

**CENTRAL MACHINERY**®

# **BELT SANDER - 1 X 30 INCHES**

**Model 02485**

## **ASSEMBLY AND OPERATION INSTRUCTIONS**



Due to continuing improvements, actual product may differ slightly from the product described herein.



3491 Mission Oaks Blvd., Camarillo, CA 93011

Visit our website at: <http://www.harborfreight.com>

**TO PREVENT SERIOUS INJURY, READ AND UNDERSTAND  
ALL WARNINGS AND INSTRUCTIONS BEFORE USE.**

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**For technical questions or replacement parts, please call 1-800-444-3353.**

Manual Revised 01/07

## SPECIFICATIONS

Power Consumption	120 V~, 60 Hz, 3 A
Motor	1/3 HP, 3400 RPM
Line Cord	6', 3-prong grounded plug, UL listed
Table Size	5-1/16" (W) x 5-1/8" (L)
Table Tilt	0 ~ 45°
Belt Size	1" (W) x 30" (dia.)
Overall Dimensions	11-1/8" (L) x 9" (W) x 13-1/2" (H)
Vacuum Chute	1-3/4" (dia.)
Weight	13.3 lb.



### Save This Manual

You will need this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures, parts list and assembly diagram. Keep your invoice with this manual. Write the invoice number on the inside of the front cover. Write the product's serial number in the back of the manual near the assembly diagram, or write month and year of purchase if product has no number. Keep this manual and invoice in a safe and dry place for future reference.

## GENERAL SAFETY RULES

### WARNING!

**READ AND UNDERSTAND ALL INSTRUCTIONS**  
**Failure to follow all instructions listed below may result in**  
**electric shock, fire, and/or serious injury.**  
**SAVE THESE INSTRUCTIONS**

### WORK AREA

1. **Keep your work area clean and well lit.** Cluttered benches and dark areas invite accidents.
2. **Do not operate power tools in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Power tools create sparks which may ignite the dust or fumes.
3. **Keep bystanders, children, and visitors away while operating a power tool.** Distractions can cause you to lose control. Protect others in the work area from debris such as chips and sparks. Provide barriers or shields as needed.

### ELECTRICAL SAFETY

1. **Grounded tools must be plugged into an outlet properly installed and grounded in accordance with all codes and ordinances. Never remove the grounding prong**

**or modify the plug in any way. Do not use any adapter plugs. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded.** If the tools should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user.

2. **Double insulated tools are equipped with a polarized plug (one blade is wider than the other). This plug will fit in a polarized outlet only one way. If the plug does not fit fully in the outlet, reverse the plug. If it still does not fit, contact a qualified electrician to install a polarized outlet. Do not change the plug in any way.** Double insulation  eliminates the need for the three wire grounded power cord and grounded power supply system.
3. **Avoid body contact with grounded surfaces such as pipes, radiators, ranges, and refrigerators.** There is an increased risk of electric shock if your body is grounded.
4. **Do not expose power tools to rain or wet conditions.** Water entering a power tool will increase the risk of electric shock.
5. **Do not abuse the Power Cord. Never use the Power Cord to carry the tools or pull the Plug from an outlet. Keep the Power Cord away from heat, oil, sharp edges, or moving parts. Replace damaged Power Cords immediately.** Damaged Power Cords increase the risk of electric shock.
6. **When operating a power tool outside, use an outdoor extension cord marked “W-A” or “W”.** These extension cords are rated for outdoor use, and reduce the risk of electric shock.

## PERSONAL SAFETY

1. **Stay alert. Watch what you are doing, and use common sense when operating a power tool. Do not use a power tool while tired or under the influence of drugs, alcohol, or medication.** A moment of inattention while operating power tools may result in serious personal injury.
2. **Dress properly. Do not wear loose clothing or jewelry. Contain long hair. Keep your hair, clothing, and gloves away from moving parts.** Loose clothes, jewelry, or long hair can be caught in moving parts.
3. **Avoid accidental starting. Be sure the Power Switch is off before plugging in.** Carrying power tools with your finger on the Power Switch, or plugging in power tools with the Power Switch on, invites accidents.
4. **Remove adjusting keys or wrenches before turning the power tool on.** A wrench or a key that is left attached to a rotating part of the power tool may result in personal injury.
5. **Do not overreach. Keep proper footing and balance at all times.** Proper footing and balance enables better control of the power tool in unexpected situations.
6. **Use safety equipment. Always wear eye protection.** Dust mask, nonskid safety shoes, hard hat, or hearing protection must be used for appropriate conditions. Always

wear ANSI-approved safety goggles and a dust mask/respirator when using or performing maintenance on this tool.

## **TOOL USE AND CARE**

1. **Use clamps (not included) or other practical ways to secure and support the workpiece to a stable platform.** Holding the work by hand or against your body is unstable and may lead to loss of control.
2. **Do not force the tool. Use the correct tool for your application.** The correct tool will do the job better and safer at the rate for which it is designed. Do not force the tool and do not use the tool for a purpose for which it is not intended.
3. **Do not use the power tool if the Power Switch does not turn it on or off.** Any tool that cannot be controlled with the Power Switch is dangerous and must be replaced.
4. **Disconnect the Power Cord Plug from the power source before making any adjustments, changing accessories, or storing the tool.** Such preventive safety measures reduce the risk of starting the tool accidentally. **Always unplug the tool from its electrical outlet before performing any inspection, maintenance, or cleaning procedures.**
5. **Store idle tools out of reach of children and other untrained persons.** Tools are dangerous in the hands of untrained users.
6. **Maintain tools with care. Keep cutting tools sharp and clean.** Properly maintained tools with a sharp cutting edge are less likely to bind and are easier to control. Do not use a damaged tool. Tag damaged tools "Do not use" until repaired.
7. **Check for misalignment or binding of moving parts, breakage of parts, and any other condition that may affect the tool's operation. If damaged, have the tool serviced before using.** Many accidents are caused by poorly maintained tools.
8. **Use only accessories that are recommended by the manufacturer for your model.** Accessories that may be suitable for one tool may become hazardous when used on another tool.

## **SERVICE**

1. **Tool service must be performed only by qualified repair personnel.** Service or maintenance performed by unqualified personnel could result in a risk of injury.
2. **When servicing a tool, use only identical replacement parts. Follow instructions in the "Inspection, Maintenance, And Cleaning" section of this manual.** Use of unauthorized parts or failure to follow maintenance instructions may create a risk of electric shock or injury.

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## **SPECIFIC SAFETY RULES**

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1. **Support workpiece with worktable.**

2. **Maintain 1/16” maximum clearance between table and sanding belt or disc.**
3. **Avoid kickback by sanding in accordance with the direction arrows.** Sanding belt is designed to rotate down towards the table.
4. **Maintain labels and nameplates on the tool.** These carry important information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
5. **Avoid unintentional starting.** Make sure you are prepared to begin work before turning on the tool.
6. **Always keep the extension cord away from moving parts on the tool.**
7. **People with pacemakers should consult their physician(s) before using this product.** Electromagnetic fields in close proximity to a heart pacemaker could cause interference to or failure of the pacemaker. In addition, people with pacemakers should adhere to the following:
  - Avoid operating power tools alone.
  - Don't use a power tool with the power switch locked on.
  - If powered via a power cord be certain that the tool is properly grounded. A ground fault interrupt (GFCI) system is also a good precaution. This inexpensive device is a good safety measure because it prevents a sustained electrical shock.
  - Properly maintain and inspect all tools before use to avoid electrical shock.
8. **Never leave the tool unattended when it is plugged into an electrical outlet.** Turn off the tool, and unplug it from its electrical outlet before leaving. Do not leave tool until it comes to a complete stop.
9. **Never run the Belt Sander without the spark cover properly installed.**
10. **Take caution as some woods contain preservatives such as copper chromium arsenate (CCA) which can be toxic.** When sanding these materials extra care should be taken to avoid inhalation and minimize skin contact.
11. **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 and cement or other masonry products
  - Arsenic and chromium from chemically treated lumberYour 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. (California Health & Safety Code § 25249.5, *et seq.*)

**Warning:** The warnings, cautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

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## GROUNDING

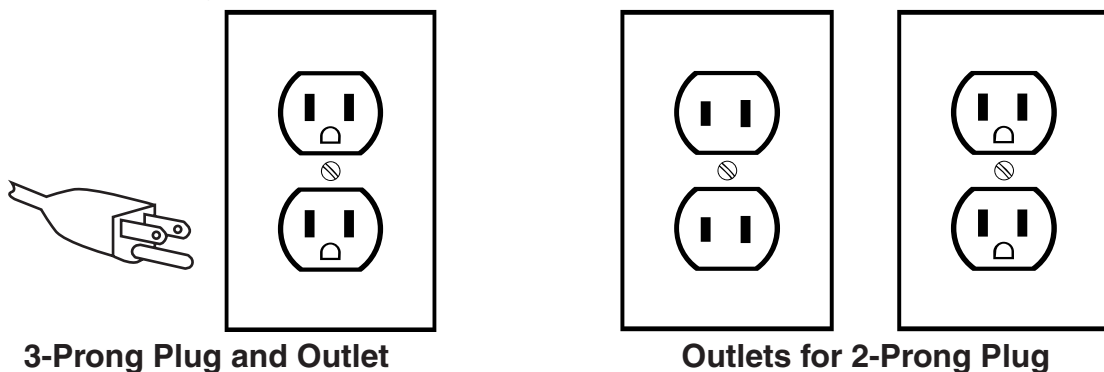
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 **WARNING!**

Improperly connecting the grounding wire can result in the risk of electric shock. Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

### GROUNDING TOOLS: TOOLS WITH THREE PRONG PLUGS

1. Tools marked with “Grounding Required” have a three wire cord and three prong grounding plug. The plug must be connected to a properly grounded outlet. If the tool should electrically malfunction or break down, grounding provides a low resistance path to carry electricity away from the user, reducing the risk of electric shock. **(See 3-Prong Plug and Outlet.)**
2. The grounding prong in the plug is connected through the green wire inside the cord to the grounding system in the tool. The green wire in the cord must be the only wire connected to the tool’s grounding system and must never be attached to an electrically “live” terminal. **(See 3-Prong Plug and Outlet.)**
3. Your tool must be plugged into an appropriate outlet, properly installed and grounded in accordance with all codes and ordinances. The plug and outlet should look like those in the following illustration. **(See 3-Prong Plug and Outlet.)**



### DOUBLE INSULATED TOOLS: TOOLS WITH TWO PRONG PLUGS

1. Tools marked “Double Insulated” do not require grounding. They have a special double insulation system which satisfies OSHA requirements and complies with the applicable standards of Underwriters Laboratories, Inc., the Canadian Standard Association, and the National Electrical Code. **(See Outlets for 2-Prong Plug.)**




2. Double insulated tools may be used in either of the 120 volt outlets shown in the preceding illustration. **(See Outlets for 2-Prong Plug.)**

## EXTENSION CORDS

1. ***Grounded*** tools require a three wire extension cord. ***Double Insulated*** tools can use either a two or three wire extension cord.
2. As the distance from the supply outlet increases, you must use a heavier gauge extension cord. Using extension cords with inadequately sized wire causes a serious drop in voltage, resulting in loss of power and possible tool damage. **(See Table A.)**
3. The smaller the gauge number of the wire, the greater the capacity of the cord. For example, a 14 gauge cord can carry a higher current than a 16 gauge cord. **(See Table A.)**
4. When using more than one extension cord to make up the total length, make sure each cord contains at least the minimum wire size required. **(See Table A.)**
5. If you are using one extension cord for more than one tool, add the nameplate amperes and use the sum to determine the required minimum cord size. **(See Table A.)**
6. If you are using an extension cord outdoors, make sure it is marked with the suffix “W-A” (“W” in Canada) to indicate it is acceptable for outdoor use.
7. Make sure your extension cord is properly wired and in good electrical condition. Always replace a damaged extension cord or have it repaired by a qualified electrician before using it.
8. Protect your extension cords from sharp objects, excessive heat, and damp or wet areas.

<b>RECOMMENDED MINIMUM WIRE GAUGE FOR EXTENSION CORDS* (120 OR 240 VOLT)</b>					
<b>NAMEPLATE AMPERES (at full load)</b>	<b>EXTENSION CORD LENGTH</b>				
	<b>25 Feet</b>	<b>50 Feet</b>	<b>75 Feet</b>	<b>100 Feet</b>	<b>150 Feet</b>
0 – 2.0	18	18	18	18	16
2.1 – 3.4	18	18	18	16	14
3.5 – 5.0	18	18	16	14	12
5.1 – 7.0	18	16	14	12	12
7.1 – 12.0	18	14	12	10	-
12.1 – 16.0	14	12	10	-	-
16.1 – 20.0	12	10	-	-	-
<b>TABLE A</b> * Based on limiting the line voltage drop to five volts at 150% of the rated amperes.					

## SYMBOLGY

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.
$V \sim$	Volts Alternating Current
A	Amperes
$n_0$ xxxx/min.	No Load Revolutions per Minute (RPM)

**Note:** Performance of this tool may vary depending on variations in local line voltage. Extension cord usage may also affect tool performance.

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## UNPACKING

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When unpacking, check to make sure the following parts are included. Refer to the Assembly Drawing and Parts List located at the end of this manual. If any parts are missing or broken, please call Harbor Freight Tools at the number on the cover of this manual as soon as possible.

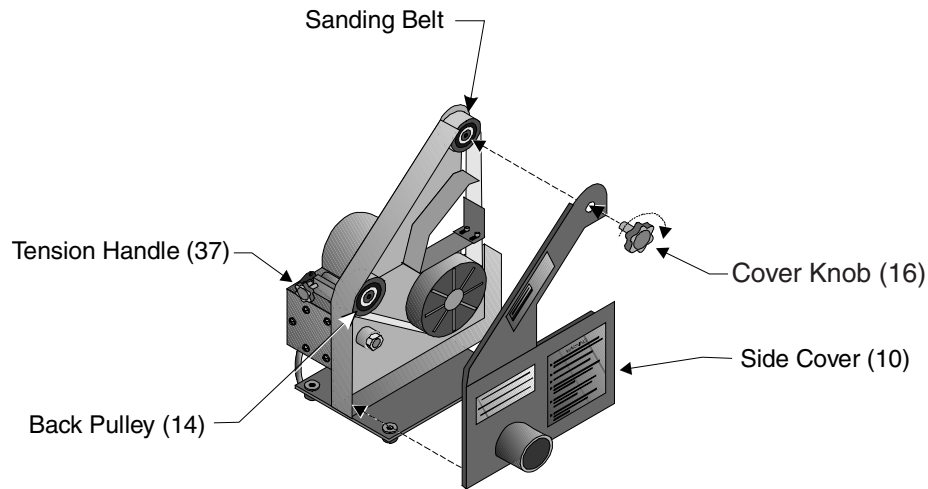


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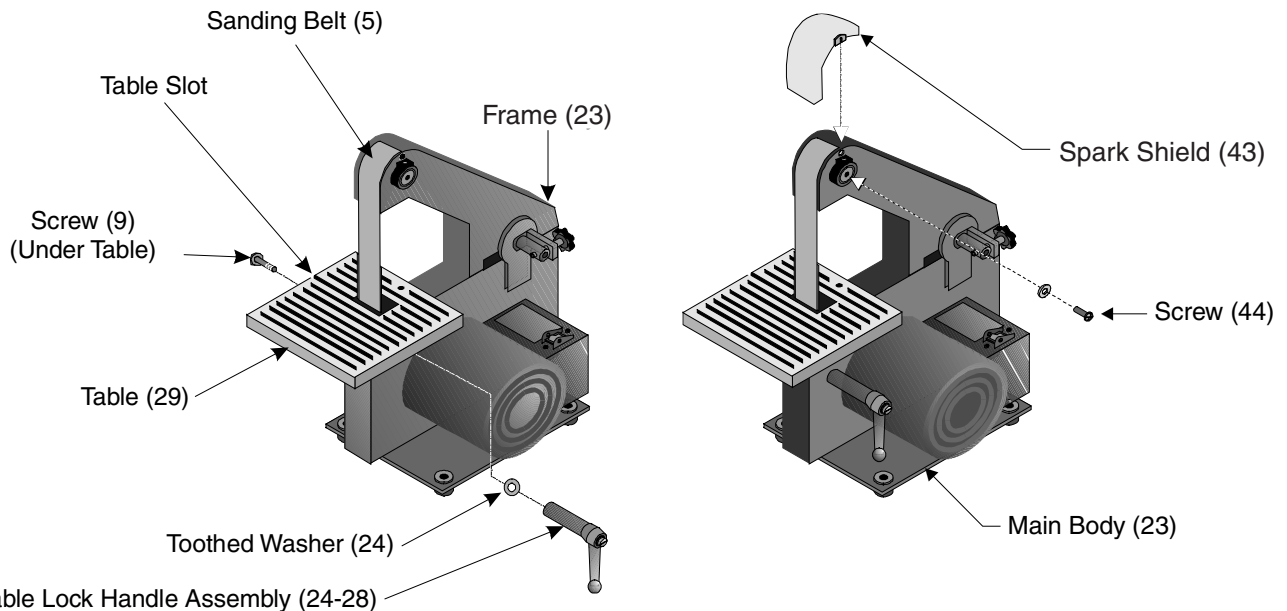
## ASSEMBLY

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The Belt Sander requires minor assembly of the Table (29) to the Main Body (23). Refer to the Parts List and Assembly Drawing at the end of this manual.



1. Remove Cover Knob (16) and take off the Side Cover (10). See illustration above.
2. Remove the Screw (9) and Toothed Washer (24) from the end of the Locking Stud (25).
3. Place the Table (29) on the Main Body (23) so that the Sanding Belt (5) fits through the Slot in the Table.
4. Attach the Table by placing the Handle Assembly on the Table side and securing the entire assembly using Screw (9).
5. Replace the Side Cover.



6. Loosen the Screw (44) most of the way as shown above.

7. Place the Spark Shield (43) on the Belt Sander Unit and secure using the Screw (44).
8. Place the Belt Sander on a secure workbench able to carry the weight of the Belt Sander and stock.
9. Attach the vacuum hose (if used) to the 1-3/4 inch vacuum chute. Otherwise, attach a vacuum bag (not supplied) to collect the sanding dust.
10. For added safety and reduced vibration, it is recommended that the Belt Sander be mounted to the workbench with "C" clamps or other appropriate devices.

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## **OPERATION**

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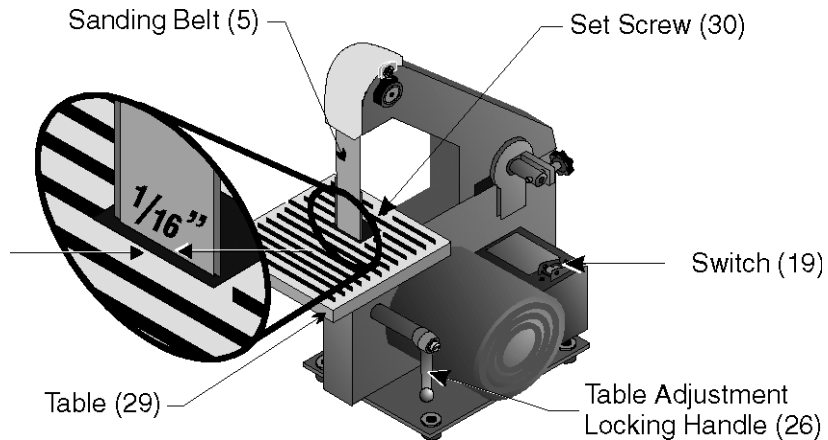
**Note:** The Belt Sander is designed to sand only workpieces made of wood.

### **Sanding**

1. Plug Sander into wall socket (or extension cord) containing grounding prong.
2. Place your safety glasses and full face shield on.
3. Turn on power Switch (19) momentarily to verify that Sander Belt (5) is tracking properly. If belt tracking needs adjustment, turn Belt Sander off and refer to instructions on page 7.
4. If the Sanding Belt (5) is rotating properly with proper tracking, the Belt Sander is ready for use.
5. Turn on power Switch (19).
6. Begin sanding.

**Caution: Do not apply so much pressure on object being sanded to stop rotation of sanding belt. Keep fingers away from the sanding belt.**

## Adjusting Table Angle

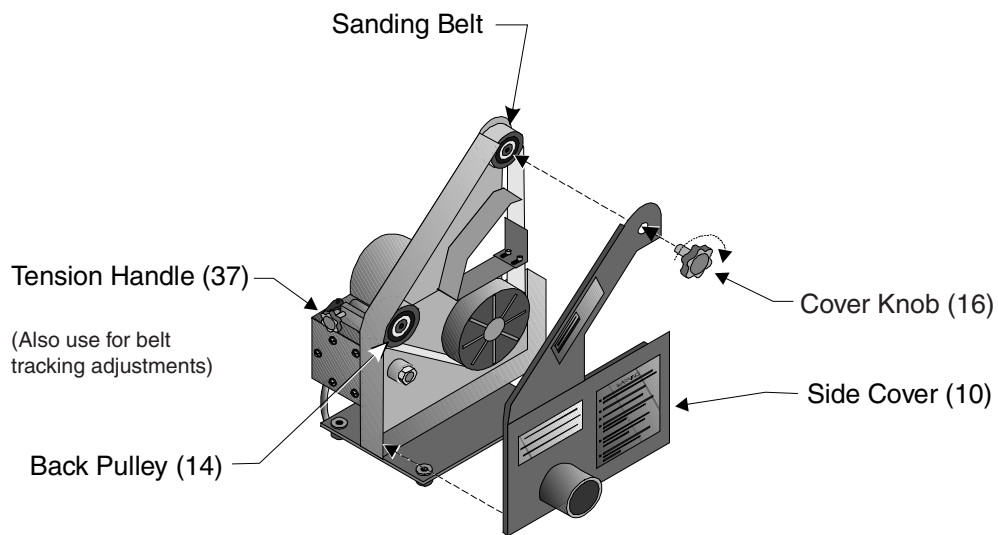


1. Loosen the Table Adjustment Locking Handle (26) by turning it counterclockwise as shown above.
2. Tilt the Table (29) to the desired angle: Use a protractor to ensure accuracy. There should be no more than 1/16" between the Table and the Sanding Belt (5).
3. Tighten the Table Adjustment Handle.

## Leveling the Table

1. Using a protractor, verify that the Table is 90° to the belt. If it is not, continue with the following steps.
2. If the Table is tilted toward the front of the machine, tighten the Set Screw (30).
3. If the Table is tilted toward the back of the machine, loosen the Set Screw.

## Removing and Installing Sanding Belt



1. Remove the Cover Knob (16), then remove the Side Cover (#10) as shown above.
2. Turn the Tension Handle (37) counterclockwise to loosen the Sanding Belt (5).

3. Remove the Sanding Belt.
4. Place the new Sanding Belt on the three pulleys. Center the Sanding Belt on the pulleys.
5. Tighten the Sanding Belt by turning the Tension Handle clockwise until the Back Pulley (14) appears centered. Belt tracking adjustments are made by slightly turning this knob as needed. See above.
6. Replace the Side Cover and Cover Knob.

### **Adjusting the Sanding Belt Tracking**

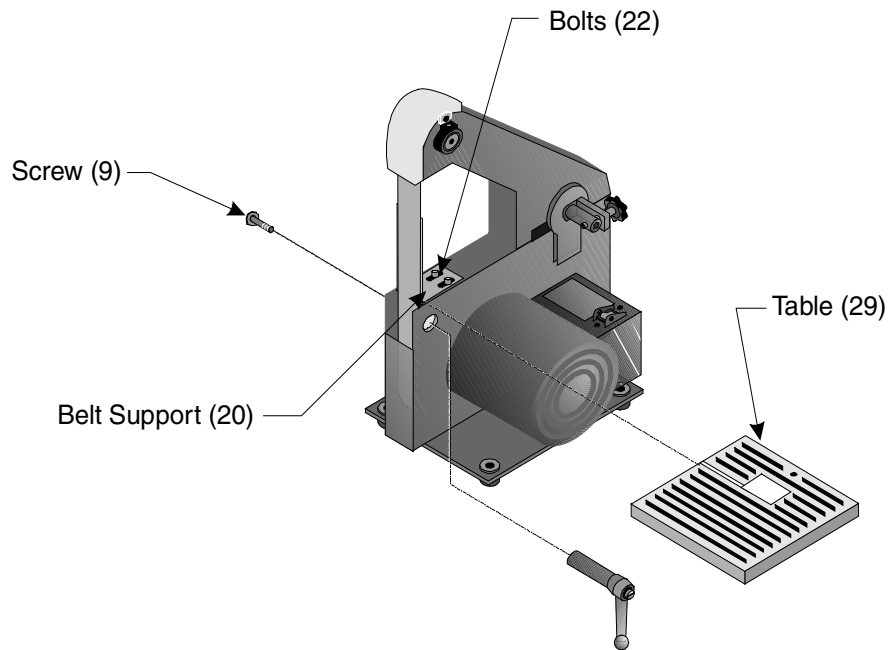
1. Turn the Belt Sander on.
2. Look at the Belt (5) through the back of the Spark Cover (43). If it is riding on the center of the upper Pulley (14) the tracking is correct and no further adjustment is required.
3. If the Belt rides to the left, turn the Tension Handle (37) to the left until the Belt is centered.
4. If the Belt rides to the right, turn the Tension Handle gradually to the right until the Belt is centered.

### **Adjustment of Belt Support**

The Belt Support (20) is made of heavy gauge steel to support or back the Sanding Belt while sanding. It should be adjusted to no more than 1/16" away from the back of the Sanding Belt.

**Caution:** Do not sand stock that is too small to be safely supported or held. Such pieces should be sanded by hand.

1. Remove the Table (29) by removing the Screw (9) as shown below.
2. Loosen the two Bolts (22) on the Belt Support (20).
3. Adjust the Belt Support to no more than 1/16" away from the back of the Sanding Belt.
4. Tighten the two Bolts on the Belt Support.



## Maintenance

1. Keep Sander clean by blowing dust off with compressed air. Wear safety glasses and dust mask or respirator while doing this.
2. Cover Sander when not in use.
3. Periodically, apply a light oil to the table to prevent rusting.
4. Store in a clean and dry location.
5. Replace Sanding Belts when they become torn or worn down to the paper.

## PARTS LIST

Part	Description	Q'ty
1	Rubber Feet	4
2	Bolt, M8 x 20	2
3	Spring Washer, $\Phi$ 8	2
4	Base	1
5	Sanding Belt	1
6	Motor Pulley	1
7	Set Screw, M6x10	1
8	Bolt, M8x25	1
9	Screw, M6x12	1
10	Side Cover	1
11	Nut, M10	1
12	Washer, $\Phi$ 10	2
13	C- Ring, 15	2
14	Pulley	2
15	Bearing, 6202	2
16	Tracking Knob	1
17	Pulley Axle	1
18	Power Cord	1
19	Switch	1
20	Belt Support	1
21	Washer, $\Phi$ 4	2
22	Bolt, M4x10	2

Part	Description	Q'ty
23	Main Body	1
24	Toothed Washer, $\Phi$ 8	1
25	Locking Stud	1
26	Locking Handle	1
27	Spring	1
28	Screw	1
29	Table	1
30	Set Screw, M6x16	1
31	Motor	1
32	Set Screw, M6x8	1
33	Tension Axle	1
34	Axle Seat	1
35	Spring Pin, $\Phi$ 3	1
36	Spring	1
37	Tension Handle	1
38	Spring	1
39	Washer, $\Phi$ 5	1
40	Lock E-Ring	1
41	Spring	1
42	Bolt, M10x30	1
43	Spark Cover	1
44	Screw, M4x10	1

### PLEASE READ THE FOLLOWING CAREFULLY

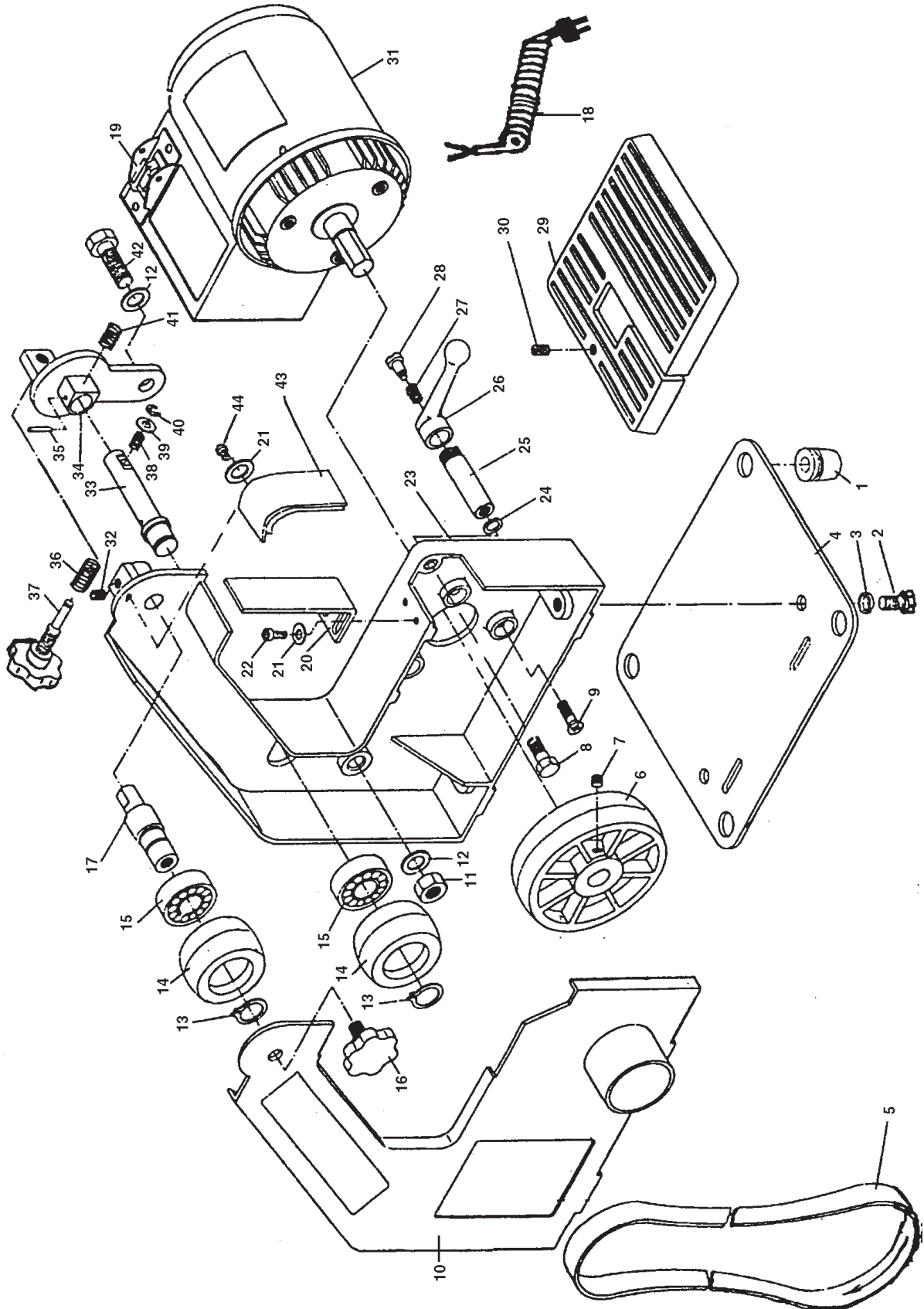
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**Record Product's Serial Number Here:** \_\_\_\_\_

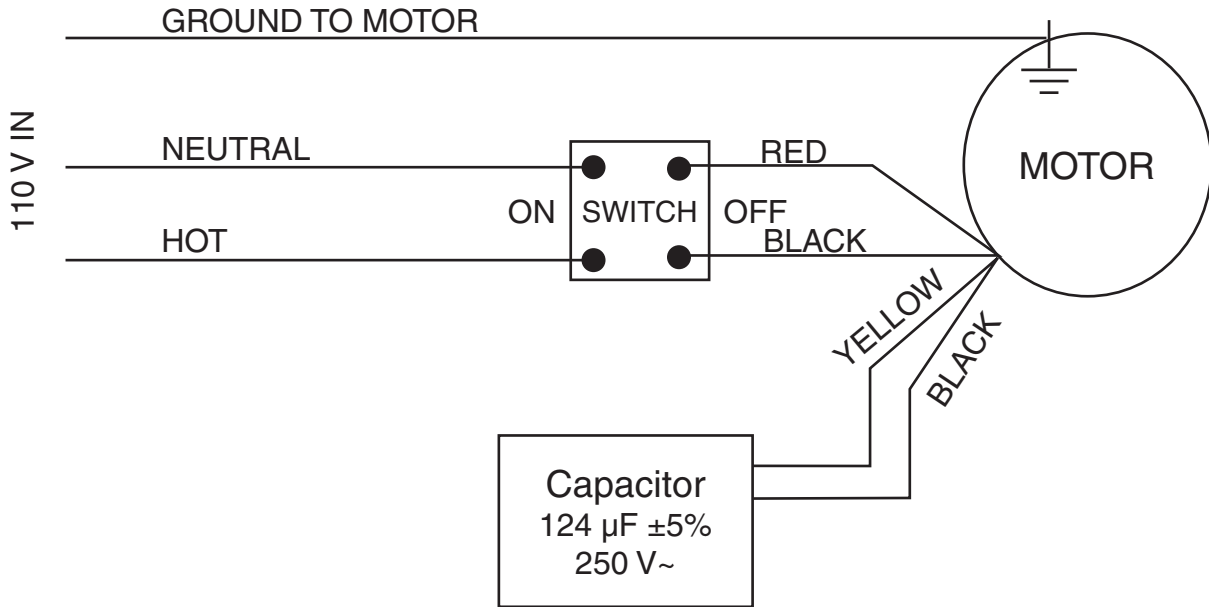
**Note:** If product has no serial number, record month and year of purchase instead.

**Note:** Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

# ASSEMBLY DIAGRAM



# WIRING DIAGRAM



Capacitor is not Polarity - Specific

**CENTRAL MACHINERY**®

**LIMITED 90 DAY/1 YEAR WARRANTY**

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser for a period of ninety days from date of purchase that the motor/engine, the belts (if so equipped), and the blades (if so equipped) are free of defects in materials and workmanship. Harbor Freight Tools also warrants to the original purchaser, for a period of one year from date of purchase, that all other parts and components of the product are free from defects in materials and workmanship. This warranty does not apply to damage due directly or indirectly to misuse, abuse, negligence or accidents; repairs or alterations outside our facilities; or to lack of maintenance. 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 product. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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