

# **POWERMATIC®**

## **Operating Instructions and Parts Manual 10-inch Cabinet Saw Model PM1000**



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**Part No. M-1791000**  
Revision A3 05/2014  
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# 1.0 Warranty and Service

Powermatic warrants every product it sells against manufacturers' defects. If one of our tools needs service or repair, please contact Technical Service by calling 1-800-274-6846, 8AM to 5PM CST, Monday through Friday.

## Warranty Period

The general warranty lasts for the time period specified in the literature included with your product or on the official Powermatic branded website.

- Powermatic products carry a limited warranty which varies in duration based upon the product. (See chart below)
- Accessories carry a limited warranty of one year from the date of receipt.
- Consumable items are defined as expendable parts or accessories expected to become inoperable within a reasonable amount of use and are covered by a 90 day limited warranty against manufacturer's defects.

## Who is Covered

This warranty covers only the initial purchaser of the product from the date of delivery.

## What is Covered

This warranty covers any defects in workmanship or materials subject to the limitations stated below. This warranty does not cover failures due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair, alterations or lack of maintenance.

## Warranty Limitations

Woodworking products with a Five Year Warranty that are used for commercial or industrial purposes default to a Two Year Warranty. Please contact Technical Service at 1-800-274-6846 for further clarification.

## How to Get Technical Support

Please contact Technical Service by calling 1-800-274-6846. **Please note that you will be asked to provide proof of initial purchase when calling.** If a product requires further inspection, the Technical Service representative will explain and assist with any additional action needed. Powermatic has Authorized Service Centers located throughout the United States. For the name of an Authorized Service Center in your area call 1-800-274-6846 or use the Service Center Locator on the Powermatic website.

## More Information

Powermatic is constantly adding new products. For complete, up-to-date product information, check with your local distributor or visit the Powermatic website.

## How State Law Applies

This warranty gives you specific legal rights, subject to applicable state law.

## Limitations on This Warranty

POWERMATIC LIMITS ALL IMPLIED WARRANTIES TO THE PERIOD OF THE LIMITED WARRANTY FOR EACH PRODUCT. EXCEPT AS STATED HEREIN, ANY IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE EXCLUDED. SOME STATES DO NOT ALLOW LIMITATIONS ON HOW LONG AN IMPLIED WARRANTY LASTS, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

POWERMATIC 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. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU.

Powermatic sells through distributors only. The specifications listed in Powermatic printed materials and on the official Powermatic website are given as general information and are not binding. Powermatic reserves the right to effect at any time, without prior notice, those alterations to parts, fittings, and accessory equipment which they may deem necessary for any reason whatsoever.

## Product Listing with Warranty Period

90 Days – Parts; Consumable items
1 Year – Motors, Machine Accessories
2 Year – Woodworking Machinery used for industrial or commercial purposes
5 Year – Woodworking Machinery

NOTE: Powermatic is a division of JPW Industries, Inc. References in this document to Powermatic also apply to JPW Industries, Inc., or any of its successors in interest to the Powermatic brand.

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### 3.0 Safety warnings

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This table saw is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a table saw, do not use until proper training and knowledge have been obtained.
5. Do not use this table saw for other than its intended use. If used for other purposes, Powermatic disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using this table saw. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this table saw, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
8. Wear ear protectors (plugs or muffs) during extended periods of operation.
9. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
  - Lead from lead based paint.
  - Crystalline silica from bricks, cement and other masonry products.
  - Arsenic and chromium from chemically treated lumber.

Your risk of exposure 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 face or dust masks that are specifically designed to filter out microscopic particles.

10. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
11. Make certain the machine is properly grounded.
12. Make all machine adjustments or maintenance with the machine unplugged from the power source. A machine under repair should be RED TAGGED to show it must not be used until maintenance is complete.
13. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
14. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately.
15. Check the alignment of the riving knife, fence and miter slot to the blade. A caution decal is installed on each guard to remind the operator of the dangers of improper machine operation.
16. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
17. Provide for adequate space surrounding work area and non-glare, overhead lighting.
18. Keep the floor around the machine clean and free of scrap material, oil and grease.
19. Keep visitors a safe distance from the work area. Keep children away.
20. Make your workshop child proof with padlocks, master switches or by removing safety keys.
21. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
22. Maintain a balanced stance at all times so that you do not fall or lean against the blade or other moving parts. Do not overreach or use excessive force to perform any machine operation.
23. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
24. Use recommended accessories; improper accessories may be hazardous.

25. Maintain tools with care. Keep blade sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
26. Check the saw blade for cracks or missing teeth. Do not use a cracked or dull blade or one with missing teeth or improper set. Make sure the blade is securely locked on the arbor.
27. Keep hands clear of the blade area. Do not reach past the blade to clear parts or scrap with the saw blade running. Never saw freehand. Avoid awkward operations and hand positions where a sudden slip could cause your hand to contact the blade.
28. Do not attempt to saw boards with loose knots or with nails or other foreign material, on its surface. Do not attempt to saw twisted, warped, bowed or "in wind" stock unless one edge has been jointed for guiding purposes prior to sawing.
29. Do not attempt to saw long or wide boards unsupported where spring or weight could cause the board to shift position.
30. Always use the riving knife, blade guard, push stick and other safety devices for all operations where they can be used. On operations such as dadoing or molding where the blade guard cannot be used, use feather boards, fixtures and other safety devices and use extreme caution. Reinstall the riving knife and blade guard immediately after completing the operation that required their removal.
31. Be sure the saw blade rotates clockwise when viewed from the motor side (left side) of the machine.
32. Turn off the machine before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
33. Do not stand on the machine. Serious injury could occur if the machine tips over.
34. Never leave the machine running unattended. Turn the power off and do not leave the machine until it comes to a complete stop.
35. Remove loose items and unnecessary work pieces from the area before starting the machine.

### 3.1 Kickback

The most common accidents among table saw users, according to statistics, can be linked to kickback, the high-speed expulsion of material from the table that can strike the operator. Kickback can also result in the operator's hands being pulled into the blade.

#### Kickback Prevention

Tips to avoid the most common causes of kickback:

- Make sure the riving knife is always aligned with the blade. A workpiece can bind or stop the flow of the cut if the riving knife is misaligned, and result in kickback.
- Use a riving knife during every cut. The riving knife maintains the kerf in the workpiece, which will reduce the chance of kickback.
- Never attempt freehand cuts. The workpiece must be fed parallel to the blade, otherwise kickback will likely occur. Always use the rip fence or miter gauge to support the workpiece.
- Make sure that rip fence is parallel to blade. If not, the chances of kickback are very high. Take the time to check and adjust the rip fence.
- Feed cuts through to completion. Anytime you stop feeding a workpiece that is in the middle of a cut, the chance of binding, resulting in kickback, is greatly increased.

#### Protection Tips from Kickback

Kickback can happen even if precautions are taken to prevent it. Listed below are some tips to protect you if kickback *does* occur:

- Stand to the side of the blade when cutting. An ejected workpiece usually travels directly in front of the blade.
- Wear safety glasses or a face shield. Your eyes and face are the most vulnerable part of your body.
- Never place your hand behind the blade. If kickback occurs, your hand will be pulled into the blade.
- Use a push stick to keep your hands farther away from the moving blade. If a kickback occurs, the push stick will most likely take the damage that your hand would have received.

Familiarize yourself with the following safety notices used in this manual:

**⚠CAUTION** This means that if precautions are not heeded, it may result in minor injury and/or possible machine damage.

**⚠WARNING** This means that if precautions are not heeded, it may result in serious injury or possibly even death.

## 4.0 About this manual

This manual is provided by Powermatic covering the safe operation and maintenance procedures for a Powermatic Model PM1000 Cabinet Saw. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. Your machine has been designed and constructed to provide years of trouble-free operation if used in accordance with the instructions as set forth in this document.

This manual is not intended to be an exhaustive guide to table saw operational methods, use of jigs or after-market accessories, choice of stock, etc. Additional knowledge can be obtained from experienced users or trade articles. Whatever accepted methods are used, always make personal safety a priority.

If there are questions or comments, please contact your local supplier or Powermatic. Powermatic can also be reached at our web site: [www.powermatic.com](http://www.powermatic.com).

Retain this manual for future reference. If the machine transfers ownership, the manual should accompany it.

**⚠WARNING** Read and understand the entire contents of this manual before attempting assembly or operation! Failure to comply may cause serious injury!

## 5.0 Glossary

**Arbor:** Metal shaft that connects the drive mechanism to the blade.

**Bevel Edge Cut:** Tilt of the saw arbor and blade between 0° and 45° to perform an angled cutting operation.

**Blade Guard:** Mechanism mounted over the saw blade to prevent accidental contact with the cutting edge.

**Crosscut:** Sawing operation in which the miter gauge is used to cut across the grain of the workpiece.

**Dado Blade:** Blade(s) used for cutting grooves and rabbets. A stacked dado set can be used for wider grooves.

**Dado Cut:** Flat bottomed groove in the face of the workpiece made with a dado blade.

**Featherboard:** Device used to keep a board against the rip fence or table that allows the operator to keep hands away from saw blade.

**Freehand:** Moving the workpiece into the blade using only the hands, without a fixed positioning device. (This is a dangerous, unacceptable procedure – **always** use appropriate devices to feed the workpiece through the saw blade during cutting operations.)

**Kerf:** The resulting cut or gap made by a saw blade.

**Kickback:** An event in which the workpiece is lifted up and thrown back toward an operator, caused when a workpiece binds on the saw blade or between the blade and rip fence (or other fixed object). To minimize or prevent injury from kickbacks, see the *Operations* section.

**Miter Gauge:** A component that controls the workpiece movement while performing a crosscut of various angles.

**Non-Through Cut:** A sawing operation that requires the removal of the blade guard and standard riving knife, resulting in a cut that does not protrude through the top of the workpiece (includes Dado and rabbet cuts).

The blade guard and riving knife must be re-installed after performing a non-through cut to avoid accidental contact with the saw blade during operation.

**Parallel:** Position of the rip fence equal in distance at every point to the side face of the saw blade.

**Perpendicular:** 90° (right angle) intersection or position of the vertical and horizontal planes such as the position of the saw blade (vertical) to the table surface (horizontal).

**Push Board/Push Stick:** An instrument used to safely push the workpiece through the cutting operation by keeping the operator's hands at a distance.

**Rabbet:** A cutting operation that creates an L-shaped channel along the edge of the board.

**Rip Cut:** A cut made along the grain of the workpiece.

**Riving Knife:** A metal plate fixed relative to the blade, which moves with the blade as cutting depth is adjusted. Thus, it maintains not only the kerf opening in the workpiece, but also the knife-to-blade distance. A *low-profile* riving knife sits lower than the top edge of the blade, for making a non-through cut.

**Splitter (Spreader):** A stationary metal plate to which the blade guard is attached that maintains the kerf opening in the workpiece during a cutting operation.

**Standard Kerf:** 1/8" gap made with a standard blade.

**Straightedge:** A tool used to check that a surface is flat or parallel.

**Through Sawing:** A sawing operation in which the workpiece thickness is completely sawn through. Proper blade height usually allows 1/8" of the top of blade to extend above the wood stock. Keep the blade guard down, the anti-kickback pawls down, and the riving knife in place over the blade.

## 6.0 Specifications

Model number ..... PM1000

### Stock numbers:

Saw unit only, without Accu-Fence or rail system ..... 1791000  
 Saw with 30" Accu-Fence and rail system ..... 1791000K  
 Saw with 50" Accu-Fence and rail system ..... 1791001K

### Motor and electricals:

Motor type ..... totally enclosed fan cooled, induction, capacitor start  
 Horsepower ..... 1-3/4 HP  
 Phase ..... single  
 Voltage ..... 115/230V  
 Cycle ..... 60Hz  
 Listed FLA (full load amps) ..... 15/7.5 A  
 Motor speed ..... 3450 RPM  
 Starting amps ..... 74 A  
 Running amps (no load) ..... 2.7 A  
 Start capacitor ..... 300MFD, 125VAC  
 Run capacitor ..... 70µF, 250VAC  
 Overload reset ..... manual push button on motor  
 Power transfer ..... poly v-belt  
 On/off switch ..... magnetic, push button with safety key  
 Motor speed ..... 3450 RPM  
 Power cord ..... 14 AWG, 6 ft. (183 cm)  
 Power plug installed ..... yes  
 Recommended circuit size<sup>1</sup> ..... 20A  
 Sound emission ..... 80 dB at 30 " (762 mm) from blade, without load  
<sup>1</sup> *subject to local/national electrical codes.*

### Arbor and blade\*:

Blade diameter ..... 10" (254mm)  
 Arbor diameter ..... 5/8" (15.88mm)  
 Arbor speed ..... 4200  
 Arbor lock ..... yes  
 Arbor wrench included ..... combination 17 / 27 mm  
 Maximum depth of cut at 90 degrees ..... 3-1/8" (79 mm)  
 Maximum depth of cut at 45 degrees ..... 2-1/8" (54 mm)  
 Maximum rip to right of blade ..... 30" or 52"  
 Maximum rip to left of blade ..... 12" (305 mm)  
 Dado maximum width ..... 13/16" (20.6 mm)  
 Dado maximum diameter ..... 8" (200 mm)  
 Blade height per one revolution of handwheel ..... 19/64" (7.5mm) for 90°; 1/16" (1.7 mm) for 45°  
 Blade tilt ..... left, 0 to 45 deg.  
 \*blade not included

### Materials:

Main table ..... ground cast iron  
 Extension wings ..... ground cast iron  
 Trunnion ..... cast iron  
 Enclosed cabinet ..... steel

### Table:

Main table dimensions ..... 20" L x 27" W (508 x 686 mm)  
 Table dimensions with wings ..... 40" L x 27" W (1016 x 686 mm)  
 Table area in front of blade at maximum height ..... 10" (305 mm)  
 Table height from floor, approximate ..... 34-1/4" (870 mm)  
 Miter T-slot ..... two at 3/4" W x 3/8" D (19 x 10 mm)  
 Edge bevel ..... front

### Dimensions:

Cabinet footprint ..... 23" W x 24-1/2" L (584 x 622 mm)  
 Overall dimensions of shipping carton (cabinet only) ..... 30-1/2" L x 27-1/2" W x 43-3/4"H (77.5 x 70 x 111.4 cm)  
 Overall dimensions, fully assembled, accessories mounted:  
 with 30" rip ..... 43" W x 61" L x 44" H (1092 x 1549 x 1117 mm)  
 with 52" rip ..... 43" W x 83" L x 44" H (1092 x 2108 x 1117 mm)

Dust collection:

Dust port outside diameter .....	4" (100 mm)
Minimum extraction volume required .....	350 cfm (18 cmm)

Weights:

Saw Only (Net/Shipping) .....	289 lb (131 kg)
Saw assembled with 30" Rail/Fence .....	330 lb (150 kg)
Saw assembled with 52" Rail/Fence .....	335 lb (152 kg)

L=length; W=width; D=depth; H=height

The specifications in this manual were current at time of publication, but because of our policy of continuous improvement, Powermatic reserves the right to change specifications at any time and without prior notice, without incurring obligations.

## 7.0 Setup and assembly

### 7.1 Shipping contents

#### 7.1.1 Carton contents (Figure 1)

- 1 Cabinet saw
- 1 Guard assembly (A)
- 1 Miter gauge (B)
- 1 Anti-kickback pawl assembly (C)
- 1 Riving knife (D)
- 1 Arbor wrench (E)
- 2 Storage hooks (F)
- 1 Push stick (G)
- 2 Knobs (H)
- 2 Handles (I)
- 2 Handwheels (J)
- 1 Motor Cover (K)
- 1 Extension wing – Left (L)
- 1 Extension wing – Right (M)
- 1 Insert plate – (N)
- 1 Low profile riving knife – (P)
- 1 Hardware package
- 1 Warranty card
- 1 Operating Instructions and Parts Manual



Figure 1

#### 7.1.2 Hardware package (Figure 2)

- 6 Hex cap screws, M10x35 (HP-1)
- 6 Lock washers, M10 (HP-2)
- 6 Flat washers, M10 (HP-3)
- 4 Socket head button screws, M6x16 (HP-4)
- 4 Lock washers, M6 (HP-5)
- 4 Flat washers, M6 (HP-6)
- 3 Socket flat head screws, M6x10 (HP-7)

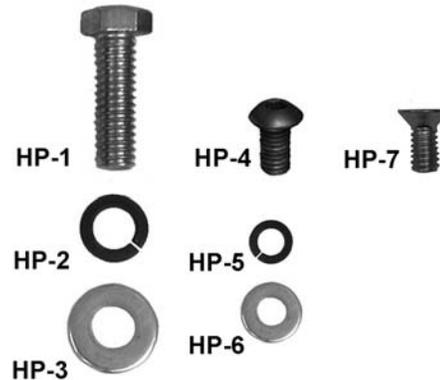


Figure 2

Note: Fence and rail assemblies, and wood extension tables and legs, are shipped in separate cartons.

**WARNING** Read and understand all assembly instructions before attempting assembly. The saw must be disconnected (unplug!) from power during assembly. Failure to comply may cause serious injury.

### 7.2 Tools required for assembly

- Hex keys – 3 and 4mm
- Open end wrenches – 14 and 17mm
- Cross point screwdriver
- Straight edge
- Rubber mallet (or hammer with block of wood)

Note: A ratchet wrench/socket set may speed assembly time. Additional tools may be needed for assembly of fence and rails – consult Accu-Fence manual.

### 7.3 Unpacking and cleanup

Remove all contents from shipping carton. Remove items from inside cabinet. Do not discard carton or packing material until saw is assembled and running satisfactorily.

Compare contents of your container with above parts lists to make sure all parts are intact. Missing parts, if any, should be reported to your distributor. (Check saw first in case parts were preinstalled.) Read instruction manual thoroughly for assembly, maintenance and safety instructions.

1. Remove screws holding saw to pallet, by unscrewing them from underneath pallet.
2. Carefully slide saw from pallet onto floor.

The cabinet saw should be placed in an area with a sturdy level floor, good ventilation and sufficient lighting. Leave enough space around the machine for mounting extension wings and rail assemblies, and loading and off-loading stock and general maintenance work.

Exposed metal surfaces, such as table top and extension wings, have been given a protective coating at the factory. This should be removed with a soft cloth moistened with kerosene or a cleaner-degreaser. Do not use acetone, gasoline, or lacquer thinner for this purpose. Do not use solvents on plastic parts, and avoid using an abrasive pad as it can scratch surfaces.

## 7.4 Installing handwheels and hooks

Refer to Figure 3.

1. Install handwheels (J, Figure 3) onto tilting and raising shafts, as shown. Fit the slot of handwheel hub onto roll pin on shaft, then secure by screwing on a locking knob (H).
2. Install handle (I) onto each handwheel, using 14mm wrench on the flat to tighten it.
3. Install storage hooks (F) with two button head screws and washers (HP-4/5/6). The hooks are used to store the Accu-Fence when it is not in use.
4. Tilt arbor using right handwheel, and remove Styrofoam packing from around motor.



Figure 3

## 7.5 Installing table extensions

Refer to Figure 4.

1. Attach an extension wing to saw table. *There is a left and a right version – make sure edge bevel on table extension faces front, to match that of saw table.* Use three screws, lock washers and flat washers (HP-1/2/3). Lightly snug screws with 17mm wrench.

(Assembly Tip: If you are doing this without an assistant, lift extension wing vertically to table

edge. Install center screw and washer, and make snug. Then pivot wing parallel to saw table to insert remaining two screws.)

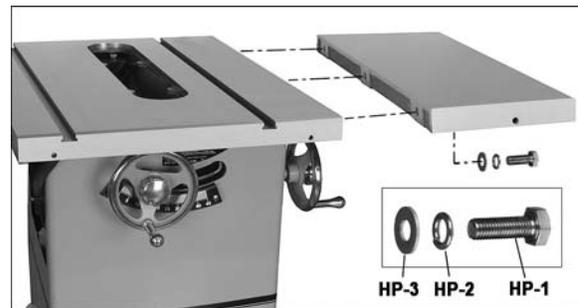


Figure 4

2. Repeat for opposite extension wing. Lightly snug screws.
3. The front edge of extension wings must be flush with front edge of saw table. If needed, tap front edge of wing with a rubber mallet to make flush. See Figure 5.



Figure 5

## 7.6 Leveling table extensions

Refer to Figure 6.

Level extension wings to saw table using a straight edge. A metal straight edge is ideal, though a carefully jointed board may also be used.



Figure 6

1. Shift extension wing so it is slightly above saw table surface.
2. Begin by tightening the three screws (17mm wrench) under the extension wing that secure it to saw table. Tighten these just enough to hold wing in place but loose enough to change wing height by tapping on it.
3. Lay straight edge (Figure 6) across saw table and extension wing, extending it out past edge of wing as shown.
4. Move straight edge to several places along wing, as you continue to nudge wing level with saw table. As each area of wing becomes flush with table, tighten the screw under that area. Continue until all three screws are fully tightened. NOTE: Make sure front edge of wing remains flush with front edge of saw table.
5. Repeat above steps for opposite extension wing.

## 7.7 Rails and Fence

With extension wings properly aligned, the rails and Accu-Fence® assembly can now be mounted to saw. Consult manual no. M-2195075Z, that accompanies the fence.

NOTE: The switch bracket must be mounted to front rail before installing guide tube. Follow instructions in section 7.8, then install guide tube.

## 7.8 Switch bracket

Refer to Figure 7.

After front rail has been installed, mount switch bracket with three flat head screws (HP-7).

Mount guide tube to front rail, referring to instructions in your Accu-Fence manual.

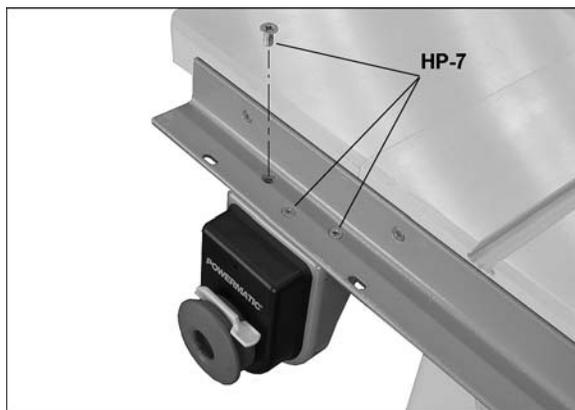


Figure 7

## 7.9 Wood Extension Table

For instructions on mounting the accessory wood extension table, consult Accu-Fence manual, document no. M-2195075Z.

## 7.10 Motor cover

Refer to Figure 8.

At the motor side, slide hinge pins through motor cover cylinders and into hinge barrels on saw. Close motor cover until it catches on latch post on saw.

**Note:** The catch mechanism may require slight adjustment to ensure proper alignment.

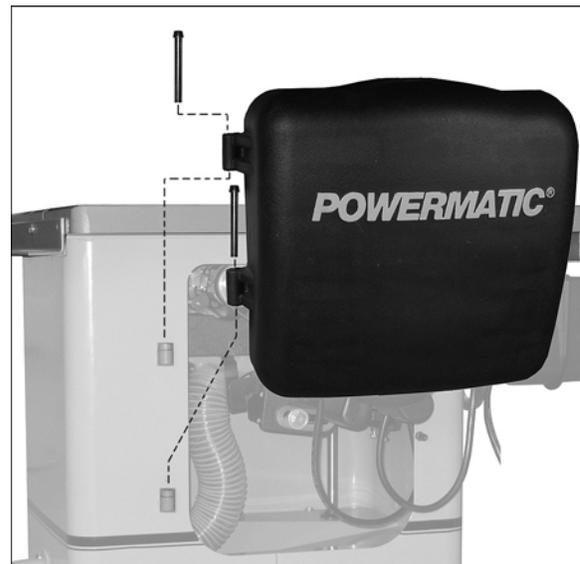


Figure 8

## 7.11 Table insert

Refer to Figure 9.

Push insert down into table opening. Verify that insert lies flush with table surface by resting a straight edge across it at various points. If insert is not flush along its length, turn any of six set screws to raise or lower that area of the insert.

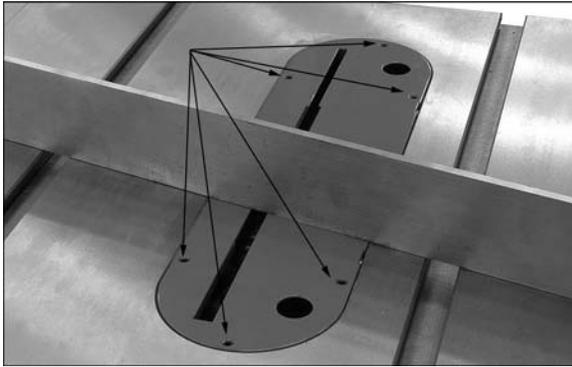


Figure 9

**NOTE:** If while lowering blade, the points on the anti-kickback pawls tend to catch in the seam between table and table insert, slightly raise that area of table insert above main table surface.

## 7.12 Installing and removing blade

A blade is not provided with the PM1000.

**CAUTION** Use care when working with or around sharp saw blades to prevent injury.

Refer to Figures 10 and 11.

1. Disconnect machine from power source.
2. Remove table insert.
4. Raise blade arbor all the way up, and set blade tilt to 0°. Tighten handwheel locking knob.
5. Press arbor lock pin (C) and rotate arbor to engage pin into slot in the arbor. Simultaneously remove arbor nut (A); loosen with arbor wrench if necessary.
6. Remove flange (B).
7. Install blade onto arbor, making sure the teeth point downward toward front of saw.
8. Install flange (B) and nut (A).
9. Engage arbor lock (C) and tighten nut (A) with provided arbor wrench.

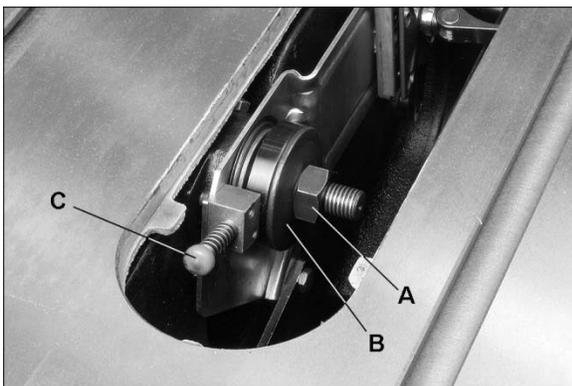


Figure 10

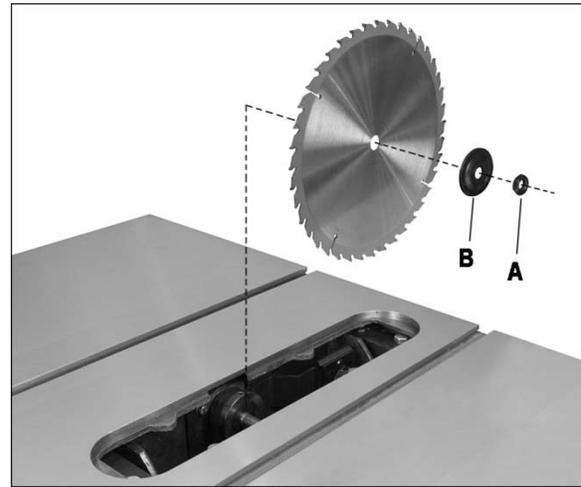


Figure 11 (blade not provided)

## 7.13 Riving knife

Refer to Figure 12.

To install riving knife:

1. Remove table insert.
2. Raise blade arbor all the way up and set tilt to 0° position.
3. Pull quick-release lever (G, Figure 12) to open position. The clamp plate (F) is spring loaded and will move away from the bracket (E), leaving a gap.

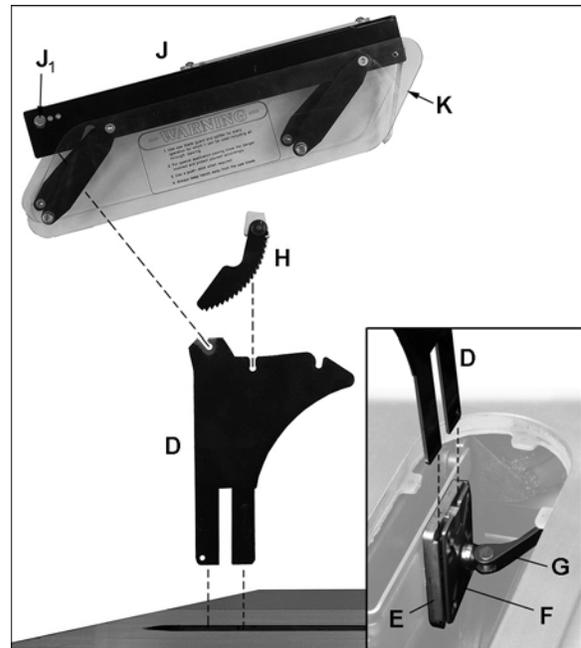


Figure 12

4. Slide prongs of riving knife (D) into slot between bracket (E, Figure 12) and clamp plate (F), and push riving knife down as far as it will go.
5. Push lever (G) to closed position.

6. Riving knife must be parallel to saw blade. See *section 9.6* for inspection and adjustments.

NOTE: A low-profile riving knife is also provided, for making non-through cuts on the table saw.

### 7.14 Anti-kickback pawls

Refer to *Figure 12*.

1. Install insert plate into table.
2. Position anti-kickback pawl assembly (H) as shown in *Figure 12*; the angled side of pawl block faces toward front of saw.
3. Lower pawl assembly onto center notch of riving knife, with pawls straddling knife. Push and hold button on pawl block (on opposite side of that shown in *Figure 12*), and push pawl block down until it securely engages in notch.
4. Allow pawls to drop freely to the table.

### 7.15 Blade guard

Refer to *Figure 12*.

1. Push and hold button (J<sub>1</sub>) at back end of guard.
2. Push guard (J) down at an angle, as shown, until pin engages rear slot in riving knife, then push down front of guard until it seats properly, and is parallel to table top.
3. Release button (J<sub>1</sub>). The transparent guard leaves (K) should drop freely to the table.
4. Lift up on guard assembly to verify proper seating.

NOTE: The transparent leaves can be kept in raised position by lifting them up and forward.

**⚠WARNING** Guard and pawl assemblies must be securely installed, and leaves must be in contact with table, before beginning any through-cutting operation.

The bracket and clamp plate (E/F, *Figure 12*) are adjusted at the factory and no further adjustment of the blade guard and riving knife assembly should be necessary. However, **proper alignment is very important**. Before operating table saw, read *section 9.6 ,Riving knife alignment*, to verify and follow adjustment procedure if necessary.

### 7.16 Dust chute

Use of a dust collection system (not provided) is strongly recommended during table saw operation. It will help keep the shop clean, as well as prevent potential health issues due to dust inhalation.

Attach dust collection hose to the 4-inch dust port at base of saw, and secure with a wire hose clamp (not provided).

## 8.0 Electrical connections

The PM1000 table saw is rated at 115/230V power, and is pre-wired for 115 volt. The table saw comes with a plug designed for use on a circuit with a *grounded outlet* that looks like the one pictured in *A*, *Figure 13*.

Before connecting to power source, be sure switch is in *off* position.

It is recommended that the table saw be connected to a dedicated 20 amp circuit with breaker or time-delay fuse marked "D". **Local codes take precedence over recommendations.**

### 8.1 Grounding instructions

#### 1. All Grounded, Cord-connected Tools:

In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

Do not modify the plug provided - if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

**⚠WARNING** Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded. Failure to comply may cause serious or fatal injury.

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug.

Repair or replace damaged or worn cord immediately.

## 2. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts:

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in **A**, Figure 13. An adapter, shown in **B** and **C**, may be used to connect this plug to a 2-pole receptacle as shown in **B** if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. *This adapter is not permitted in Canada.* The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

## 3. Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating between 150 - 250 volts, inclusive:

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in **D**, Figure 13. The tool has a grounding plug that looks like the plug illustrated in **D**. Make sure the tool is connected to an outlet having the same configuration as the plug. No adapter is available or should be used with this tool. If the tool must be reconnected for use on a different type of electric circuit, the reconnection should be made by qualified service personnel; and after reconnection, the tool should comply with all local codes and ordinances.

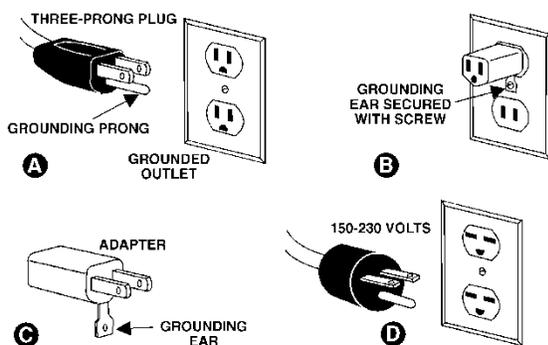


Figure 13

## 8.2 Voltage conversion

To switch the incoming power leads for 230 volt operation, follow wiring diagram on inside cover of motor junction box (A, Figure 14). A similar diagram is found in section 16.0 of this manual. (*In case of discrepancy, diagram in junction box takes precedence.*)

The plug on the end of the motor cord must be replaced with a UL/CSA listed plug rated for 230V.

## 8.3 Overload reset button

If saw becomes overloaded and the motor shuts off, open motor cover and push reset button (B, Figure 14) to restart. If overloading happens frequently, consult the Troubleshooting section in this manual.



Figure 14

## 8.4 Extension cords

USE PROPER EXTENSION CORD. Make sure your extension cord is in good condition. When using an extension cord, be sure to use one heavy enough to carry the current your product will draw. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating. Table 1 shows correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Ampere Rating		Volts	Total length of cord in feet			
More Than	Not More Than		25	50	100	150
120	240	AWG				
		18	16	16	14	
6	10	18	16	14	12	
10	12	16	16	14	12	
12	16	14	12	Not Recommended		

Table 1

Extension Cord Recommendations

## 8.5 Magnetic switch and safety key

Refer to Figure 15.

The start switch has a power indicator lamp which is on **whenever there is power connected** to the saw, not just when the saw is running. *Do not assume that no light means there is no power to the machine.* If the bulb is bad, there will be no indication. Always check before use.

**⚠WARNING** Do not rely that no light means no power to the machine. Always check for power first. Failure to comply may cause serious injury.

To start saw, pull red button. Push it back in to stop saw.

The switch has a safety key (Figure 15). Slide key out and store in a safe place, to prevent unauthorized starting of saw. Reinstall key to operate saw.

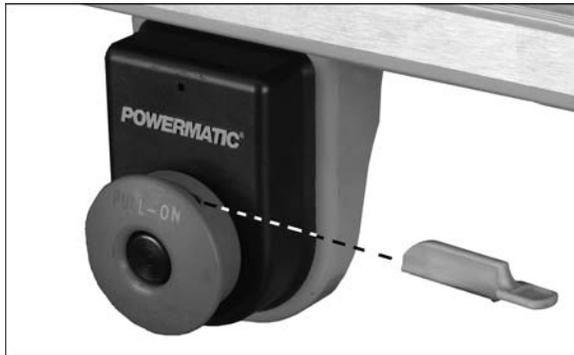


Figure 15

## 9.0 Adjustments

### 9.1 Tools required for adjustments

Hex keys – 3, 4, and 8mm  
Wrenches – 11 and 12mm  
Straight edge  
Combination square

**⚠WARNING** Disconnect saw from power source before making adjustments.

### 9.2 Fence alignment

Before using the Accu-Fence<sup>®</sup>, verify that it is properly aligned with the blade. Consult the manual, no. M-2195075Z, that accompanied the fence.

### 9.3 Blade raising/tilt mechanism

Refer to Figure 16:

To raise or lower blade, loosen *lock knob* (A) and turn *handwheel* (B) on front of saw until desired height is reached. Tighten lock knob. The blade should be adjusted about 1/8" above top surface of material being cut.

To tilt blade, turn *lock knob* (C) counter-clockwise to loosen, turn *handwheel* (D) until desired angle is obtained, as shown on tilt scale. Retighten *lock knob* (C).



Figure 16

### 9.4 Miter gauge

Refer to Figures 17 and 18.

#### 9.4.1 Setting miter angle

The precision miter gauge has a rack and pinion adjustment for setting the angle. To operate:

1. Slide miter gauge into one of the slots on table top.
2. Loosen lock handle (A, Figure 17) by turning counterclockwise.
3. Pull out spring-loaded knob (C) and rotate knob until body (B) of miter gauge is at desired angle as indicated on scale.
4. Tighten lock handle (A).

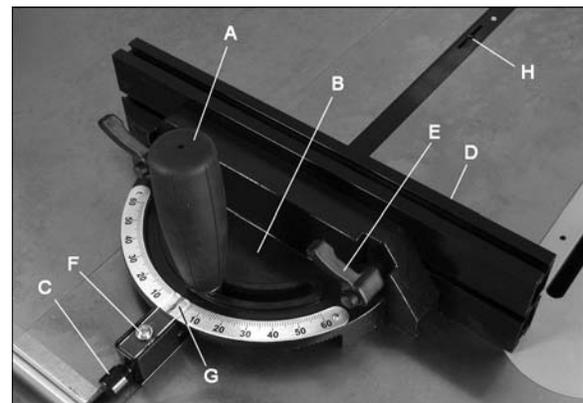


Figure 17

#### 9.4.2 Indent settings

There are indents at 0°, 30° and 45° right and left positions. At these settings, release knob (C) to engage stop rod. Then tighten lock handle (A).

**Note:** Do not rely solely on the indents for an accurate setting. After stop rod engages at the 0°, 30° and 45° positions, make a fine adjustment with the knob (C) if necessary, setting it against the scale indicator (G).

### 9.4.3 Extension plate

The extension plate (D, Figure 17) can be adjusted by sliding to the right or left or removed entirely.

To adjust, loosen two lock handles (E), slide the extension plate and retighten lock handles. **Make sure end of extension plate is not in blade path.**

NOTE: The lock handles (E) are adjustable. Pull out on handle, rotate it to different position, then release, making sure it seats itself upon the pin.

To remove extension plate, slide it completely off and remove lock handles (E) and mounting hardware.

### 9.4.4 Calibration

1. Place miter gauge into one of the slots on the table.
2. Set miter gauge at 90° to blade (0° setting on the scale) by loosening lock handle (A), then pulling out spring-loaded knob (C) and turning body (B) until 0° is indicated on scale.
3. Measure accuracy of miter gauge against slot with a combination square.

If adjustment is needed:

4. Adjust body (B) until it is square (90°) to miter slot.
5. Tighten lock handle (A).
6. Verify that *scale indicator* (G) reads 0°. If further adjustment is needed:
  7. Loosen screw (F) and adjust *indicator* (G) until it reads 0°.
  8. Tighten screw (F).
9. If the above procedure does not satisfactorily align the miter gauge, loosen two screws (J, Figure 18) beneath mounting block and shift block as needed. Retighten screws when finished.

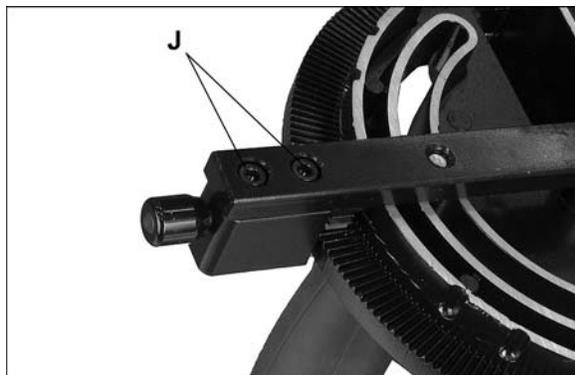


Figure 18

NOTE: The bar of the miter gauge has two slots with *set screws* (H, Figure 17). Adjust these set

screws (4mm hex key) to eliminate any play between bar and miter slot.

## 9.5 Blade tilt stop adjustment

The stops for 90°, 45° blade tilt, and elevation settings have all been factory set, and should require no immediate adjustment. The settings should be confirmed by the operator, however, and especially if cuts become inaccurate. Both tilt stops are located inside cabinet in front of the motor.

### 9.5.1 Tilt stop 90°

1. Disconnect machine from power source.
2. Make sure table insert has been leveled with table surface. See *section 7.11*.
3. Raise blade all the way, and place a 90° square on the table and against blade (Figure 19). Make sure that a blade tooth does not obstruct the actual reading.

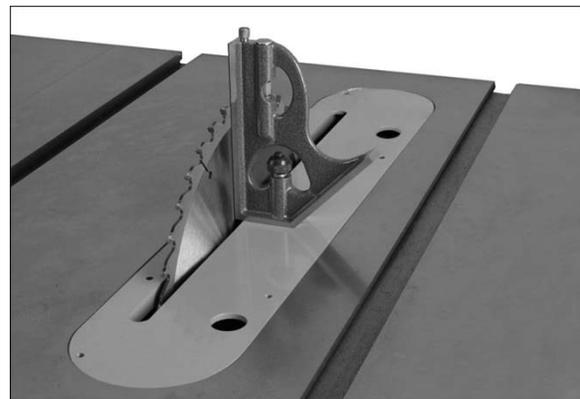


Figure 19

4. Tilt blade with handwheel until square and blade are flush.
5. If adjustment is required, loosen nut (A<sub>1</sub>, Figure 20) on 90° stop screw (A<sub>2</sub>) with a 12mm wrench, and turn screw to proper height. Verify setting and retighten nut.
6. Check pointer position (Figure 21). If needed, loosen screw and adjust pointer to zero. Retighten screw.

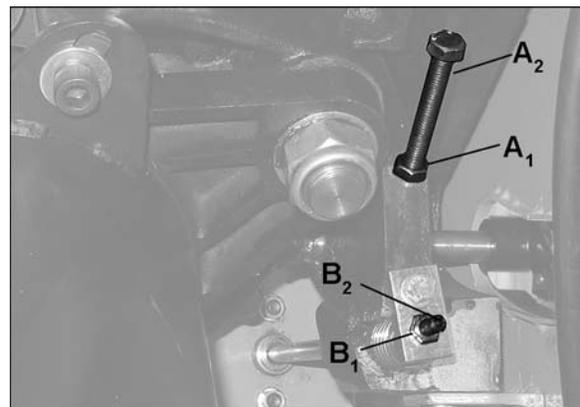


Figure 20

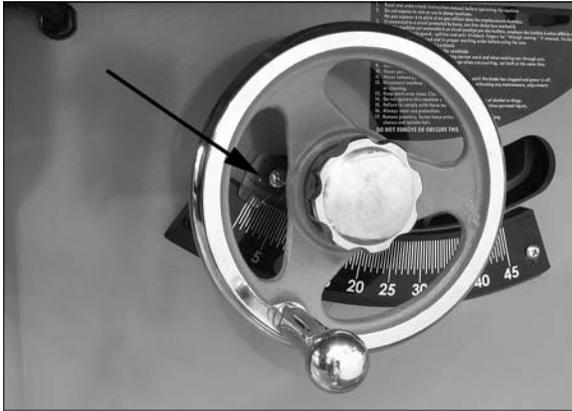


Figure 21

### 9.5.2 Tilt stop 45°

Repeat steps 1 through 4 above for 45° setting, as shown in Figure 22. Loosen nut (B<sub>1</sub>) with 11mm wrench, and turn set screw (B<sub>2</sub>) with a hex key the needed amount. Retighten nut (B<sub>1</sub>).

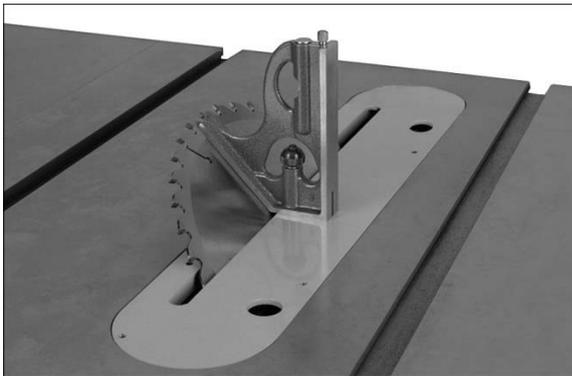


Figure 22

## 9.6 Riving knife alignment

### 9.6.1 Lateral alignment

The saw blade and riving knife must be in line as close as possible with each other (*lateral alignment*) for the prevention of kickback. Upon initial blade guard and riving knife installation no further adjustment should be necessary. Alignment should be checked and adjusted, if required, after each blade change.

Check the alignment as follows:

1. Remove blade guard, pawl assemblies, and table insert.
2. Place a straightedge (A, Figure 23) on the table so it rests against blade (B) and riving knife (C). Rotate blade so that top of blade tooth touches straightedge.

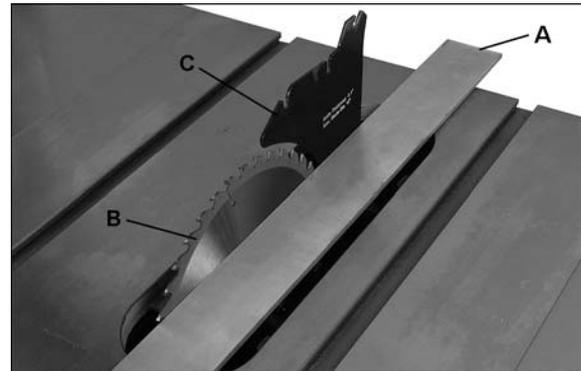


Figure 23

The saw blade and riving knife must be in line. If adjustment is needed:

3. Pull quick-release lever (A, Figure 24) and remove riving knife, making note as to which direction riving knife needs to be moved to align it with saw blade.
4. Use a 3mm hex key to make adjustments to four set screws (D, Figure 25) accessible through openings located in the corners of the clamp plate (B, Figure 25).
5. Adjust any number of setscrews required to bring riving knife in alignment with saw blade. Then reinsert riving knife, secure by tightening lever (A) and check the alignment per step 2.
6. Repeat steps 3–5 until alignment is correct.

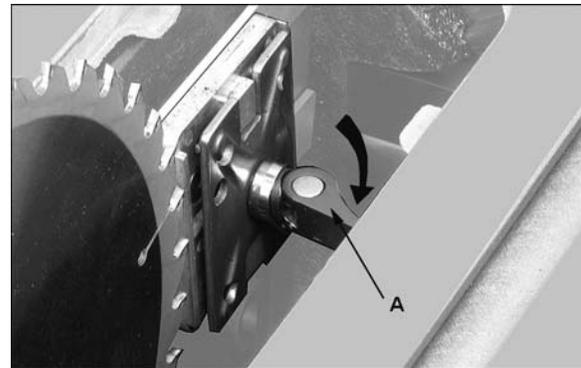


Figure 24

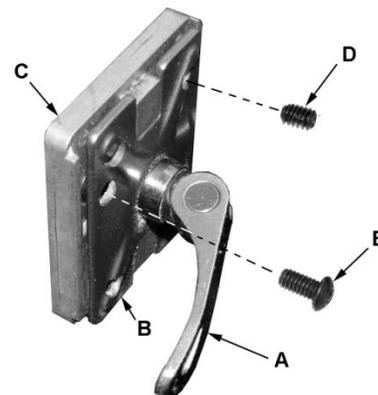


Figure 25

## 9.6.2 Blade proximity alignment

The gap between saw blade and riving knife must be between 3 and 8mm (Figure 26).

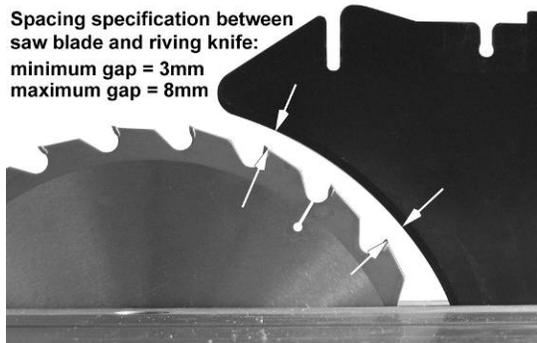


Figure 26

If adjustment is needed, note whether the blade to knife gap needs to be increased or decreased. Then adjust as follows:

Refer to Figure 25.

1. Remove blade guard, pawl, table insert and riving knife.
2. Use a 5mm hex key to loosen two socket head button screws (E, Figure 25).

**Note:** These screws are accessible through openings on the clamp plate (B) located diagonally on either side of the lever (A). They secure the bracket (C) to the riving knife carrier plate.

Loosening these screws (E) will allow the bracket (C) to slide back and forth on the carrier plate.

3. Slide the bracket (C) toward or away from the saw blade as required.
4. Tighten the socket head button screws (E).
5. Reinsert riving knife; tighten lock lever (A) and check that saw blade/knife gap is between 3-8mm (Figure 26).

**Note:** Attempt to make the gaps as even as possible.

## 9.7 Table to blade alignment

Refer to Figures 27 and 28.

The table has been squared to the blade by the manufacturer and no adjustment should be needed now. If cuts become inaccurate, check table/blade squareness and correct if necessary. Use the miter slot to do this:

1. Disconnect saw from power source.
2. Raise blade to maximum height.
3. Mark one tooth (A, Figure 27) with a grease pencil and position the tooth slightly above top edge of table at the front.

4. Raise miter gauge slightly out of its slot to serve as a shoulder. Using a sliding square (B) against the side of the bar, slide the scale over until it touches the tip of the blade, and lock scale in position.



Figure 27



Figure 28

5. Rotate marked tooth (A) so that it is slightly above table top at the rear and, using the square as before, verify that distance to blade is the same. See Figure 28. If the distances are not the same, make a careful note of the difference.
6. Loosen table screws (item #66, section 15.1.1), and nudge table according to the distance you noted.
7. Retighten screws firmly.
8. Verify alignment, angle pointer setting, fence setting, etc. Make any needed adjustments.

## 9.8 Belt adjustment

### 9.8.1 Belt tension

Refer to Figure 29.

Tension of the drive belt should be inspected after the first few days of operation, as it may stretch slightly during initial use; also inspect it periodically thereafter.

To tighten belt:

1. Disconnect machine from power source.
2. Loosen screw (C, Figure 29) with 8mm hex key.

3. Press down on motor while retightening screw (C).

If belt shows signs of wear, fraying, cracks, etc. it should be replaced, as follows.

### 9.8.2 Belt replacement

Refer to Figure 29.

1. Lower trunnion completely.
2. Loosen screw (C) with 17mm wrench.
3. Slightly loosen nut (D) with 1-1/4" (or adjustable) wrench.
4. Pivot motor upward to release tension on belt.
5. Replace belt.
6. Push down on motor and tighten screw (C) to tension new belt. Retighten nut (D).

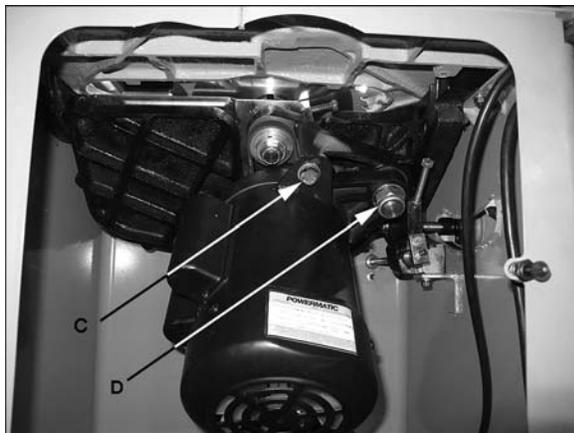


Figure 29

## 9.9 Arbor/Arbor Bearing Removal

The saw arbor is *press fitted* in the saw raising arm housing. If the arbor needs to be removed for bearing replacement, it should be done by a qualified service technician. Call your customer service representative at the phone number on the front cover.

## 10.0 Operations

Familiarize yourself with the location and operation of all controls and adjustments and the use of accessories such as miter gauge and rip fence.

Note: The following figures may or may not show your exact saw model, but procedures are identical.

### 10.1 Kickback prevention

Serious injury can result from kickbacks which occur when a workpiece binds on the saw blade or binds between the blade and rip fence or other fixed object. This binding can cause the workpiece to lift up and be thrown toward the operator.

Listed below are conditions which can cause kickbacks:

- Confining the cutoff piece when crosscutting or ripping.
- Releasing workpiece before completing operation or not pushing workpiece all the way past saw blade.
- Not using splitter/riving knife when ripping or not maintaining alignment of splitter/riving knife with saw blade.
- Using dull saw blade.
- Not maintaining alignment of rip fence so that it tends to angle toward rather than away from saw blade front to back.
- Applying feed force when ripping to the cutoff (free) section of workpiece instead of the section between saw blade and fence.
- Ripping wood that is twisted (not flat), or does not have a straight edge, or has twisted grain.

To minimize or prevent injury from kickbacks:

- Avoid conditions listed above.
- Wear a safety face shield, goggles, or safety glasses.
- Do not use miter gauge and rip fence in the same operation unless provision is made by use of a facing board on the fence, to allow the cutoff section of workpiece to come free before the actual cut begins (See Figure 37).
- As the machine receives use, the operation of the anti-kickback pawls should be checked periodically (Figure 30). If the pawls do not stop the reverse motion of a workpiece, sharpen all the points.

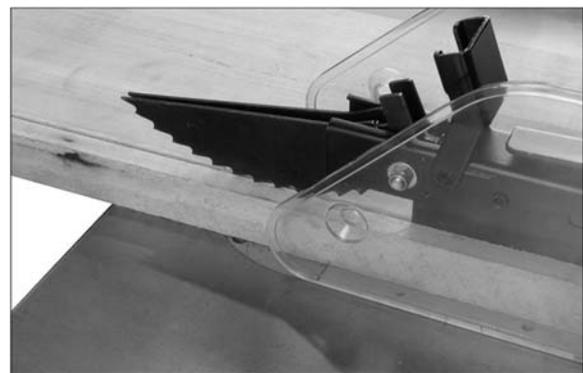


Figure 30

- Where possible, keep your face and body out of line with potential kickbacks, including when starting or stopping the machine.
- Dull, badly set, improper, or improperly filed cutting tools, and cutting tools with gum or resin adhering to them can cause

accidents. Never use a cracked saw blade. The use of a sharp, well maintained, and correct cutting tool for the operation will help avoid injuries.

- ❑ Support the work properly and hold it firmly against gauge or fence. Use a push stick or push block when ripping short, narrow (6" width or less), or thin work. Use a push block or miter gauge hold-down when dadoing or molding.
- ❑ Never use the fence as a length stop when crosscutting. Do not hold or touch the free end or cutoff section of a workpiece. On through-sawing operations, the cutoff section must NOT be confined.
- ❑ Always keep your hands out of line of the saw blade and never reach back of the cutting blade with either hand to hold the workpiece.
- ❑ Bevel ripping cuts should always be made with the fence on the right side of saw blade so that the blade tilts away from the fence and minimizes possibility of the work binding and the resulting kickback.

## 10.2 Rip sawing

Ripping is feeding the workpiece with the grain into the saw blade using the fence or other positioning device as a guide to ensure desired width of cut (Figure 31).

**⚠WARNING** Before starting a ripping cut, verify that fence is clamped securely and aligned properly.

- ❑ Never rip freehand or use miter gauge in combination with the fence.
- ❑ Never rip workpieces shorter than the saw blade diameter.
- ❑ Never reach behind the blade with either hand to hold down or remove the cutoff piece with the saw blade rotating.



Figure 31

Always use blade guard, splitter/riving knife and anti-kickback pawls. Make sure splitter/riving knife

is properly aligned. When wood is cut along the grain, the kerf tends to close and bind on the blade and kickbacks can occur.

Note: A warning decal is affixed to the guard to remind the operator of some basic safety procedures.

The *rip fence* (A, Figure 32) should be set for the width of the cut by using the scale on the front rail, or by measuring the distance between blade (A) and fence (B). Stand out of line with saw blade and workpiece to avoid sawdust and splinters coming off the blade or a potential kickback.

If the work piece does not have a straight edge, nail an auxiliary straight edged board on it to provide one against the fence. To cut properly, the board must make good contact with the table. Do not attempt to cut warped boards.

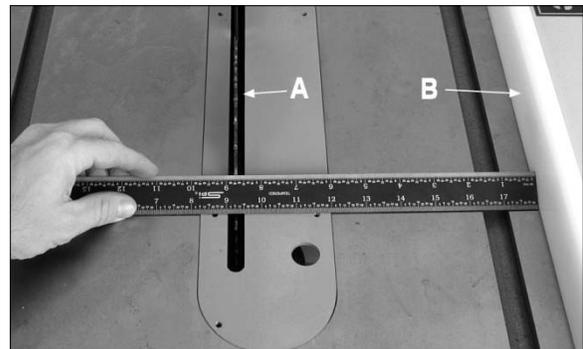


Figure 32

In ripping, use one hand to hold the board down against the fence or fixture, and the other to push it into the blade between blade and fence. If workpiece is narrower than 6" or shorter than 12", use a push stick or push block to push it through between fence and blade (Figure 33). Never push in a location such that the pushing hand is in line with the blade. Move the hand serving as a hold-down a safe distance from blade as cut nears completion.

For very narrow ripping where a push stick cannot be used, use a push block or auxiliary fence. Always push the workpiece completely past the blade at the end of a cut to minimize the possibility of a kickback.

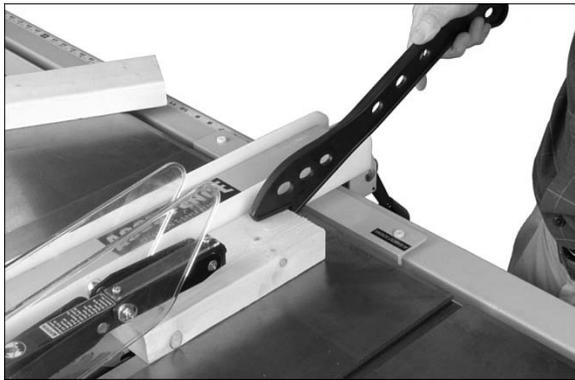


Figure 33

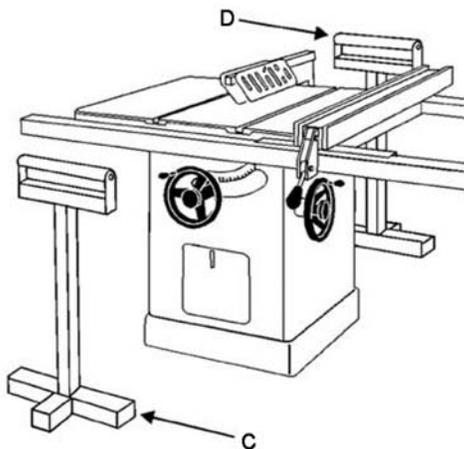


Figure 34

When ripping long boards, use a support at front of table (C, Figure 34), such as a roller stand, and a support or "tailman" at the rear (D).

Never use the rip fence beyond the point where the carriage is flush with the end of the rails.

Have the blade extend about 1/8" above the top of the workpiece. Exposing the blade above this point can be hazardous.

### 10.3 Resawing

Resawing is a ripping operation in which thick boards are cut into thinner ones. Note: A band saw is the ideal tool for resawing.

**⚠ WARNING** If the table saw is used for resawing, take precautions such as using an auxiliary fence, resaw barrier or similar devices to stabilize the workpiece and provide operator safety.

Narrow boards up to 3" can be resawn in one pass. Wider boards up to 6" must be resawn in two passes.

In resawing wider boards, adjust the blade height so as to overlap the two cuts by 1/2" as shown in Figure 35. Too deep a first cut can result in binding and possible kickbacks on the second cut. Always

use the same side of the board against the fence for both cuts.

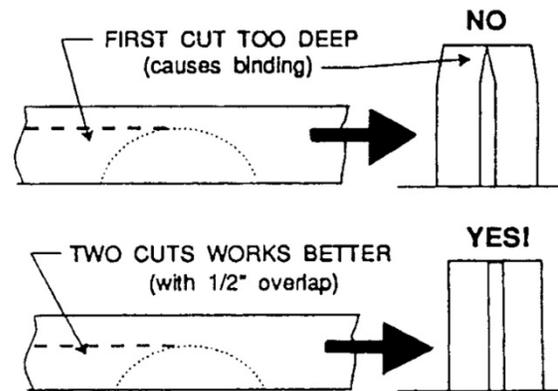


Figure 35

### 10.4 Crosscutting

Crosscutting is where the workpiece is fed cross grain into the saw blade using the miter gauge to support and position the workpiece (Figure 36).



Figure 36

Crosscutting should **never** be done freehand nor should the fence be used as an end stop unless an auxiliary block (E, Figure 37) is clamped to the front of the blade area such that the cutoff piece comes free of the block before cutting begins.

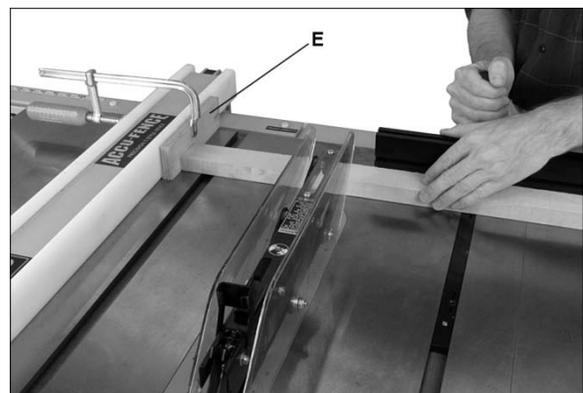


Figure 37

Length stops should not be used on the free end of the workpiece in the cutoff area.

Do **not** crosscut workpieces shorter than 6". Before starting a cut, be sure the miter gauge is securely clamped at the desired angle. Hold the workpiece firmly against the table and back against the miter gauge. **Always** use the saw guard and riving knife and make sure the riving knife is properly aligned.

For 90 degree crosscutting, most operators prefer to use the left-hand miter gauge slot. When using it in this position, hold the workpiece against the gauge with the left hand and use the right hand to advance the workpiece. When using the right hand slot for miter and compound crosscutting so that the blade tilts away from the gauge, the hand positions are reversed.

When using the miter gauge, the workpiece must be held firmly and advanced smoothly at a slow rate. If the workpiece is not held firmly, it can vibrate causing it to bind on the blade and dull the saw teeth.

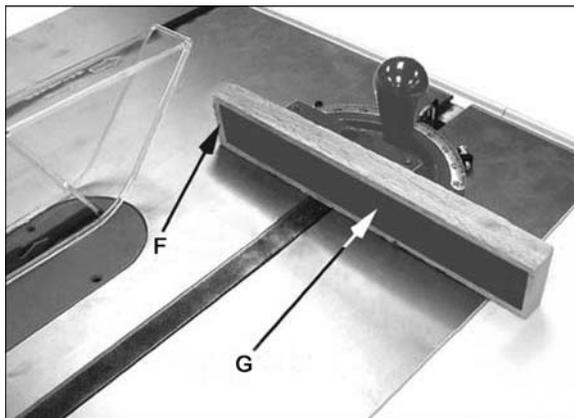


Figure 38

To augment the effectiveness of the miter gauge in crosscutting, some users mount an auxiliary wooden extension face (F, Figure 38) with a glued-on strip of sandpaper (G) to the miter gauge.

Provide auxiliary support for any workpiece extending beyond the table top with a tendency to sag and lift up off the table.

Have the blade extend about 1/8" above the top of the workpiece. Exposing the blade above this point can be hazardous.

### 10.5 Bevel and miter operations

**Bevel cut** – A bevel cut is a special type of operation where the saw blade is tilted at an angle less than 90 degrees to the table top (Figure 39). Operations are performed in the same manner as ripping or crosscutting, except the fence or miter gauge should be used on the right-hand side of the blade to provide added safety in avoiding a binding action between blade and table top. When beveling with the miter gauge, the workpiece must be held firmly to prevent creeping.

**CAUTION** Never use a zero-clearance insert with saw blade in tilted position.



Figure 39

**Mitering** – Crosscuts made at an angle to the edge of the workpiece are called miters (Figure 40). Set the miter gauge at the required angle, and make the cut the same as a normal crosscut except the workpiece must be held extra firmly to prevent creeping.



Figure 40

**Note:** When making compound miters (with blade tilted) use the miter gauge in the **right** hand slot to provide more hand clearance and safety.

Have the blade extend only 1/8" above the top of the workpiece. Exposing the blade above this point can be hazardous.

### 10.6 Dado cutting

Dadoing is cutting a wide groove into a workpiece or cutting a rabbet along the edge of a workpiece. A dado insert (optional accessory, not provided) shown in Figure 41, is necessary for this type of operation.

**CAUTION** Do not use the standard table insert for dadoing operations.



Figure 41

The process of cutting 1/8" to 13/16" grooves in workpieces is accomplished by the use of a stacked dado blade set or an adjustable type blade mounted on the saw arbor. By using various combinations of stacked dado blades, or properly setting the dial on an adjustable blade, an accurate width dado can be made. This is very useful for shelving, making joints, tenoning, etc.

The guard, riving knife, and anti-kickback pawls supplied with the saw should be used for all cutting operations where they can be used. When performing operations where the guard cannot be used, as in some dadoing operations, alternative safety precautions should be taken. These include push sticks, feather boards, filler pieces, fixtures, jigs and any other appropriate device that can be utilized to keep operators' hands away from the blade. Upon completion of the operation requiring removal of the guard, the entire guard assembly must be placed back on the machine in its proper working order.

**CAUTION** Never use a dado head in a tilted position. Never operate the saw without the blade guard, riving knife and anti-kickback pawls for operations where they can be used.

## 11.0 Safety devices

### Feather board

Feather boards can be purchased at most tool stores, or made by the operator to suit particular applications. The feather board (Figure 42) should be made of straight grain hardwood approximately 1" thick and 4" to 8" wide depending on the size of the machine. The length is developed in accordance with intended use.

Feather boards can be fastened to the table or rip fence by use of C-clamps. Alternatively, drilled and tapped holes in the table top allow the use of wing nuts and washers as a method of clamping. If this method of fastening is used, provide slots in the feather board for adjustment. (The illustration shows a method of attaching and use of the feather board as a vertical comb. The horizontal application is essentially the same except that the attachment is to the table top.)

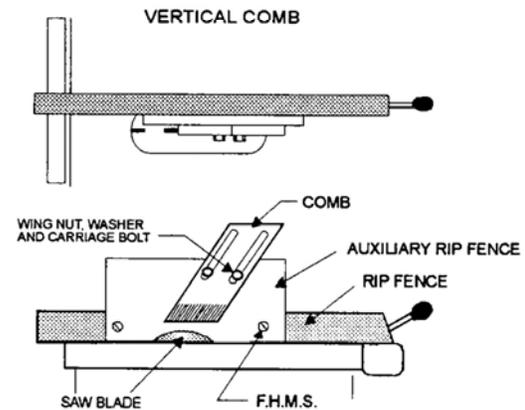
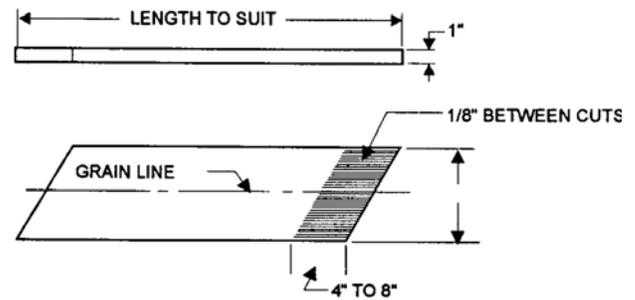


Figure 42

### Filler piece

A filler piece (Figure 43) is necessary for narrow ripping and permits the blade guard to remain on the machine. It also provides space for the safe use of a push stick.

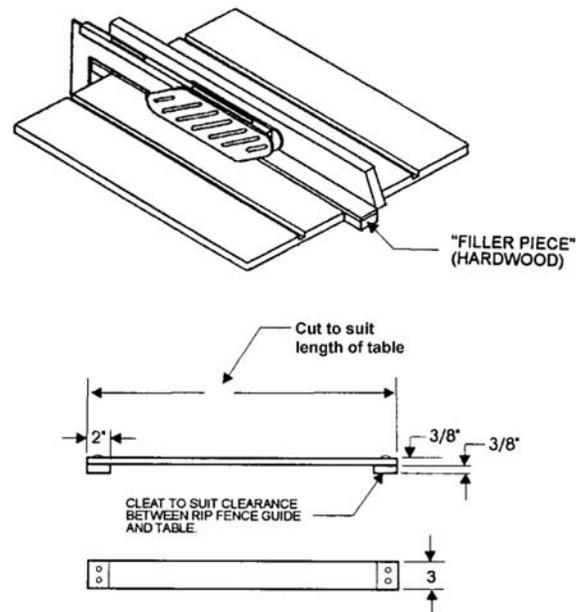


Figure 43 – Filler Piece

## Push stick and push block

The use of a push block or push stick provides an added level of safety for the operator. A push stick is included with your table saw, but you may wish to make others personalized for different cutting procedures. The templates in Figures 44 and 45 offer construction details.

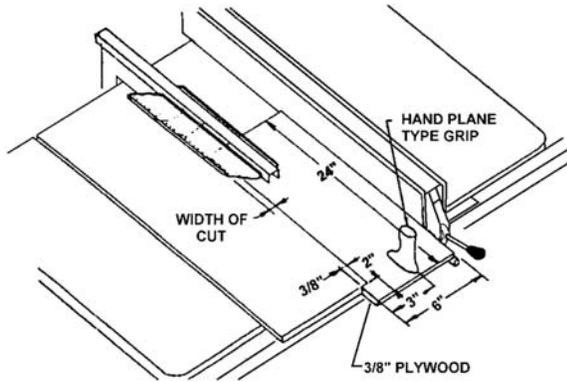


Figure 44 – Push Block Template

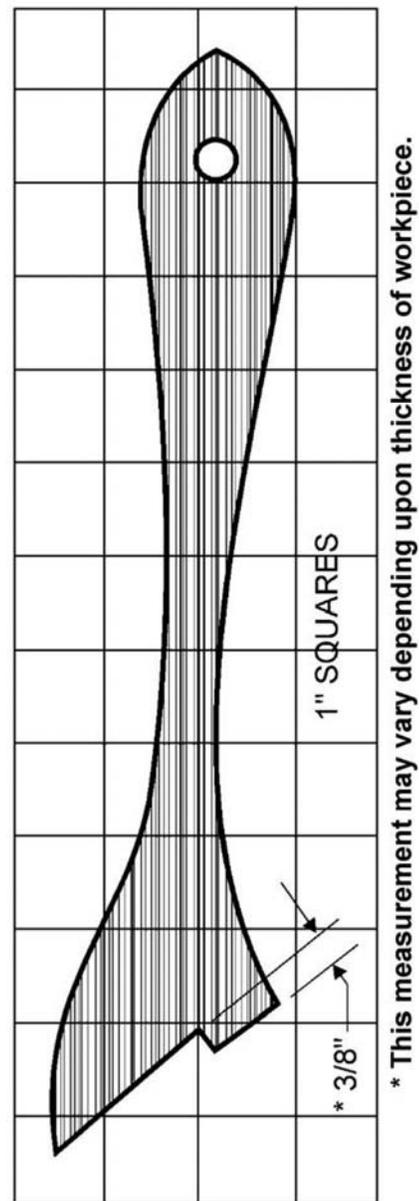


Figure 45 – Push stick template

\* This measurement may vary depending upon thickness of workpiece.

## 12.0 Maintenance

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

### 12.1 Cleaning

**Note:** The following maintenance schedule assumes the saw is being used every day.

#### Daily:

- Wipe down the table surface and T-slots with a rust preventive.
- Clean pitch and resin from the saw blade.

#### Weekly:

- Table surface must be kept clean and free of rust for best results. To facilitate this, apply a coat of paste wax to the surface. Alternatively, commercial spray protectants are available from local hardware and tool stores. A good protectant should provide rust protection for the surface without staining workpieces.
- Clean the motor housing with compressed air.
- Wipe down the fence rails with a dry silicon lubricant.

#### Periodic:

- Keep the inside of the cabinet and trunnion area clean.
- Check for excessive play in the tilting and raising mechanism and in the saw arbor and adjust as required.
- Check for belt tension and wear. Adjust or replace belt as required.

### 12.2 Lubrication

- Grease the tilting worm gear, raising worm gear, and the trunnion areas with a good grade non-hardening grease.
  - Check all adjustments after lubricating.

### 12.3 Miscellaneous

Always be aware of the condition of your machine. Routinely check the condition of the following items and repair or replace as necessary:

- Mounting bolts
- Power switch
- Saw blade
- Blade guard assembly

## 13.0 Optional accessories

These accessory items (purchased separately) can enhance the functionality of your table saw. Contact your dealer to order, or call Powermatic at the phone number on the cover.



Figure 46 # 708097 – Dado Insert



Figure 47 # 708119 – Universal Mobile Base, adjustable up to 36" x 36"  
# 708158 – Mobile Base Extension Kit



Figure 48 # 708295 – Tenoning Jig



Figure 49 # 1791793 – Low Profile Thin Kerf Riving Knife (0.079")

## 14.0 Troubleshooting the PM1000 Cabinet Saw

Table 2

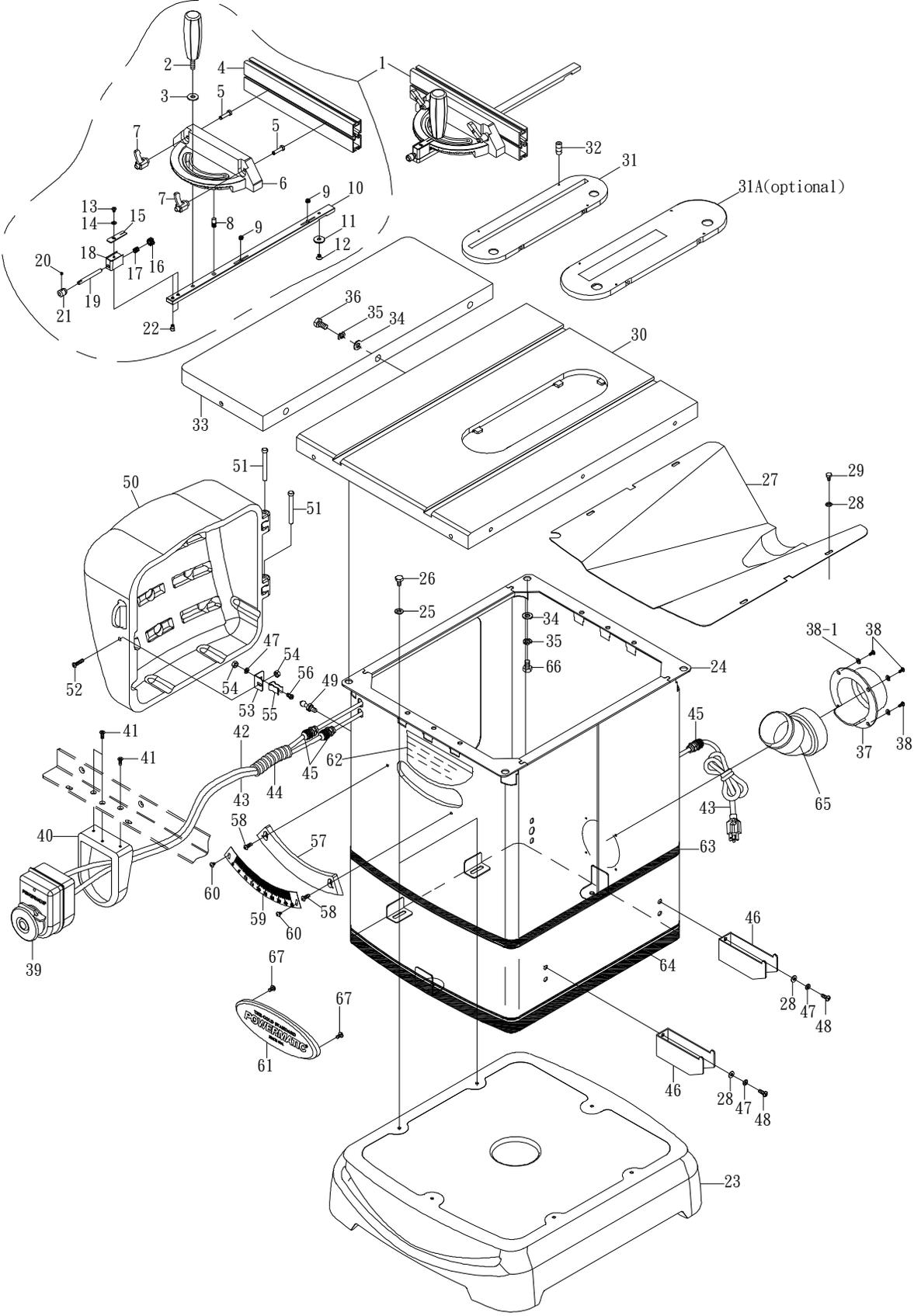
Symptom	Probable Cause	Remedy
Saw will not start.	No incoming power.	Check plug connection.
	Low voltage.	Check power line for proper voltage.
	Open circuit in motor or loose connection.	Inspect all lead connections on motor for loose or open connections.
	Cord damaged.	Replace cord.
Saw will not start: fuse blows or breaker trips.	Short circuit in line cord or plug.	Inspect cord or plug for damaged insulation and shorted wires.
	Short circuit in motor or loose connections.	Inspect all connections on motor for loose or shorted terminals or worn insulation.
	Incorrect fuses or circuit breakers in power line.	Install correct fuses or circuit breakers.
Motor starts slowly or fails to reach full speed.	Low voltage.	Request voltage check from power company and correct low voltage condition.
	Power line overloaded.	Correct overload condition.
	Undersized wires in supply system.	Increase supply wire size.
	Centrifugal switch not operating.	Replace centrifugal switch (qualified personnel only).
	Motor malfunction.	Have motor checked by a qualified inspector. Repair or replace.
Motor overheats.	Motor overloaded.	Reduce load on motor.
	Improper cooling of motor; lack of air circulation.	Clean sawdust from fan and duct areas of motor.
Motor stalls, resulting in blown fuses or tripped breaker.	Motor overloaded.	Reduce load on motor.
	Short circuit in motor or loose connections.	Inspect connections on motor for loose or shorted terminals or worn insulation.
	Low voltage.	Correct low voltage conditions.
	Incorrect fuses or circuit breakers in power line.	Install correct fuses or circuit breakers.
Motor stalls or workpiece binds or burns.	Excessive feed.	Reduce feed.
	Dull or incorrect blade.	Replace blade; use proper type of blade for cut needed.
	Miter slot misaligned.	Realign table to blade.
	Fence misaligned.	Realign fence (see Accu-Fence manual).
	Motor malfunction.	Have motor checked by a qualified inspector. Repair or replace.
Machine slows or stalls when operating.	Applying too much pressure to workpiece.	Feed workpiece more slowly.
	Poly-v drive belt is loose.	Tighten belt.
Loud, repetitive noise coming from machine.	Pulley setscrews or keys are missing or loose.	Inspect keys and setscrews. Replace or tighten if necessary.
	Motor fan is hitting the cover.	Tighten fan or shim cover.
	V-belt is defective.	Replace V-belt.

Symptom	Probable Cause	Remedy
Excessive vibration.	Tilting or raising lock knobs not tightened.	Tighten lock knobs on handwheels
	Machine not resting evenly on floor.	Make sure floor is level; use shims beneath cabinet if needed.
	Blade out of balance.	Replace blade.
	Pulley loose.	Check motor pulley and spindle pulley. Tighten set screws if needed.
	Belt is worn, cracked or frayed.	Replace belt.
	Motor not functioning properly.	Have motor checked by a qualified inspector. Repair or replace.
Blade not square with miter slot, or fence not square to blade.	Blade is warped.	Replace saw blade.
	Table top not parallel to blade.	Adjust table parallel to blade.
	Fence not parallel to blade.	Adjust fence parallel to blade.
Blade does not reach 90 degrees.	90 degree stop is out of adjustment.	Adjust 90 degree stop.
	Pointer bracket is hitting before the blade reaches 90 degrees.	File down the right side of pointer bracket until blade can reach 90 degrees.
Cuts out-of-square when crosscutting.	Miter gauge out of adjustment.	Re-set stops and pointer on gauge.
	Miter slot misaligned.	Realign table to blade.
Cuts not true at 90 or 45 degrees.	Stop screws not set properly.	Readjust screws.
Tilting or raising handwheel difficult to turn.	Lock knob not released.	Loosen lock knob.
	Worm and trunnion segment caked with sawdust and pitch.	Clean and re-grease worm and segment.
	Worm and trunnion segment out of alignment.	Realign worm with segment.

## 15.0 Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday (see our website for business hours, [www.powermatic.com](http://www.powermatic.com)). Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

# 15.1.1 PM1000 Table and Cabinet Assembly – Exploded View

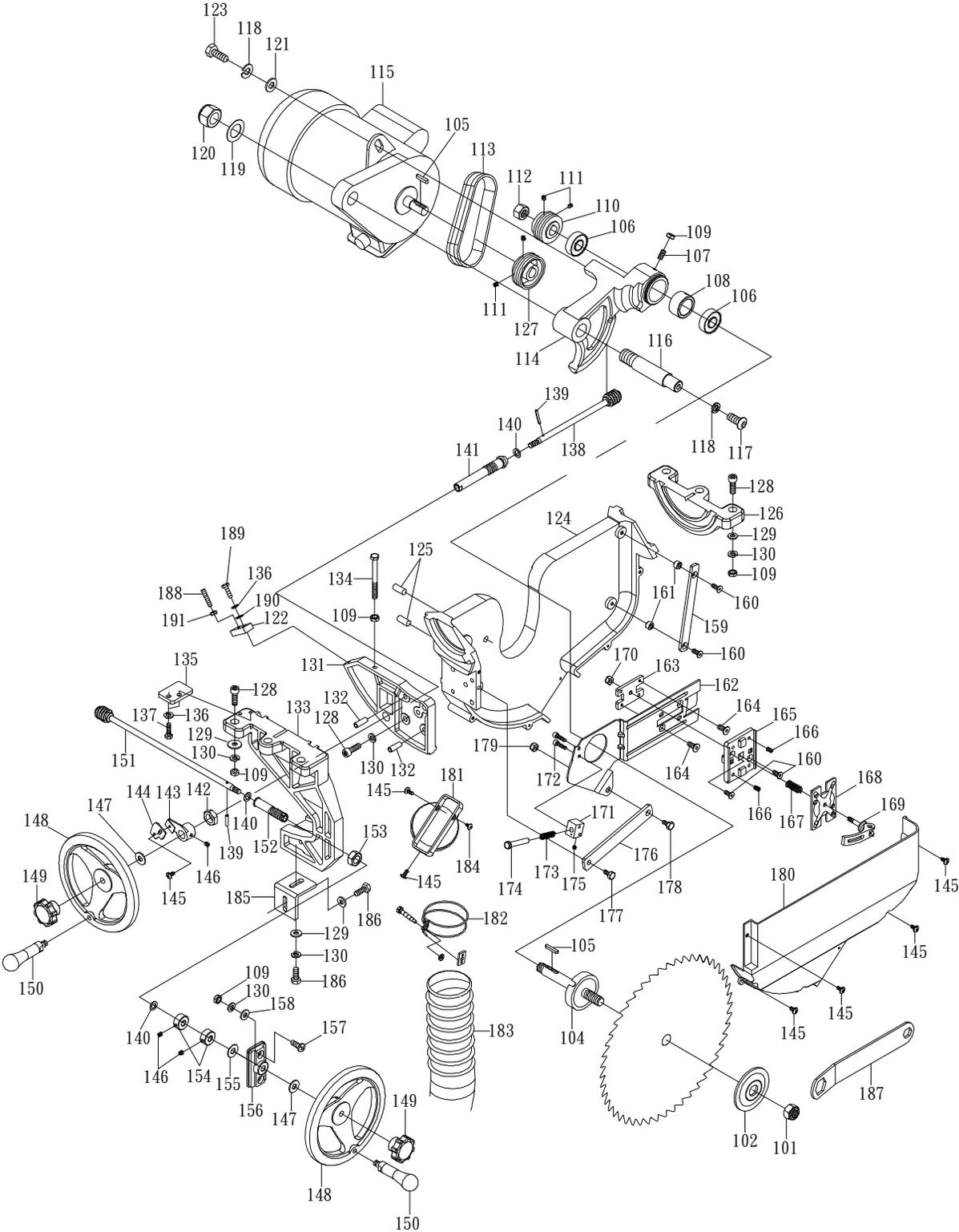


## 15.1.2 PM1000 Table and Cabinet Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	1791789	Miter Gauge Assembly (index #2 thru 22)		1
2	PM2000-340	Handle		1
3	TS-0680031	Flat Washer	5/16"	1
4	PM2000-342	Fence		1
5	TS-0050051	Hex Cap Screw	1/4"-20 x 1"	2
6	PM2000-323	Miter Gauge Body		1
7	PM2000-333	Locking Handle		2
8	PM2000-324	Pin		1
9	PM2700-126	Socket Set Screw	M8-1.25P x 5	2
10	PM2000-325	Miter Bar		1
11	PM2000-326	Guide Washer		1
12	PM2000-327	Flat Head Machine Screw	M6-1.0P x 9	1
13	TS-0810012	Round Head Screw	#10-24 x 1/4"	1
14	TS-1550031	Flat Washer	M5	1
15	PM2000-335	Pointer		1
16	PM2700-133	Gear		1
17	PM2000-336	Spring		1
18	PM2000-330	Support Base		1
19	PM2000-337	Gear Shaft		1
20	TS-1521011	Socket Set Screw	M4-0.7P x 4	1
21	PM2000-331	Knob		1
22	PM2000-329	Hex Socket Cap Screw	M5-0.8P x 8	2
23	PM1000-023	Base		1
24	PM1000-024	Cabinet		1
25	TS-1550061	Flat Washer	M8	6
26	TS-2228161	Hex Cap Screw	M8 x 16	6
27	PM1000-027	Lower Panel		1
28	TS-1550041	Flat Washer	M6	8
29	TS-1482011	Hex Cap Screw	M6 x 10	4
30	PM1000-030	Table		1
31	PM1000-031	Table Insert		1
31A	708097	Dado Insert (Optional)		1
32	TS-0267021	Socket Set Screw	1/4" x 1/2"	6
33	PM1000-033	Extension Wing		2
34	TS-1550071	Flat Washer	M10	10
35	TS-2361101	Lock Washer	M10	10
36	TS-149105	Hex Cap Screw	M10 x 35	6
37	PM2000-132	Dust Chute		1
38	PM1000-038	Button Head Socket Screw	M6 x 8	4
38-1	TS-0720081	Lock Washer	5/16	4
39	PM1000-039	ON/OFF Magnetic Switch		1
40	PM1000-040	Switch Plate		1
41	TS-2246101	Socket Head Flat Screw	M6 x 10	3
42	PM1000-042	Motor Cord (Switch to motor)	14AWG x 3C	1
43	PM1000-043	Power Cord	14AWG x 3C	1
44	PM1000-044	Power Cord Sleeve		1
45	PM1000-045	Cable Gland	PG11	3
46	PM1000-046	Hook		2
47	TS-2361061	Lock Washer	M6	5
48	TS-1534052	Pan Head Screw	M6 x 16	4
49	PM1000-049	Latch Post		1
50	1791002	Motor Cover Assembly (includes #47,49-56)		1
51	PM1000-051	Hinge Pin		2
52	TS-2246202	Button Head Socket Screw	M6 x 20	1
53	PM1000-053	Bracket		1
54	TS-1540041	Hex Nut	M6	2
55	PM1000-055	Latch Clip		1
56	TS-2246101	Pan Head Screw	M6 x 10	1
57	PM1000-057	Scale Base		1
58	TS-2246102	Button Head Socket Screw	M6 x 10	2

Index No.	Part No.	Description	Size	Qty
59	PM1000-059	Tilt Angle Scale		1
60	TS-1533032	Pan Head Screw	M5 x 10	2
61	PM2000-05	Powermatic Logo		1
62	LM000636	Warning Label		1
63	PM2700-441	Top Stripe	40"L	2
64	PM2700-440	Bottom (wide) Stripe	40"L	2
65	PM2000-121	Dust Port		1
66	TS-1482011	Hex Cap Screw	M10 x 20	4
67	TS-0254011	Button Head Socket Screw	1/4" x 3/8"	2
	PM2000-135	Push Stick (not shown)		1

# 15.2.1 PM1000 Motor and Trunnion Assembly – Exploded View

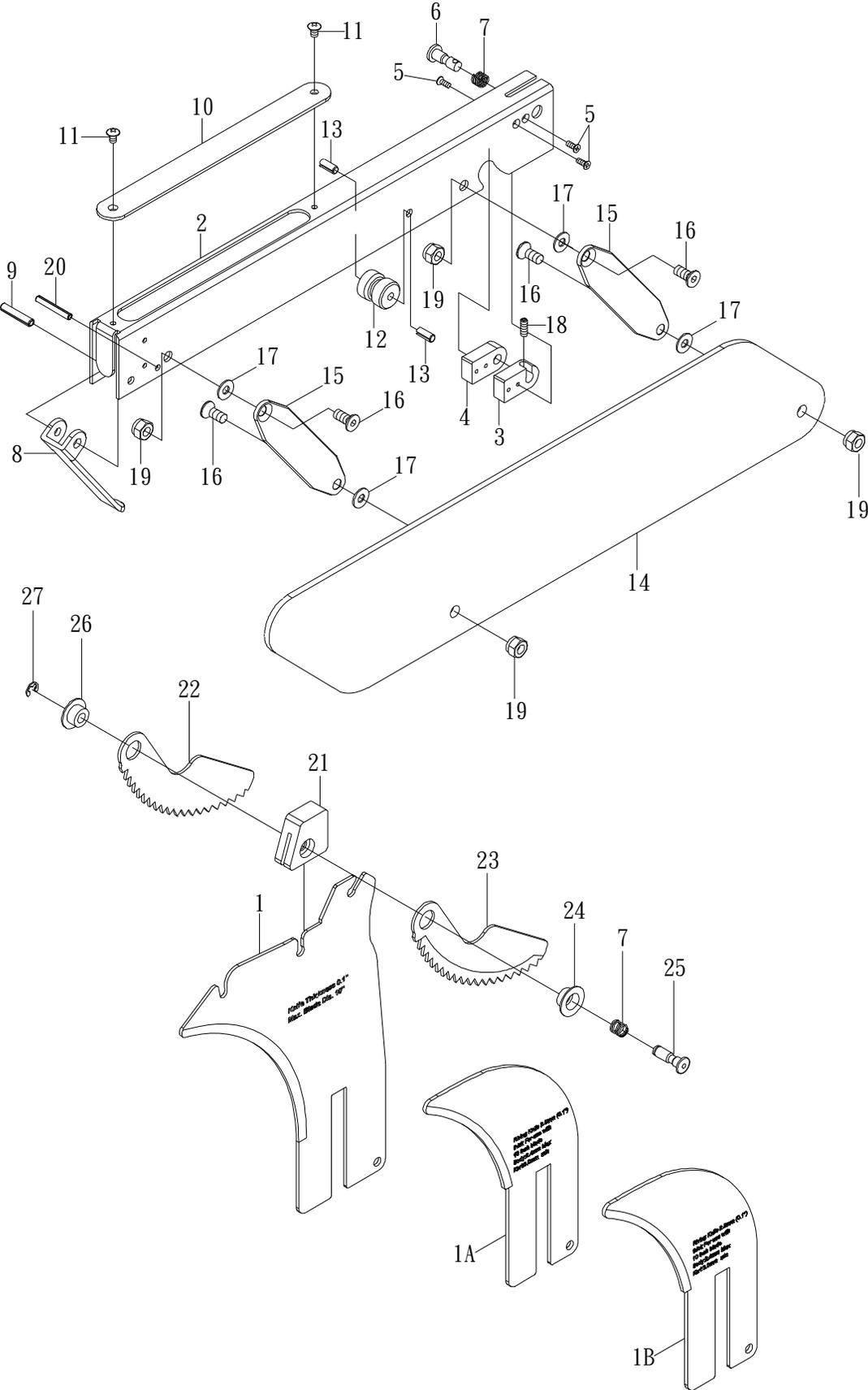


## 15.2.2 PM1000 Motor and Trunnion Assembly – Parts List

Index No	Part No	Description	Size	Qty
101	PM1000-101	Arbor Nut		1
102	PM1000-102	Arbor Collar		1
104	PM1000-104	Arbor		1
105	PM1000-105	Key	M5 x 25	2
106	BB-6203ZZ	Ball Bearing	6203ZZ	2
107	TS-1524041	Set Screw	M8 x 15	1
108	PM1000-108	Bearing Load Spacer		1
109	TS-2311081	Hex Nut	M8	10
110	PM1000-110	Arbor Pulley		1
111	TS-1523021	Set Screw	M6 x 8	4
112	TS-0640132	Nylon Nut	5/8"	1
113	PM1000-113	Poly V-Belt	PJ150	1
114	PM1000-114	Arbor Bracket		1
115	PM1000-115	Motor	1-3/4HP, 1PH, 115/230V	1
	PM1000-115MF	Motor Fan (not shown)		1
	PM1000-115MFC	Motor Fan Cover (not shown)		1
	PM1000-115CS	Centrifugal Switch (not Shown)		1
	PM1000-115SCC	Starting Capacitor Cover (not shown)		1
	PM1000-115RCC	Running Capacitor Cover (not shown)		1
	PM1000-115SC	Starting Capacitor (not shown)	300MFD, 125VAC	1
	PM1000-115RC	Running Capacitor (not shown)	70uf, 250VAC	1
	PM1000-115JB	Junction Box (not shown)		1
	PM1000-115JBC	Junction Box Cover (not shown)		1
	PM1000-115OL	Overload (not shown)		1
	PM1000-115DC	Dust Cover (not shown)		1
116	PM1000-116	Shaft		1
117	TS-2249202	Button Head Socket Screw	M10 x 20	1
118	TS-1550071	Lock Washer	M10	2
119	PM1000-119	Brass Flat Washer	M24	1
120	PM1000-120	Nylon Nut	M22	1
121	TS-1550071	Flat Washer	M10	1
122	PM1000-122	Bracket		1
123	TS-1491021	Hex Cap Screw	M10 x 20	1
124	PM1000-124	Center Trunnion		1
125	PM1000-125	Pin	M10 x 40	2
126	PM1000-126	Rear Trunnion		1
127	PM1000-127	Motor Pulley		1
128	TS-1504061	Socket Head Cap Screw	M8 x 30	8
129	TS-1550061	Flat Washer	M8	8
130	TS-2361081	Lock Washer	M8	11
131	PM1000-131	Front Trunnion		1
132	PM1000-132	Lock Pin	8 x 25	3
133	PM1000-133	Front Trunnion Bracket		1
134	TS-1490151	Hex Cap Screw	M8 x 80	1
135	PM1000-135	Bracket		1
136	TS-2361061	Lock Washer	M6	3
137	TS-1482051	Hex Cap Screw	M6 x 25	2
138	PM1000-138	Raising Shaft		1
139	PM1000-139	Pin	8 x 25	2
140	PM1000-140	Fiber Washer		3
141	PM1000-141	Eccentric Bushing		1
142	TS-2342161	Hex Nut	M16	1
143	PM1000-143	Pointer Bracket		1
144	PM1000-144	Pointer		1
145	TS-1534041	Pan Head Screw	M5 x 10	8
146	TS-1523011	Socket Set Screw	M6 x 6	3
147	TS-0680042	Flat Washer	3/8"	2
148	PM1000-148	Hand Wheel		2
149	PM1000-149	Knob		2
150	PM1000-150	Handle		2

Index No.	Part No.	Description	Size	Qty
151	PM1000-151	Tilting Shaft		1
152	PM1000-152	Eccentric Bushing		1
153	TS-2342141	Hex Nut	M14	1
154	PM1000-154	Collar		2
155	PM1000-155	Fiber Washer		1
156	PM1000-156	Bracket		1
157	TS-2288202	Pan Head Screw	M8 x 20	2
158	TS-1550061	Flat Washer	M8	2
159	PM1000-159	Guide Plate		1
160	TS-1534052	Pan Head Screw	M6 x 15	4
161	PM1000-161	spacer		1
162	PM1000-162	Riving Knife Carrier Plate		1
163	PM1000-163	Plate		1
164	TS-1533042	Pan Head Screw	M5 x 12	2
165	PM1000-165	Bracket		1
166	TS-1523031	Socket Set Screw	M6 x 10	2
167	PM1000-167	Spring		1
168	PM1000-168	Clamp Plate		1
169	PM1000-169	Lock Handle		1
170	TS-1541021	Nylon Nut	M6	1
	JTAS10L-179A	Arbor Lock Insert Assembly (index #171 thru 175)		1
171	JTAS10L-179-3	Insert Bracket		1
172	TS-1503051	Socket Head Cap Screw	M6 x 20	2
173	JTAS10L-179-2	Spring		1
174	JTAS10L-179-1	Locking Pin		1
175	TS-1521031	Socket Set Screw	M4 x 8	1
176	PM1000-176	Pilot Link Plate		1
177	PM1000-177	Special Screw	1/4"-20UNC x 12	1
178	PM1000-178	Special Screw	3/8"-24UNF x 13	1
179	TS-0640071	Nylon Nut	1/4"	1
180	PM1000-180	Dust Deflector		1
181	PM1000-181	Dust Port		1
182	PM1000-182	Hose Clamp		1
183	PM1000-183	Hose		1
184	TS-2245102	Socket Head Button Screw	M5 x 10	1
185	PM1000-185	Bracket		1
186	TS-1490031	Hex Cap Screw	M8 x 20	2
187	PM1000-187	Arbor Wrench		1
188	PM1000-188	Socket Set Screw	M6 x 35	1
189	TS-1482041	Hex Cap Screw	M6 x 20	1
190	TS-1550041	Flat Washer	M6	1
191	TS-1540041	Hex Nut	M6	1

15.3.1 PM1000 Blade Guard Assembly – Exploded View

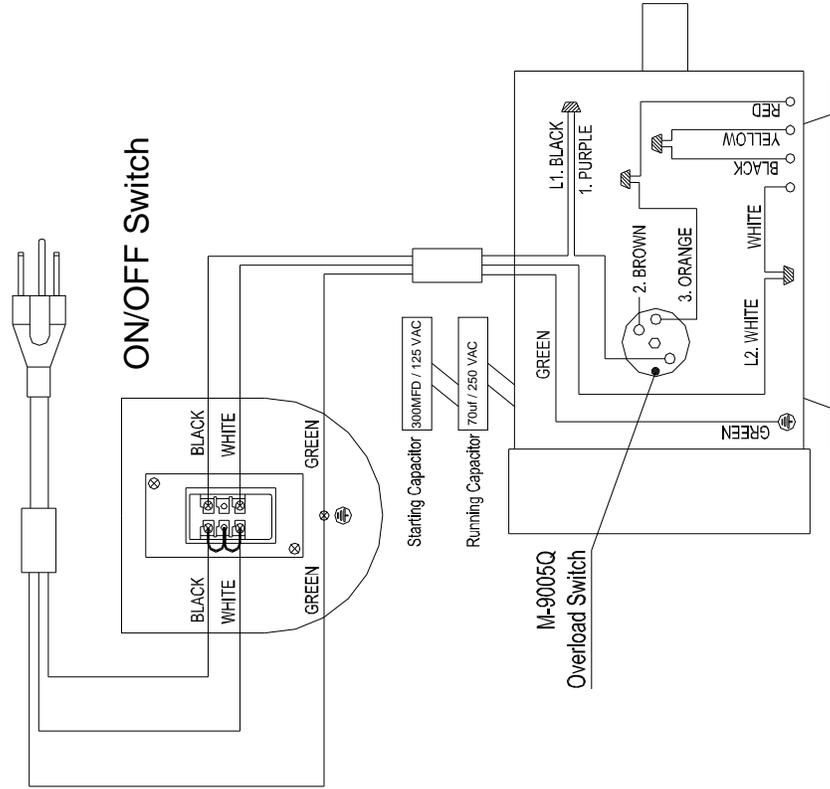


### 15.3.2 PM1000 Blade Guard Assembly – Parts List

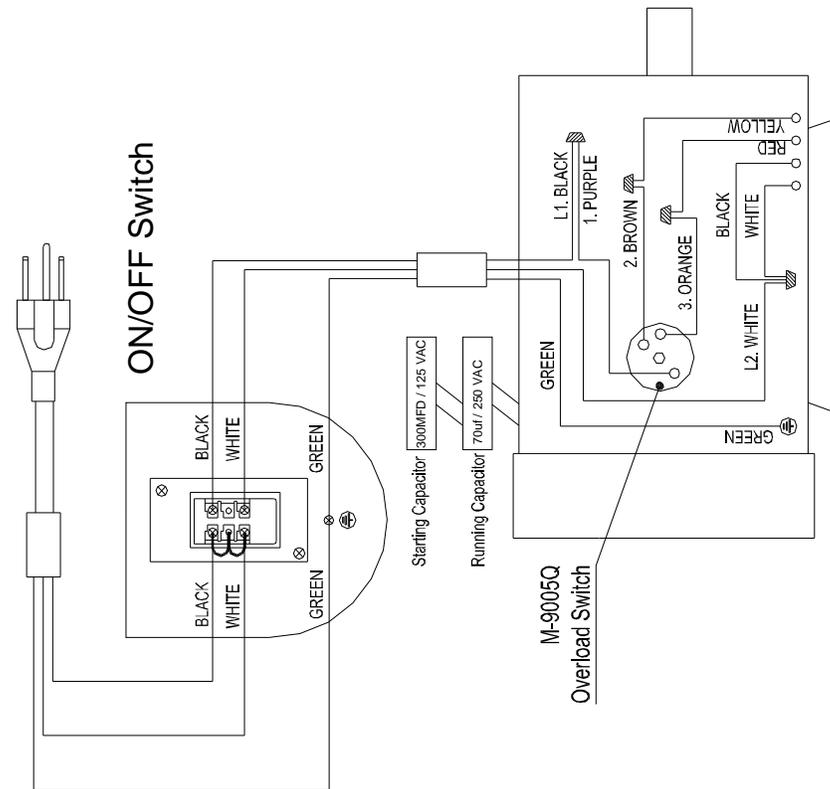
Index No	Part No	Description	Size	Qty
1	PM1000-301	Riving Knife		1
1A	PM1000-301A	Low Profile Riving Knife	0.1" Thk	1
1B	1791793	Low Profile Thin Kerf Riving Knife (Optional)	0.079" Thk	1
	PM1000-BGA	Blade Guard Assembly (index #2 thru 20)		1
2	PM1000-302	Blade Guard Body		1
3	PM1000-303	Bushing (R)		1
4	PM1000-304	Bushing (L)		1
5	TS-2283102	Pan Head Screw	M3 X 10	4
6	PM1000-306	Lock Pin		1
7	PM2000-321	Spring		2
8	PM2000-308	Front Shield		1
9	PM2000-313	Roll Pin	M5 x 25	1
10	PM2000-310	Top Shield		1
11	TS-081B012	Pan Head Screw	M4 x 8	2
12	PM2000-309	Bushing		1
13	PM1000-313	Roll Pin	M5 x 8	2
14	JTAS10L-304	Blade Guard Side Shield		2
15	PM1000-315	Linking Plate		4
16	TS-1514021	Flat Head Socket Screw	M6 x 16	8
17	TS-1550061	Flat Washer	M6	8
18	TS-1521041	Socket Set Screw	M4 x 10	1
19	TS-1541021	Nylon Insert Lock Nut	M6	8
20	PM1000-320	Roll Pin	M4 x 30	1
	PM1000-AKPA	Anti-Kickback Pawl Assembly (index #7, 21 thru 27)		1
21	PM2000-318	Pawl Base		1
22	PM1000-322	Anti-Kickback Pawl (L)		1
23	PM1000-323	Anti-Kickback Pawl (R)		1
24	PM1000-324	Flange (R)		1
25	PM2000-320	Lock Pin		1
26	PM1000-326	Flange (L)		1
27	PM2000-322	E-Clip	E5	1

# 16.0 Electrical Connections for PM1000

## ELECTRICAL SCHEMATIC - 230V



## ELECTRICAL SCHEMATIC - 115V



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