nasal cancer and severe respiratory illnesses. If you work around dust everyday, a half-mask respirator can be a lifesaver. Also compatible with safety glasses!



**Figure 30.** Half-mask respirator and disposable cartridge filters.

#### 1" x 30" Aluminum Oxide Sanding Belts

Our silicon carbide sanding belts are available in grits from 80–220, and packs of 2 or 10.

<u>Grit</u>	<u>Model</u>
60 Grit, 10 pack	H3501
100 Grit, 10 pack	H3503
180 Grit, 10 pack	H3506

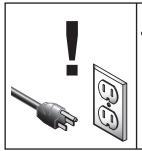
#### 8" PSA Aluminum Oxide Sanding Discs

Our aluminum oxide sanding discs are manufactured in ISO 9002 factories to ensure the highest quality, and are available in packs of three.

<u>Grit</u>	
60 Grit	G1211
80 Grit	G4240
100 Grit	G1212
120 Grit	G4241
150 Grit	G1213
220 Grit	G4243

Gall 1-300-523-4777 To Order

### **SECTION 6: MAINTENANCE**



#### **AWARNING**

Always disconnect power to the machine before performing maintenance. Failure to do this may result in serious personal injury.

#### **Schedule**

For optimum performance from your machine, follow this maintenance schedule and refer to any specific instructions given in this section.

#### Before Each Use, Check and Correct:

- Loose mounting bolts.
- Damaged or worn sanding belt or disc.
- Worn or damaged wires.
- Any other unsafe condition.

#### After Each Use:

Clean/vacuum dust buildup on tables and motor.

#### After 50 Hours of Use:

Check and correct V-belt tension, damage, or wear.

### **Cleaning**

Cleaning the Model H8192 is relatively easy. Vacuum excess sawdust, and wipe off the remaining dust with a dry cloth. Wiping the table clean after every use ensures moisture from wood dust does not remain on bare metal surfaces.

If any resin has built up, use a resin dissolving cleaner to remove it. After cleaning, treat all unpainted cast iron and steel with a non-staining lubricant with products like G96® Gun Treatment, SLIPIT®, or Boeshield® T-9.

#### Lubrication

Since all bearings are sealed and permanently lubricated, simply leave them alone until they need to be replaced. Do not lubricate them.

## Sanding Belt Tracking

The sanding belt must track in the center of the top pulley to avoid damaging itself during use.

#### To adjust the sanding belt tracking:

- 1. Turn the sander ON.
- 2. Observe the sanding belt as it moves over the top pulley (see Figure 31).

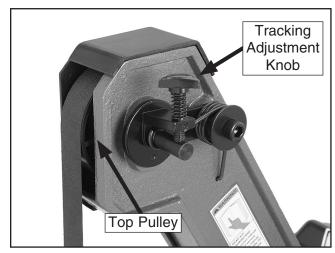


Figure 31. Sanding belt tracking adjustment.

**3.** Slowly adjust the tracking adjustment knob until the sanding belt tracks in the center of the top pulley.

## Changing the Sanding Belt

Some sanding belts are designed to sand in only one direction and will have a direction indicated on the back of the belt. The Model H8192 is designed so that the sanding belt travels downward to the sanding table.

#### To change the sanding belt:

- 1. DISCONNECT THE SANDER FROM POWER!
- Unscrew the two knobs from the sanding belt cover and remove the cover from the sander (see Figure 32).

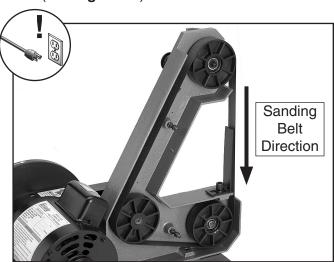


Figure 32. Sanding belt cover removed.

- Press down firmly on the tracking adjustment knob to remove the tension from the sanding belt.
- **4.** Roll the old sanding belt off the three pulleys, and roll the new belt back on.
- **5.** Make sure the sanding belt is positioned in the center of all three pulleys.
- **6.** Replace and secure the sanding belt cover.
- 7. Check and the adjust the sanding belt traction, as instructed on Page 22.

## **Changing the Sandpaper Disc**

The Model H8192 accepts 8" diameter cloth or paper-backed pressure sensitive adhesive (PSA) sandpaper discs (refer to **Accessories** on **Page 21**).

Refer to the **Assembly** subsection, beginning on **Page 13**, for detailed instructions for some of the following steps.

#### To change the sanding disc:

- DISCONNECT THE SANDER FROM POWER!
- **2.** Remove the sanding disc table, disc dust port, and dust cover.
- Rotate the disc until you can see the set screw through the access hole (see Figure 33).
- **4.** Using the 2.5mm hex wrench through the access hole in the V-belt safety cover, loosen the set screw and remove the sanding disc.



**Figure 33.** Location of access hole for the sanding disc set screw.

- **5.** Peel off the old sandpaper disc, clean the aluminum disc thoroughly, and apply the new sandpaper disc.
- Reverse Steps 2–4 above to reassemble your sander.

## **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.

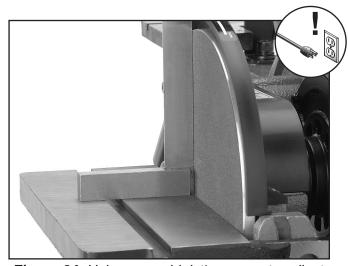
## **Troubleshooting**

Symptom	Possible Cause	Possible Solution
Motor will not start; fuses/circuit breakers trip.	<ol> <li>Low voltage.</li> <li>Loose connection or short in line cord, plug, or motor.</li> <li>Incorrect fuses or circuit breakers in power line.</li> </ol>	<ol> <li>Check power line voltage and correct if necessary.</li> <li>Inspect/repair cord, plug, and motor for damaged insulation, shorted wires, or loose connections.</li> <li>Install correct fuses or circuit breakers.</li> </ol>
Motor stalls.	<ol> <li>Motor overloaded.</li> <li>Low voltage.</li> <li>Incorrect fuses or circuit breakers in power line.</li> </ol>	<ol> <li>Reduce load on motor.</li> <li>Check power line voltage and correct if necessary.</li> <li>Install correct fuses or circuit breakers.</li> </ol>
Machine slows when operating.	Workpiece pressure is too great.	Reduce workpiece pressure on sanding surface.
Machine vibrates excessively.	<ol> <li>Machine not mounted securely.</li> <li>Incorrect sanding belt tracking.</li> <li>Weak or broken sanding belt tension spring.</li> </ol>	<ol> <li>Properly secure machine to benchtop/stand (Page 18).</li> <li>Adjust sanding belt tracking (Page 22).</li> <li>Replace spring.</li> </ol>
	<ul><li>4. Broken/damaged sanding belt.</li><li>5. Sanding disc rubbing, not properly centered, set screw not tight.</li></ul>	<ul><li>4. Replace sanding belt.</li><li>5. Properly install/secure sanding disc.</li></ul>
Sanded surface not square.	Table/miter guage not square to sanding belt/disc.	Square table/miter guage relative to sanding belt/ disc (Page 25).
Deep sanding grooves or scars in workpiece.	<ol> <li>Sandpaper damaged or clogged.</li> <li>Sandpaper too coarse for desired finish.</li> <li>Workpiece sanded across grain.</li> <li>Too much sanding force on workpiece.</li> <li>Workpiece held still against the belt/disc.</li> </ol>	<ol> <li>Clean/replace sanding surface.</li> <li>Use a finer grit sanding surface.</li> <li>Sand with the grain.</li> <li>Reduce pressure on workpiece while sanding.</li> <li>Keep workpiece moving across sanding surface.</li> </ol>
Sanding grains easily rub off sanding surface.	<ol> <li>Sanding belt/disc has been stored incorrectly.</li> <li>Sanding surface has been damaged.</li> </ol>	<ol> <li>Store sanding materials away from heat or damp conditions; store flat, not folded or bent.</li> <li>Replace sanding material.</li> </ol>
Sanding surface clogs quickly or burns.	<ol> <li>Too much pressure against belt/disc.</li> <li>Sanding softwood or has paint/varnish.</li> </ol>	<ol> <li>Reduce pressure on workpiece while sanding.</li> <li>Use different stock; change/clean sanding material often.</li> </ol>
Burn marks on workpiece.	<ol> <li>Using too fine of sanding grit.</li> <li>Using too much pressure.</li> <li>Work held still for too long.</li> </ol>	<ol> <li>Use a coarser grit sanding belt/disc.</li> <li>Reduce pressure on workpiece while sanding.</li> <li>Do not keep workpiece in one place for too long.</li> </ol>
Glazed sanding surfaces.	Sanding wet stock.     Sanding stock with high residue.	<ol> <li>Dry stock proper before sanding.</li> <li>Use different stock; change/clean sanding material often.</li> </ol>

## **Squaring Disc Table**

#### To square the sanding disc table:

- DISCONNECT THE SANDER FROM POWER!
- 2. Place a machinist's square or other 90° measuring tool against the disc table and sanding disc (see **Figure 34**).



**Figure 34.** Using a machinist's square to adjust the sanding disc table to 90°.

- 3. Loosen the table lock handle, adjust the table square with the sanding disc, then re-tighten the table lock handle.
- 4. Loosen the Phillips head screw on the angle pointer, position the red scale pointer over the "0" mark on the angle scale, then retighten the screw.

## Tensioning/ Replacing V-Belt

#### To adjust the V-belt tension:

- DISCONNECT THE SANDER FROM POWER!
- **2.** Remove the disc table, dust port, dust cover, and V-belt safety cover.

- **3.** Lay the sander on its back, and loosen (but do not remove) the two cap screws securing the belt housing assembly.
- 4. Position the belt housing assembly so there is about ½" V-belt deflection when moderate pressure is applied to the V-belt between the pulleys (see **Figure 10** on **Page 14**)—then fully tighten the cap screws to secure the belt housing assembly in place.
- Check the V-belt tension and re-adjust if necessary.
- 6. Re-install the V-belt safety cover, dust cover, dust port, and disc table.

#### To replace the V-belt:

- DISCONNECT THE SANDER FROM POWER!
- **2.** Remove the disc table, dust port, dust cover, and V-belt safety cover.
- Lay the sander on its back, loosen the two hex nuts securing the cast iron disc guard, and remove the disc guard (see Figure 35).

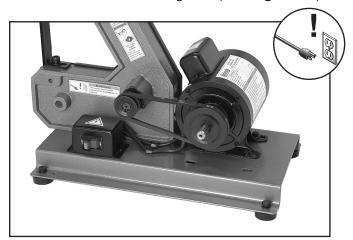


Figure 35. V-belt fully exposed.

- **4.** Roll the old V-belt off the pulleys and roll the new one back on.
- Re-install the disc guard, and re-adjust the V-belt tension, as described in the above subsection.
- **6.** Re-install the V-belt safety cover, dust cover, dust port, and disc table.

## **Electrical Components & Wiring Diagram**

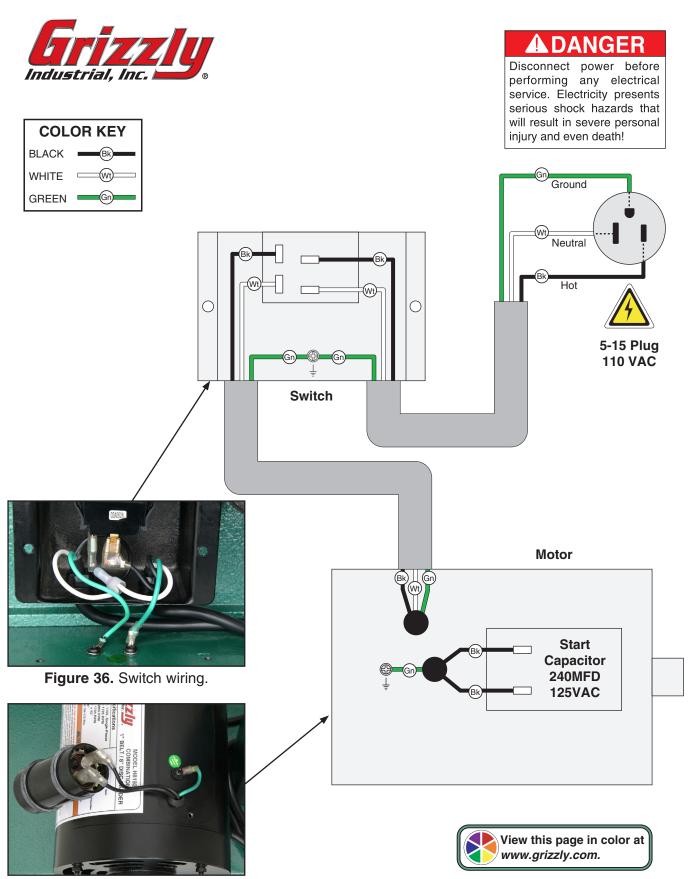
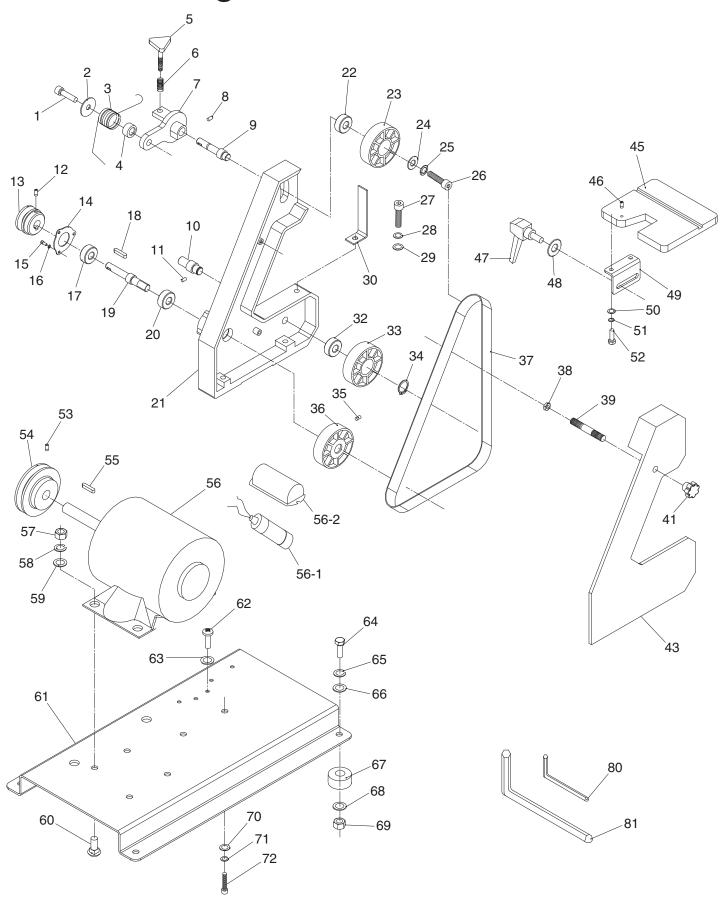
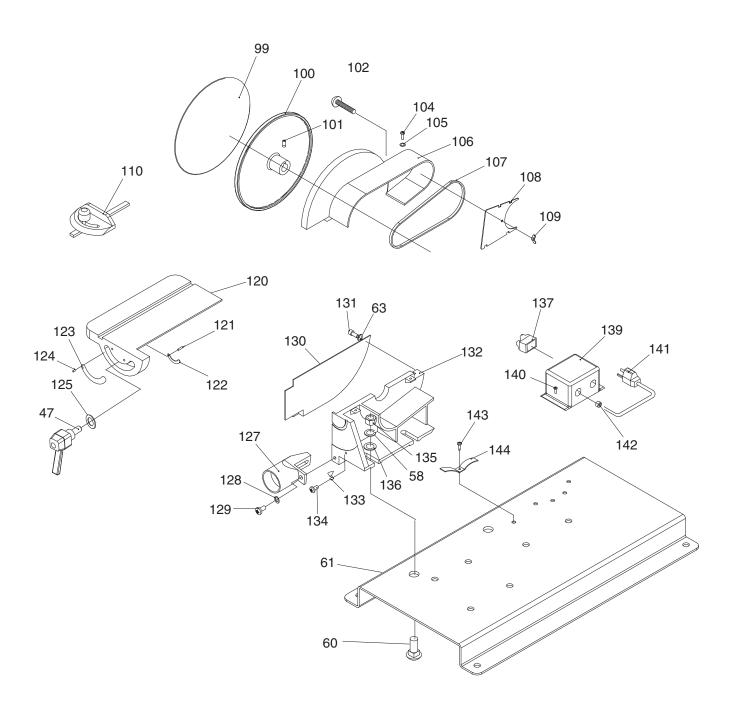


Figure 37. Motor wiring.

## Sanding Belt & Motor Breakdown



## **Sanding Disc Breakdown**



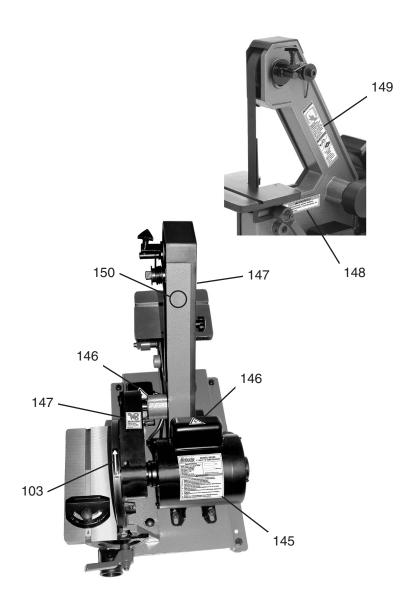
-28-

## **Parts List**

REF	PART#	DESCRIPTION
1	PSB47M	CAP SCREW M10-1.5 X 40
2	PW04M	FLAT WASHER 10MM
3	PH8192003	TORSION SPRING
4	PH8192004	SPACER
5	PH8192005	TRACKING KNOB
6	PH8192006	COMPRESSION SPRING
7	PH8192007	TRACKING BRACKET
8	PRP42M	ROLL PIN 3 X 20
9	PH8192009	SHAFT
10	PH8192010	SHAFT
11	PSS05M	SET SCREW M58 X 10
12	PSS05M	SET SCREW M58 X 10
13	PH8192013	BELT DRIVE PULLEY
14	PH8192014	RETAINING PLATE
15	PS07M	PHLP HD SCR M47 X 8
16	PTLW01M	EXT TOOTH WASHER 4MM
17	P6202	BALL BEARING 6202ZZ
18	PK23M	KEY 5 X 5 X 25
19	PH8192019	SHAFT
20	P6002	BALL BEARING 6002ZZ
21	PH8192021	BELT HOUSING
22	P6202	BALL BEARING 6202ZZ
23	PH8192023	UPPER BELT PULLEY
24	PW03M	FLAT WASHER 6MM
25	PLW03M	LOCK WASHER 6MM
26	PSB04M	CAP SCREW M6-1 X 10
27	PSB146M	CAP SCREW M10-1.5 X 15
28	PLW06M	LOCK WASHER 10MM
29	PW04M	FLAT WASHER 10MM
30	PH8192030	BELT SUPPORT
32	P6202	BALL BEARING 6202ZZ
33	PH8192033	MIDDLE BELT PULLEY
34	PR05M	EXT RETAINING RING 15MM
35	PSS53M	SET SCREW M58 X 12
36	PH8192036	LOWER BELT PULLEY
37	PH8192037	SANDING BELT 1" X 42"
38		HEX NUT M6-1
39	PN01M PH8192039	THREADED STUD M6-1 X 12
41	PH8192041	BELT COVER KNOB BELT COVER
45	PH8192043	
	PH8192045	BELT TABLE
46	PSS57M	SET SCREW M58 X 20
47	PH8192047	TABLE LOCK
48	PW04M	FLAT WASHER 10MM
49	PH8192049	BELT TABLE SUPPORT
50	PW04M	FLAT WASHER 10MM
51	PLW06M	LOCK WASHER 10MM
52	PB70M	HEX BOLT M10-1.5 X 16
53	PSS05M	SET SCREW M58 X 10
54	PH8192054	MOTOR PULLEY
55	PK112M	KEY 5 X 5 X 55
56	PH8192056	MOTOR 1/3HP,110V,1-PH
56-1	PH8192056-1	START CAPACITOR 240MF 125VAC

REF	PART#	DESCRIPTION
56-2	PH8192056-2	CAPACITOR COVER
57	PN03M	HEX NUT M8-1.25
58	PLW04M	LOCK WASHER 8MM
59	PW01M	FLAT WASHER 8MM
60	PCB01M	CARRIAGE BOLT M8-1.25 X 20
61	PH8192061	BASE
62	PS07M	PHLP HD SCR M47 X 8
63	PW05M	FLAT WASHER 4MM
64	PB03M	HEX BOLT M8-1.25 X 16
65	PLW04M	LOCK WASHER 8MM
66	PW01M	FLAT WASHER 8MM
67	PH8192067	RUBBER FOOT
68	PW01M	FLAT WASHER 8MM
69	PN03M	HEX NUT M8-1.25
70	PW04M	FLAT WASHER 10MM
71	PLW06M	LOCK WASHER 10MM
72	PSB64M	CAP SCREW M10-1.5 X 25
80	PAW02.5M	HEX WRENCH 2.5MM
81	PAW08M	HEX WRENCH 8MM
99	PH8192099	SANDING DISC 8"
100	PH8192100	SANDING DISC PLATE 8"
101	PSS31M	SET SCREW M58 X 8
102	PS78M	PHLP HD SCR M47 X 45
104	PS07M	PHLP HD SCR M47 X 8
105	PW05M	FLAT WASHER 4MM
106	PH8192106	V-BELT SAFETY COVER
107	PVM19	V-BELT M-19 0580
108	PH8192108	V-BELT REAR COVER
109	PWN03M	WING NUT M47
110	PH8192110	MITER GUAGE
120	PH8192120	DISC TABLE
121	PRP78M	ROLL PIN 4 X 10
122	PH8192122	ARC KEY
123	PH8192123	ANGLE SCALE
124	PH8192124	RIVET
125	PW04M	FLAT WASHER 10MM
127	PH8192127	DUST PORT 2"
128	PW03M	FLAT WASHER 6MM
129	PS14M	PHLP HD SCR M6-1 X 12
130	PH8192130	DUST COVER
131	PS07M	PHLP HD SCR M47 X 8
132	PH8192132	DISC COVER
133	PH8192133	POINTER
134	PS07M	PHLP HD SCR M47 X 8
135	PN02M	HEX NUT M10-1.5
136	PW04M	FLAT WASHER 10MM
137	PH8192137	SWITCH W/SAFETY TAB
139	PH8192139	SWITCH COVER
140	PS07M	PHLP HD SCR M47 X 8
141	PH8192141	POWER CORD
142	PH8192142	STRAIN RELIEF
143	PS07M	PHLP HD SCR M47 X 8
144	PH8192144	CLAMP
	1 10 102 177	OL

#### **Label Placement**



REF	PART #	DESCRIPTION
103	PH8192103	DIRECTION LABEL
145	PH8192144	MACHINE ID LABEL
146	PLABEL-14	ELECTRICITY LABEL
147	PH8192146	GUARD IN PLACE LABEL

REF	PART#	DESCRIPTION
148	PH8192147	DISCONNECT POWER LABEL
149	PH8192148	READ/EYE/LUNG COMBO LABEL
150	PPAINT-1	GRIZZLY GREEN TCH/UP PAINT

## **AWARNING**

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 CARD

Nan	ne		
Stre	et		
City		_ State	Zip
Phone #		_ Email	Invoice #
Model #		_ Order #	Serial #
		n a voluntary basis. It will be used for i urse, all information is strictly confi	•
1.	How did you learn about us? Advertisement Card Deck	? Friend Website	Catalog Other:
2.	Which of the following maga	zines do you subscribe to?	
	Cabinet Maker Family Handyman Hand Loader Handy Home Shop Machinist Journal of Light Cont. Live Steam Model Airplane News Modeltec Old House Journal	Popular Mechanics Popular Science Popular Woodworking Practical Homeowner Precision Shooter Projects in Metal RC Modeler Rifle Shop Notes Shotgun News	Today's Homeowner Wood Wooden Boat Woodshop News Woodsmith Woodwork Woodwork Woodworker West Woodworker's Journal Other:
3.	What is your annual househouse \$20,000-\$29,000 \$50,000-\$59,000	old income? \$30,000-\$39,000 \$60,000-\$69,000	\$40,000-\$49,000 \$70,000+
4.	What is your age group? 20-29 50-59	30-39 60-69	40-49 70+
5.	How long have you been a v		ears20+ Years
6.	How many of your machines	or tools are Grizzly? 3-56-9	10+
7.	Do you think your machine r	epresents a good value?	No
8.	Would you recommend Grizz	zly Industrial to a friend?	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 timesYesNo		
10.	Comments:		

Place Stamp Here



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

Haladadaabdhadabdhaadhabdaadhabdadhad

FOLD ALONG DOTTED LINE

Send a Grizzly Catalog to a friend:

 Name\_\_\_\_\_\_

 Street\_\_\_\_\_

 City\_\_\_\_\_\_
 State\_\_\_\_\_Zip\_\_\_\_\_

TAPE ALONG EDGES--PLEASE DO NOT STAPLE

#### 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.



Buy Direct and Save with Grizzly® - Trusted, Proven and a Great Value!

Visit Our Website Today And Discover Why Grizzly® Is The Industry Leader!

- SECURE ORDERING
- ORDERS SHIPPED WITHIN 24 HOURS
- E-MAIL RESPONSE WITHIN ONE HOUR

-OR-

# Call Today For A FREE Full Color Catalog

1-800-528-4777









Free Manuals Download Website

http://myh66.com

http://usermanuals.us

http://www.somanuals.com

http://www.4manuals.cc

http://www.manual-lib.com

http://www.404manual.com

http://www.luxmanual.com

http://aubethermostatmanual.com

Golf course search by state

http://golfingnear.com

Email search by domain

http://emailbydomain.com

Auto manuals search

http://auto.somanuals.com

TV manuals search

http://tv.somanuals.com