

# **POWERMATIC<sup>®</sup>**

## **Operating Instructions and Parts Manual 15-inch Woodworking Band Saw Models: PM1500 & PM1500T**



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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. Powermatic woodworking machinery is designed to be used with Wood. Use of these machines in the processing of metal, plastics, or other materials may void the warranty. The exceptions are acrylics and other natural items that are made specifically for wood turning.

## 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

**WARNING: For your own safety read instruction manual before operating Band Saw.**

**- Wear eye protection.**

**- Do not remove jammed cutoff pieces until blade has stopped.**

**- Maintain proper adjustment of blade tension, blade guides, and thrust bearings.**

**- Adjust upper guide to just clear workpiece.**

**- Hold workpiece firmly against table.**

1. Read and understand 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 warning labels if they become obscured or removed.
4. This band 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 band saw, do not use until proper training and knowledge have been obtained.
5. Do not use this band 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. Model PM1500T has an industrial-grade low-friction corrosion-resistant table coating. While this coating is durable, it can be damaged if metal or other hard and/or sharp objects strike, gouge, or scratch the surface. Significant damage to the coating may affect its performance.
7. Always wear approved safety glasses/face shield while using this machine. (Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.)
8. Before operating band 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.
9. Keep work area clean. Cluttered areas and benches invite accidents.
10. 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 the correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gage. The smaller the gage number, the heavier the cord.

11. Secure work. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
12. Disconnect tools before servicing; when changing accessories, such as blade, bits, cutters and the like.
13. Direction of feed: Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
14. Adjust upper blade guides to approximately 1/8" above workpiece.
15. Make sure blade tension, tracking and blade guides are all properly adjusted.
16. Make relief cuts where possible, when cutting curved stock.
17. When feeding small work pieces into blade, always use push stick, fixture, or similar device to keep hands at a safe distance.
18. Hold stock firmly and flat against table.
19. Wear ear protectors (plugs or muffs) during extended periods of operation.
20. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
21. Make certain switch is in OFF position before connecting machine to power supply.
22. Make certain machine is properly grounded.
23. Do not back stock out of blade while blade is running.
24. 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.
25. Keep safety guards in place at all times when machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately after completion of maintenance.
26. Check damaged parts. Before further use of 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.

27. Keep floor around machine clean and free of scrap material, oil and grease.
28. Keep visitors a safe distance from work area. Keep children away.
29. Make your workshop child proof with padlocks, master switches or by removing starter keys.
30. Give your work undivided attention. Looking around, carrying on a conversation and "horse-play" are careless acts that can result in serious injury.
31. Maintain a balanced stance at all times so that you do not fall into blade or other moving parts. Do not overreach or use excessive force to perform any machine operation.
32. 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 more safely.
33. Use recommended accessories; improper accessories may be hazardous.
34. Maintain tools with care. Keep blades sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
35. Turn off machine before cleaning. Use a brush or compressed air to remove chips or debris — not your hands.
36. Do not stand on machine. Serious injury could occur if machine tips over.
37. Never leave machine running unattended. Turn power off and do not leave band saw until blade comes to a complete stop.
38. Remove loose items and unnecessary work pieces from area before starting machine.
39. Keep hands out of line of saw blade.
40. Don't use in dangerous environment. Do not expose machine to rain or use in wet or damp locations. Keep work area well lighted.
41. Remove safety key from switch whenever band saw is turned "OFF", and keep safety key out of reach of unauthorized persons or children.

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



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



**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 Powermatic model PM1500 & PM1500T Band Saws. 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 consistent, long-term 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 band 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.

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



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

## 5.0 Features and Terminology

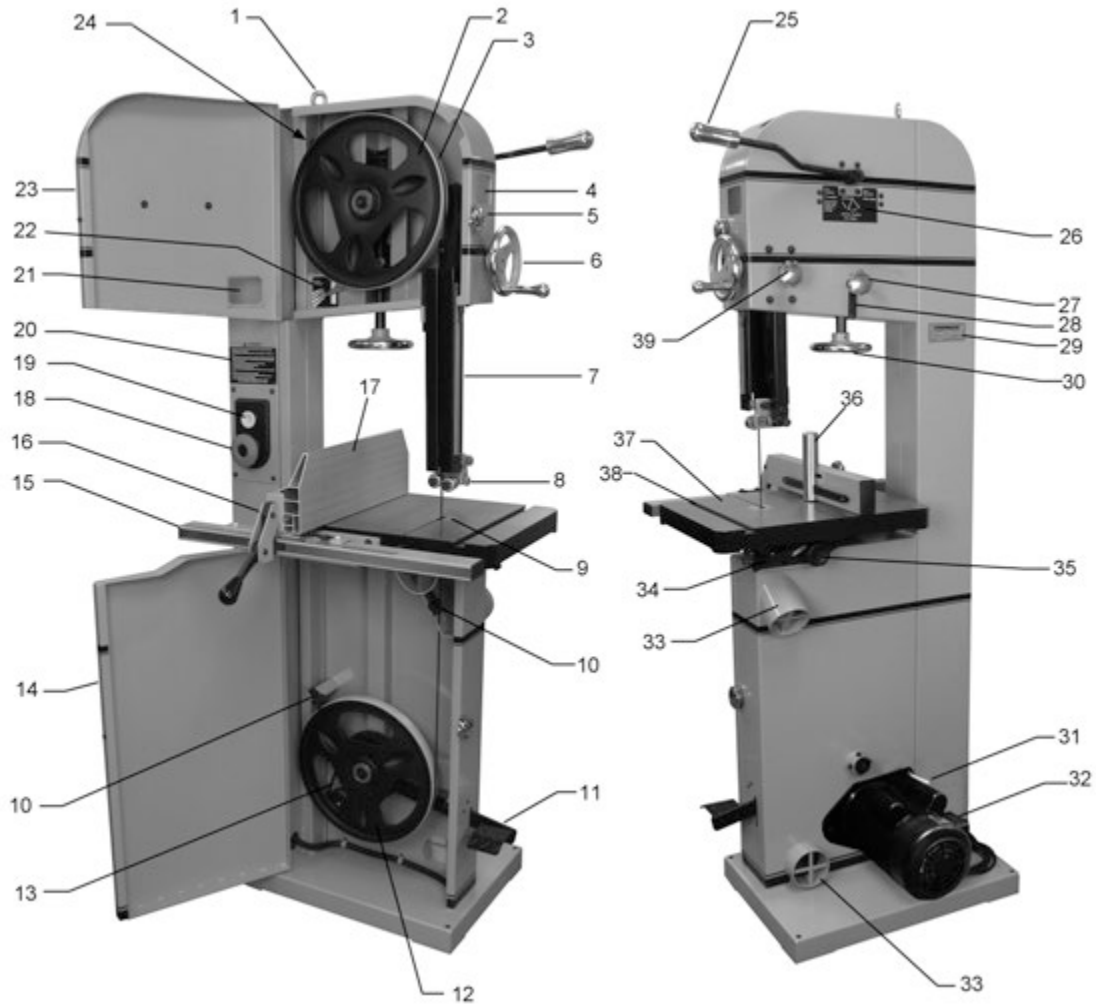


Figure 1

- |  |   |
|--|---|
| 1. Lifting ring                                | 22. Blade tension scale   |
| 2. Upper wheel                                 | 23. Upper door  |
| 3. Tire  | 24. Interlock switch  |
| 4. Tracking window                             | 25. Blade tension lever   |
| 5. Door catch                                  | 26. Tension lever position label  |
| 6. Guide post handwheel                        | 27. Tracking knob   |
| 7. Guide post                                  | 28. Tracking knob lock lever  |
| 8. Upper bearing blade guides                  | 29. Serial number/machine identification plate  |
| 9. Table insert                                | 30. Blade tension handwheel   |
| 10. Blade and wheel brushes                    | 31. Motor lift handle   |
| 11. Brake pedal                                | 32. 3 horsepower TEFC motor   |
| 12. Lower wheel                                | 33. Dust port   |
| 13. Drive belt and pulley                      | 34. Trunnion lock handle  |
| 14. Lower door                                 | 35. Trunnion fine adjust knob   |
| 15. Guide rail                                 | 36. Resaw pin   |
| 16. Rip fence                                  | 37. Cast iron table (model PM1500) / Industrial-grade low-friction corrosion-resistant coated cast iron table (model PM1500T) |
| 17. Aluminum fence plate                       | 38. Miter slot  |
| 18. Magnetic switch with power indicator light | 39. Guide post locking knob   |
| 19. Safety key                                 |   |
| 20. Warning label                              |   |
| 21. Blade tension window                       |   |

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.

## 6.0 Specifications

Model numbers .....	<b>PM1500</b> .....	<b>PM1500T</b>
Stock numbers .....	1791500.....	PM1-1791500T

### Motor and electricals:

Motor type .....	totally enclosed fan cooled, induction, capacitor start
Horsepower.....	3 HP
Phase.....	single
Voltage.....	230V
Cycle.....	60Hz
Listed FLA (full load amps) .....	12A
Starting amps.....	55A
Running amps (no load).....	3.3A
Start capacitor.....	200MFD, 250VAC
Run capacitor.....	60µF, 300VAC
Power transfer.....	Poly-V 9 groove belt drive
On/off switch .....	Magnetic, with power indicator lamp and safety key
Motor speed .....	1720 RPM
Blade speed .....	3100 SFPM
Power cord length .....	6.6 ft. (200cm)
Power plug installed.....	yes
Recommended circuit size <sup>1</sup> .....	20A
Sound emission .....	72 dB at 39" (1000mm) from blade, without load

<sup>1</sup> subject to local and national electrical codes.

### Capacities:

Maximum cutting height/resaw capacity .....	14" (355mm)
Throat capacity .....	14-1/2" (368mm)
Minimum blade width .....	1/8" (3.2mm)
Maximum blade width .....	1" (25.4mm)
Blade length <sup>2</sup> .....	153 +/-1/2" (3886mm)
Blade provided.....	hook type, 3/8" x 0.065" x 6 TPI
Wheel diameter.....	15" (381mm)

<sup>2</sup> blade length range is 152-1/2" to 153" for band saws with serial no. 12100002 to 12100052.

### Miscellaneous:

Fence plate .....	19-3/4"L x 6-1/2"H (502 x 165mm)
Resaw pin .....	1-1/2" dia x 6-1/2"H (38 x 165mm)
Stand footprint.....	17-3/4"L x 25-1/4"W (450 x 641mm)
Overall dimensions, assembled.....	30-1/4"L x 34-3/8"W x 80-1/4"H (768 x 873 x 2038mm)
Miter gauge positive stops (model PM1500).....	45°, 90°
Miter gauge positive stops (model PM1500T) .....	0°, 15, 22.5°, 30°, 45°, 60°, 67.5°

### Materials:

Table (PM1500).....	ground cast iron
Table (PM1500T).....	ground cast iron with industrial-grade low-friction corrosion-resistant coating
Trunnion.....	cast iron
Enclosed cabinet.....	steel
Band wheels .....	cast iron
Tires .....	polyurethane
Blade guides .....	ball bearing
Resaw fence .....	extruded aluminum
Handwheels .....	cast iron, chrome finish
Paint finish .....	powder coat

### Table:

Table dimensions.....	21-1/2"L x 16"W x 2"Thk (546 x 406 x 51mm)
Table tilt .....	10° left, 45° right
Table height from floor at 90-degrees.....	40" (1016mm)
Miter T-slot.....	7/8"W x 3/8"D; opening 3/4"W (22 x 9.5; 19mm)
Edge bevel.....	front



Dust collection:

Dust port outside diameter..... two at 4" (100mm)  
Minimum extraction volume required..... 600 CFM

Weights:

Net weight (fully assembled)..... 394 lb (179 kg)  
Shipping weight..... 502 lb (228 kg)

**6.1 Base Hole Centers (PM1500 / PM1500T Band Saws)**

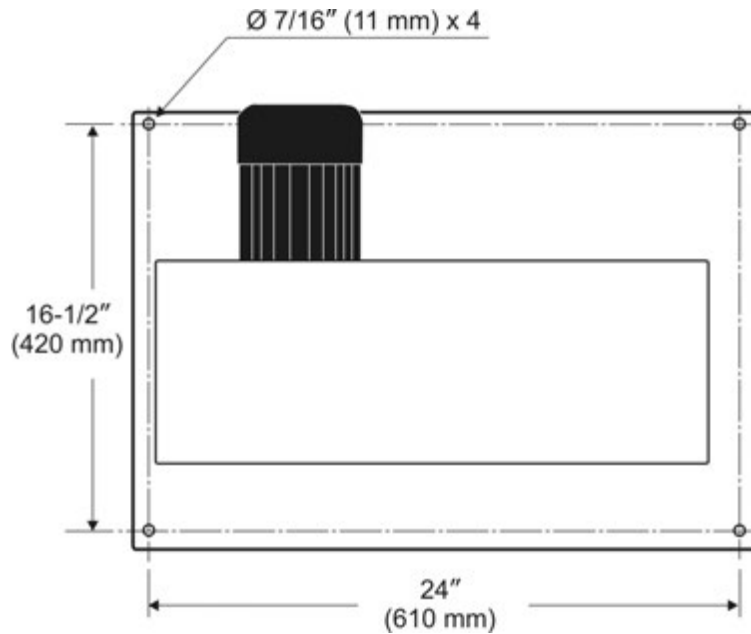


Figure 2

## 7.0 Setup and Assembly

**WARNING** Read and understand all instructions before attempting assembly or operation of band saw. Failure to comply may cause serious injury.

**CAUTION** Model PM1500T has an industrial-grade low-friction corrosion-resistant table coating. While the coating is durable, it can be damaged if metal or other hard and/or sharp objects strike, gouge, or scratch the surface. Significant damage to the coating may affect its performance. Use care when unpacking and locating the machine and during all setup and assembly procedures.

### 7.1 Unpacking

1. Remove all contents from shipping carton. Do not discard any shipping material until band saw is assembled and running satisfactorily.
2. Inspect contents for shipping damage. Report any damage immediately to your distributor and shipping agent.
3. Compare contents of shipping carton with the contents list in this manual. Report shortages, if any, to your distributor.

Note: Some parts may have come pre-assembled to the saw.

### 7.2 Shipping Contents

Carton contents (see Figure 3):

- 1 Band saw
- 1 Fence plate – A
- 1 Fence body – B
- 1 Resaw pin – C
- 1 Fence lever knob – D
- 1 Resaw pin lock knob – E
- 1 Rail – F
- 1 Guide rail – G
- 1 Miter gauge – H
- 1 Hand wheel – I
- 1 Owner's manual (not shown)
- 1 Warranty card (not shown)

Tools required for set up and assembly:

- Hoist or forklift, with straps
- Machinist square

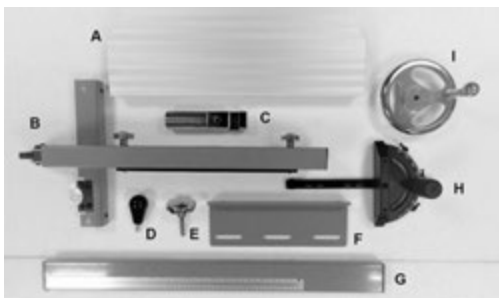
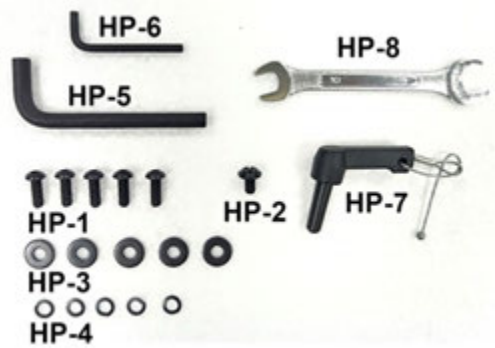


Figure 3

Hardware for PM1500 & PM1500T:



- 5 Socket head button screws, M6x16 – HP-1
- 1 Pan head Phillips screw with flange, M6x10 – HP-2
- 5 Flat washers, M6 – HP-3
- 5 Lock washers, M6 – HP-4
- 1 Hex wrench, 8mm – HP-5
- 1 Hex wrench, 3mm – HP-6
- 1 Table pin – HP-7
- 1 Wrench 13mm/10mm – HP-8

### 7.3 Location

Remove all crating and plastic from around machine. Remove any screws or straps holding band saw to shipping pallet.

**CAUTION** Exercise care when removing machine from shipping pallet.

Use a hoist or forklift with straps to remove band saw from pallet. The straps used should have a minimum 500-lb. lifting capacity. Do NOT place forks or straps directly beneath table or against handles or levers – use the lifting eye atop the band saw.

Move band saw to its permanent location, which should be dry and well lit, with a level floor and enough space on all sides to handle long stock or perform routine maintenance on the machine. Make sure floor is able to support weight of machine. If desired, band saw can be secured to floor using lag screws (not provided) through the four holes in base. See Figure 2 for hole spacing.

Exposed metal surfaces, such as table surface and blade guides, have been given a protective coating at the factory. This coating should be removed with a soft cloth moistened with solvent. Do not get solvents near plastic or rubber parts; and do not use an abrasive pad as it may scratch exposed surfaces. **Note: Model PM1500T has an industrial-grade low-friction corrosion-resistant table coating and will not require cleaning.**

The handle on the front handwheel may be in reverse position for shipping. Reinstall it in proper position on the handwheel. Use a wrench on the flat to tighten it to the handwheel.

## 7.4 Dust Collection

The use of a dust collection system is strongly recommended for this band saw. It will help keep the shop clean, as well as reduce potential health hazards caused by inhalation of wood dust. The collector should have a capacity sufficient for this size machine: 600 CFM is recommended. Powermatic has a line of dust collection systems available; see your dealer or visit our website listed on the cover.

Connect the hoses of your dust collection system to the saw's dust ports (4" outside diameter). Secure tightly with hose clamps (not provided).

## 7.5 Electrical Connections

**⚠ WARNING** Electrical connections must be made by a qualified electrician in compliance with all relevant codes. This machine must be properly grounded to help prevent electrical shock and possible fatal injury.

The band saw is factory wired for 230 volts. It is recommended that the band saw be connected to a grounded and dedicated 20-amp circuit with a 20-amp circuit breaker or time delay fuse. Local codes take precedence over recommendations.

## 7.6 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.

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. 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 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 Figure 4. The tool's grounding plug is illustrated in Figure 4. 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.

Make sure the voltage of your power supply matches the specifications on the motor plate of the Band Saw.

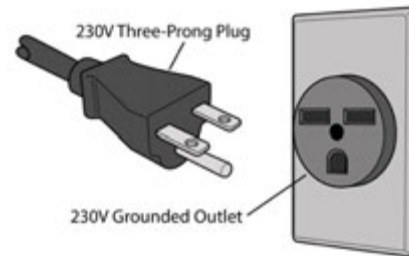


Figure 4

## 7.7 Extension Cords

The use of extension cords is discouraged; try to position machines within reach of power source. If an extension cord becomes necessary, make sure the cord rating is suitable for the amperage listed on the machine's motor plate. An undersized cord will cause a drop in line voltage resulting in loss of power and overheating.

Use Table 1 as a general guide in choosing the correct size cord. The smaller the gauge number, the heavier the cord. If in doubt, use the next heavier gauge.

Recommended Gauges (AWG) of Extension Cords

Amp Rating		Volts	Total length of cord in feet			
More Than	Not More Than	120	25	50	100	150
		240	50	100	200	300
			AWG			
0	6		18	16	16	14
6	10		18	16	14	12
10	12		16	16	14	12
12	16		14	12	Not Recommended	

Table 1

## 7.8 Rail and Guide Rail

Refer to Figure 5a.

1. Install the rail to the front edge of the table, using two (2) M6x16 socket head button screws (HP-1), with M6 lock washers (HP-4), and M6 flat washers (HP-3), through the slotted holes in the rail. Place the screws approximately in the center of the slots; this can be adjusted later as

needed. Tighten the screws with the hex wrench.

2. Install the guide rail to the bottom holes in the front rail, using three (3) M6x16 socket head button screws (HP-1), with M6 lock washers (HP-4) and M6 flat washers (HP-3). Hand-tighten only. Pull the guide rail away from the table as far as it will go, then tighten all five (5) screws in the guide tube with the hex wrench. Do not overtighten.
3. Install the table pin (HP-7) to the front edge of the table and connect the table pin tether to the table using the provided screw (HP-2).

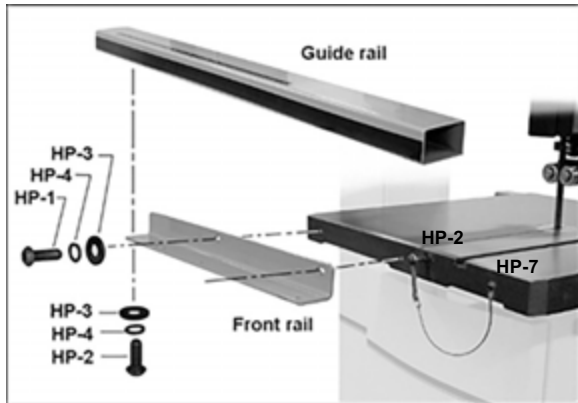


Figure 5a

## 7.9 Install Handwheel

Refer to Figure 5b.

Install the handwheel (A) onto the shaft (B). Align the set screw on the handwheel with the flat side of the shaft and tighten with the hex key.

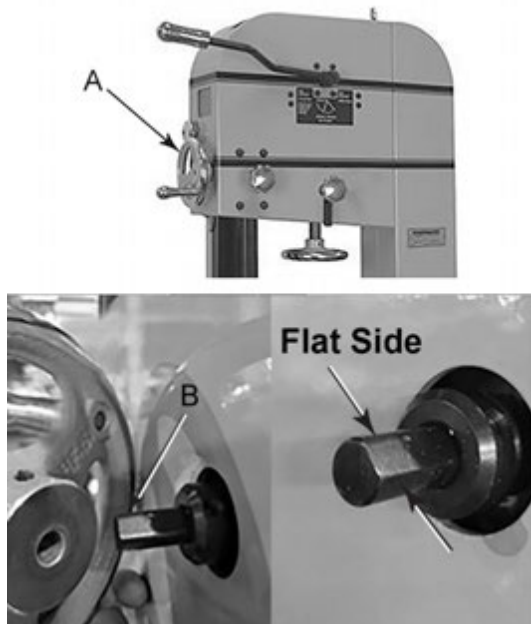


Figure 5b

## 8.0 Adjustments

### CAUTION

Model PM1500T has an industrial-grade low-friction corrosion-resistant table coating. While the coating is durable, it can be damaged if metal or other hard and/or sharp objects strike, gouge, or scratch the surface. Significant damage to the coating may affect its performance. Use care when making adjustments to this machine.

Tools required for adjustments:

- Machinist square
- Cross point (Phillips) screwdriver
- Hex keys, 4mm/5mm/6mm
- 13mm wrench
- Straight edge and gauge

## 8.1 Fence Assembly

Refer to Figure 5c.

Place fence body onto guide tube, as shown in Figure 5c. Raise fence lever all the way up to install or remove fence from guide rail. Midway lever position allows fence to slide along guide rail. Lowest lever position locks fence in place.

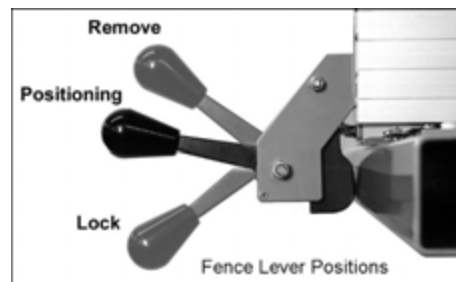


Figure 5c

## 8.2 Fence Plate

Refer to Figures 6 and 7.

Loosen lock bar (A) using knobs (B). Pull out on lock bar until it protrudes enough on which to slide the aluminum fence plate from one end, as shown in Figure 6. Retighten knobs.

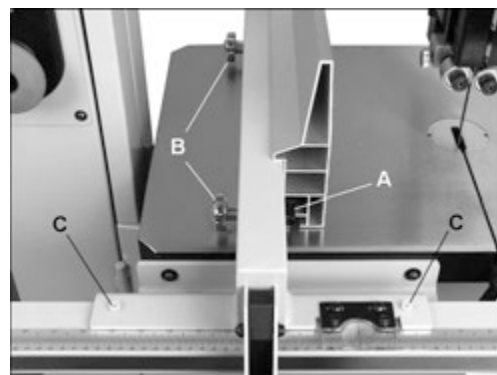


Figure 6 – vertical position

The aluminum fence plate can be installed in one of two positions; vertically (resaw position), as shown in Figure 6; or horizontally as shown in Figure 7.

Horizontal position is useful for smaller workpieces. (The zero setting of the cursor cannot be used with horizontal fence position.)

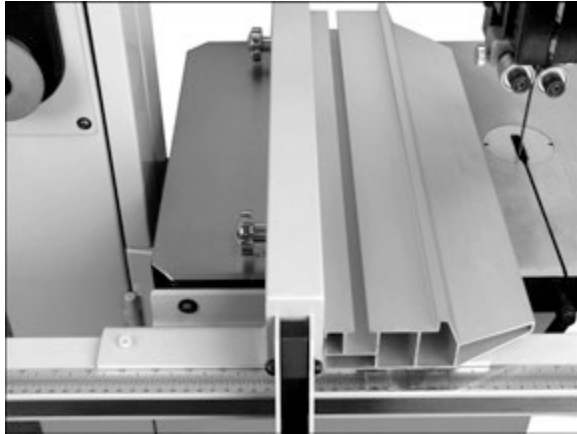


Figure 7 – horizontal position

### 8.3 Fence to Table Clearance

1. Check clearance between table and bottom of fence (Figure 8). The fence plate should not rub against table surface but be slightly above it. This gap should be the same at both front and back of table.
2. If clearance is not equal, use a 5mm hex key to rotate the two nylon adjustment screws (C, Figure 6) the *same amount* to raise or lower fence body on guide tube. Clockwise raises fence body, counterclockwise lowers.

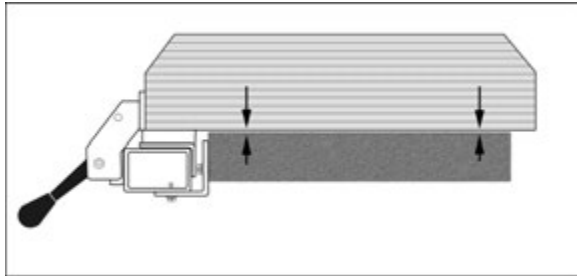


Figure 8

### 8.4 Setting Table Parallel to Blade

Refer to Figures 9 and 10.

The table has been aligned by the manufacturer so that the miter slot is parallel to the blade; it should not require adjustment. However, in the future you may wish to confirm the setting is still accurate. A wide blade is recommended for the procedure.

1. Disconnect band saw from power source.
2. Blade should be fully tensioned (see *section 8.11*).
3. Place a long straightedge flush against blade, making sure it contacts both front and back of

blade. (Do not deflect blade by pushing into it.) See Figure 9.

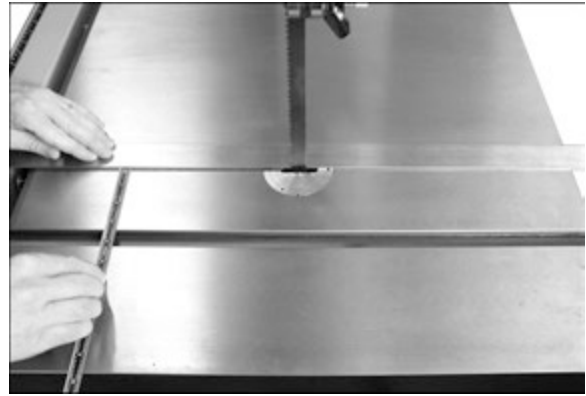


Figure 9

4. Use a gauge to carefully measure distance from miter slot to straight edge. Take measurements at both front and back of table – these should be identical.
5. If miter slot is not parallel to blade, loosen four screws (E, Figure 10) that secure table to trunnion, and shift table as needed until miter slot is parallel to blade.
6. Tighten the four screws.

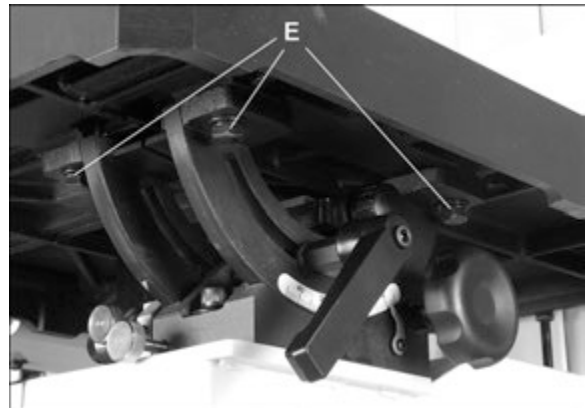


Figure 10

### 8.5 Setting Fence Parallel to Blade

Refer to Figures 11 through 13.

Fence must be parallel to flat of blade for accurate cutting. Since miter slot has been set parallel to blade from the manufacturer (and confirmed by user, as described in *section 8.4*), the miter slot can be used to set fence parallelism.

1. Slide fence to edge of miter slot, as shown in Figure 11. The fence should align with miter slot along its entire length.
2. If adjustment is needed, use one of the back adjustment screws (F, Figure 12) to turn fence in line with miter slot (5mm hex key).

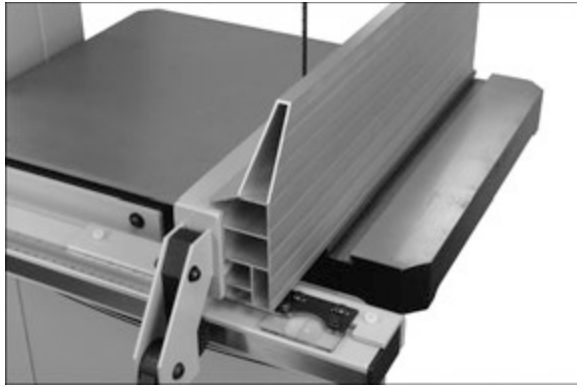


Figure 11

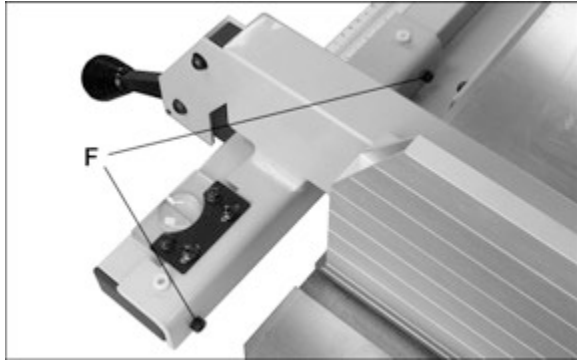


Figure 12

The fence must also be *vertically* parallel to blade. Refer to Figure 13:

3. Make sure table has been set 90° to blade (see section 8.9).
4. Slide fence (with aluminum plate securely fastened) against blade; do not push into blade. Turn either of the nylon adjustment screws (C) until fence is parallel to blade along vertical length of fence.

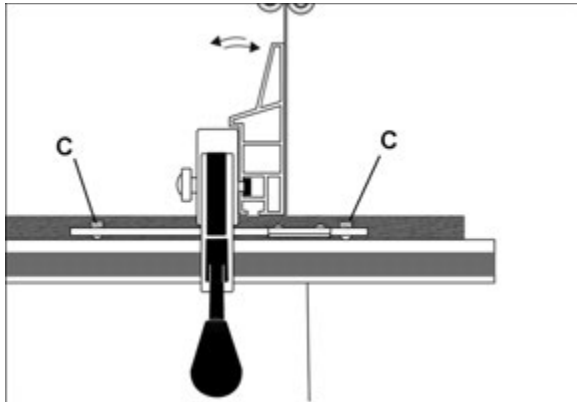


Figure 13

## 8.6 Setting Cursor (Zero) Position

Refer to Figure 14.

1. The fence must be set so that cursor reads zero at line of blade. The fence plate must be installed on fence body in vertical position, and blade must be installed and fully tensioned.

Also, blade should be square with table and fence (sect. 8.4 and 8.5).

2. Slide fence flush against flat of blade, as shown. (Do not force fence into blade so that blade deflects.)
3. If cursor is not at zero, loosen two screws (D, Figure 14) and shift cursor as needed. Retighten screws.

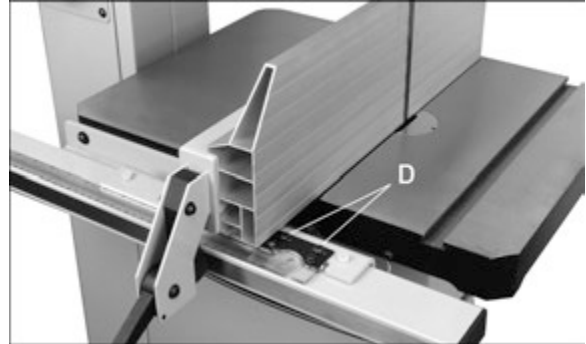


Figure 14

## 8.7 Fence Locking Tightness

The tightness of fence against guide rail tube can be adjusted by rotating back adjustment screws (F, Figure 12). Rotate the two screws *equally* (clockwise to tighten).

Because these screws are also used to align fence to blade, after adjusting fence locking tightness, you should inspect fence-to-blade relationship, as explained in section 8.5.

## 8.8 Table Tilt

Refer to Figure 15.

1. Loosen lock handle (A).
2. For *right tilt* (as viewed from front or operator's side of saw), push on table while rotating knob (B) clockwise to tilt table up to 45°. Use knob (B) for fine adjustment.
3. For *left tilt* (as viewed from front or operator's side of saw), loosen lock lever (A) and rotate knob (B) clockwise a turn or two to release pressure on the 90° stop bolt (shown in Figure 16). Remove stop bolt, then rotate knob to tilt table up to 15°.
4. Tighten lock handle (A) to secure setting.

NOTE: The lock handle (A) can be pivoted to more convenient positions. Simply lift straight out on handle and rotate it on the pin, then release handle making sure it seats itself on the pin.

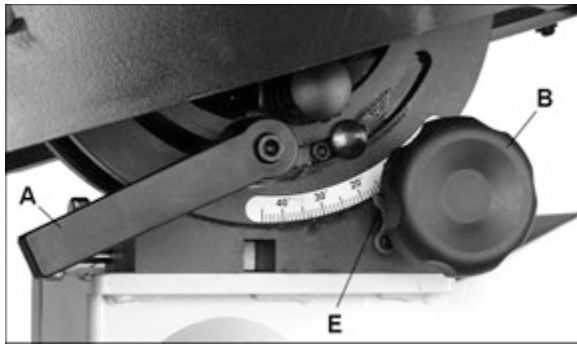


Figure 15

## 8.9 90° Table Stop

Refer to Figures 16 and 17.

The 90° positive stop ensures that table will always be perpendicular to blade after table is returned to horizontal position. Check and adjust this 90° stop as follows:

1. Disconnect machine from power source.
2. Make sure blade is under full tension.
3. Tilt table until it rests on stop bolt (C).

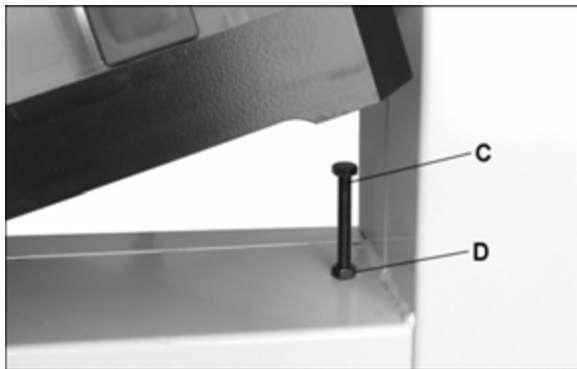


Figure 16

4. Place a square on table and against blade to check that table is 90° to blade. See Figure 17. *Do not push square into blade.*

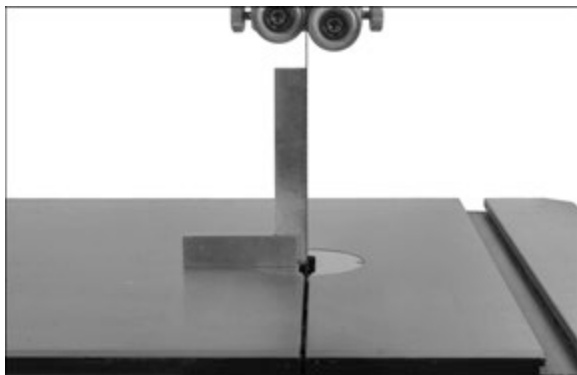


Figure 17

5. If table and blade are not square, use a 13mm wrench to loosen lock nut (D, Figure 16) then rotate stop bolt. Turn stop bolt as needed until there is no longer light showing between square and blade.

6. Tighten lock nut (D) to secure table stop in position.
7. Tighten lock handle (A, Figure 15).
8. Check that scale pointer (E, Figure 15) is at zero. If necessary, loosen screw on pointer and shift pointer to zero. Re-tighten screw.

## 8.10 Installing/Changing Blades

**CAUTION** Always wear gloves when handling blades. New blades are usually packaged in coiled position; to prevent injury uncoil them slowly and carefully, while wearing work gloves and safety glasses.

This band saw is designed for blades from 1/8" to 1" wide.

Refer to Figure 18.

1. Disconnect machine from power source.
2. Remove table insert (F, Figure 18).
3. Pull out table pin (G).
4. Adjust upper and lower blade guides away from blade (see sections 8.13 and 8.15).

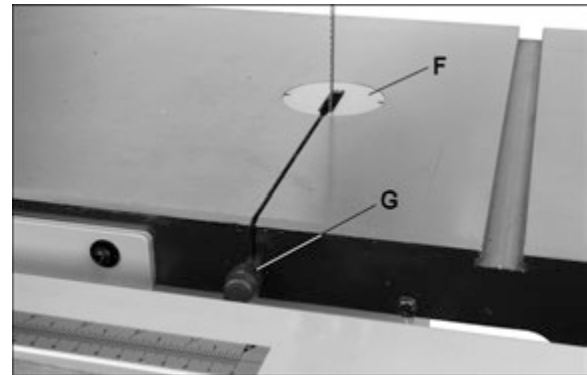


Figure 18

5. Move quick tension lever to "Full Release (Blade Change)" position.
6. Open upper and lower doors by rotating door catches.
7. Carefully remove blade from top wheel, then from between upper and lower blade guides and lower wheel. Slide blade out through slot in table.
8. Guide new blade through table slot. Place blade loosely in upper and lower blade guides. Make sure blade teeth point down toward table, and toward front of saw. (If the teeth will not point down, no matter how you orient blade, then blade is twisted inside-out. Twist it into correct position and re-install it.)
9. Position blade at center of upper and lower wheels.
10. Reinstall table insert (F) and table pin (G).

11. Before operating band saw, the new blade must be *tensioned* and *tracked*, in that order. Find instructions for tensioning and tracking the blade in *sections 8.11 and 8.12*. The blade guides must also be set properly according to instructions in *sections 8.13 through 8.16*.

### 8.11 Blade Tension

Refer to Figure 19.

1. Disconnect machine from power source.
2. Back off upper and lower guide bearings to eliminate any contact with blade.
3. With blade centered on wheels, move quick tension lever to “Full Tension” position, as shown in Figure 19. NOTE: You should feel tension lever settle into each of its three positions.



Figure 19

4. Open upper door.
5. Rotate tension handwheel (A, Figure 20) until scale pointer (B) indicates width of installed blade.

**TIP:** Use the band saw’s gauge setting initially. As you become familiar with the machine and with different properties of band saw blades, you may find it necessary to change blade tension from initial setting. Keep in mind that not only changes in blade width, but also type of material being cut will have an effect on blade tension. Too little or too much blade tension can cause blade breakage and/or poor cutting performance.

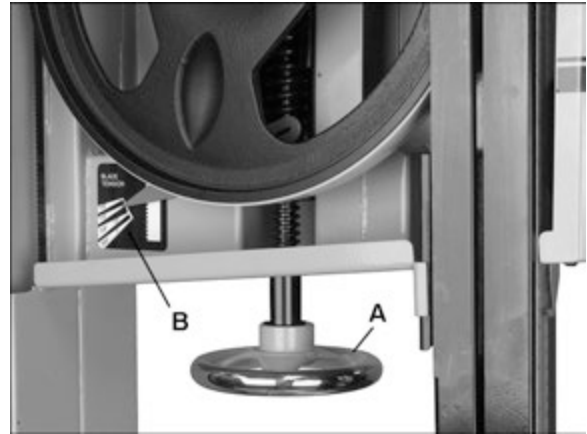


Figure 20

6. Make a note of the specific tension setting for a particular blade. Tension can then be re-set quickly when that blade is reinstalled.

**IMPORTANT:** When band saw is not being used, move quick tension lever to “Partial Tension-Idle/Tracking” position. This will prolong the life of blade and tires, and reduce load on wheels, bearings, and other components.

### 8.12 Blade Tracking

Refer to Figures 21 and 22.

After proper tensioning, the blade must be tracked. “Tracking” refers to position of blade on the wheels while machine is in operation. Tracking should be checked periodically and is mandatory after every blade change. Blade tracking is done by hand with machine disconnected from power.

1. Disconnect machine from power source.
2. Blade must be correctly tensioned (*section 8.11*).
3. Make sure blade guides and other parts of machine will not interfere with blade movement. Lower guide post until you can see blade through tracking window (C).



Figure 21



4. Set quick tension lever initially to "Partial Tension-Idle/Tracking" position, as shown in Figure 21.
5. Open upper door to expose wheel.
6. Rotate wheel by hand, observing position of blade through tracking window. As you rotate wheel, move lever to "Full Tension" position. The blade should continue to ride upon center of tire (Figure 22).

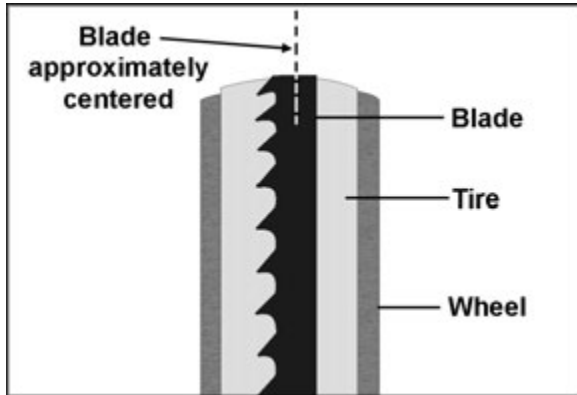


Figure 22

7. If blade tends to move toward edge of wheel, set lever to "Partial Tension-Idle/Tracking."
8. Loosen lock handle (D, Figure 21) and slightly rotate tracking knob (E) with your right hand while continuing to rotate wheel with your left. Observe blade through tracking window. Rotating knob clockwise will cause blade to move toward rear edge of wheel. Rotating knob counterclockwise will cause blade to move toward front edge of wheel.

**IMPORTANT:** This adjustment is sensitive; perform in small increments and give blade time to react to changes.

9. When blade is tracking in center of wheel, re-tighten lock handle (D), and close upper door.
10. Move tension lever to "Full Tension" position, and connect band saw to power. Turn it on for a brief time to observe the blade in action through tracking window.
11. If further adjustments are needed, disconnect from power and repeat above procedure.

**NOTE:** An interlock switch in the upper housing prevents operation of saw unless tension lever is in full tension position.

### 8.13 Upper Blade Guides

The bearing guides should be set so that contact between blade and guides will occur only when blade is under pressure from a workpiece. To adjust upper bearing guides for proper blade control, proceed as follows.

Refer to Figures 23 through 24.

1. Disconnect machine from power source.

2. Blade must already be tensioned and tracking correctly. Place quick tension lever in "Full Tension" position.
3. Lower guide post until upper guide bearings are a few inches off the table. (The reason for this will be evident later in *section 8.17*)
4. Loosen lock knob (F, Figure 23).

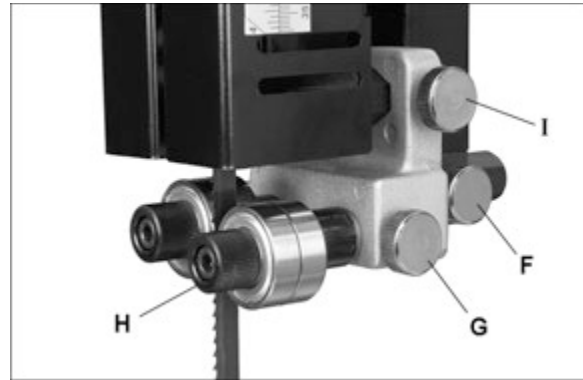


Figure 23

5. Slide entire guide bracket until front of guide bearings are about 0.015" (1/64") behind the blade's gullet (curved area at base of tooth). See Figure 24.

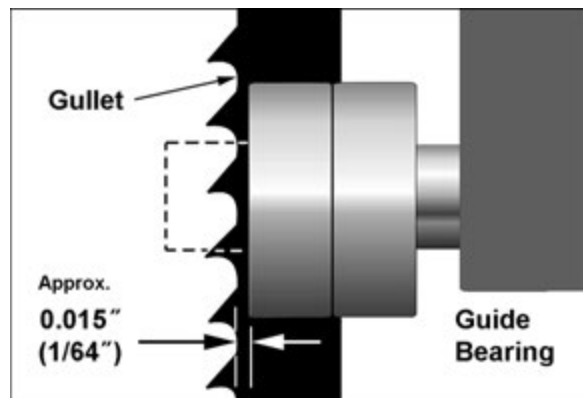


Figure 24

6. Tighten lock knob (F) to secure this position.
7. Loosen lock knob (G) for one of the guide bearings.
8. The guide bearing rotates on an eccentric shaft. Adjust guide bearing by rotating the knurled knob (H) with a 5mm hex key, until guide bearing is approximately 0.004" from blade. A quick way to achieve this spacing is by placing a single thickness of a crisp dollar bill (a dollar bill is approximately 0.004" thick) between blade and guide bearing. See Figure 25. Adjust guide bearing until it just lightly grips the dollar bill.



Figure 25

9. NOTE: Do not force guide bearing against side of blade. It should generally only make contact with blade when there is pressure from the cutting operation.
10. Tighten lock knob (G).
11. Repeat process for opposite guide bearing.

### 8.14 Upper Thrust Bearing

Refer to Figures 23 and 26:

1. The thrust bearing prevents backward deflection of blade during cutting. A groove provided in the bearing surface helps stabilize the moving blade.
2. Loosen lock knob (I) and push thrust bearing (J) up to back of blade.
3. Adjust thrust bearing until space between groove bottom and back edge of blade is approximately 0.015" (1/64"). Tighten lock knob (I).
4. If lateral adjustment of bearing is needed to align groove with blade, loosen set screw (K) at front of bearing assembly, and shift bearing as needed. Retighten set screw.
5. Make sure all lock knobs on upper guide bearing assembly are tightened when adjustments are finished.

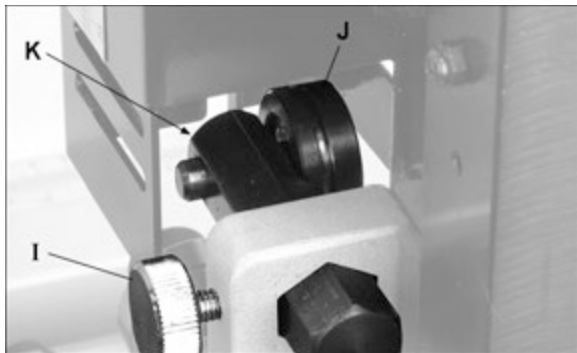


Figure 26

### 8.15 Lower Blade Guides

Refer to Figures 27 and 28.

1. Disconnect band saw from power source.

2. Open lower door and lower blade guard.
3. Adjust lower guide bearings and lower thrust bearing below table, using same procedure and measurements as for upper guide bearings and thrust bearing described above.

*Movement summary:* Loosen lock knob (L) to move guide bracket. Loosen lock knob (M) to rotate side bearing, using knurled knob (N). Loosen lock ring (O, Figure 27) and rotate knob (P) to adjust thrust bearing in relation to blade.

4. Make sure all knobs are tightened after adjustments are complete.
5. Close lower blade guard and lower door.

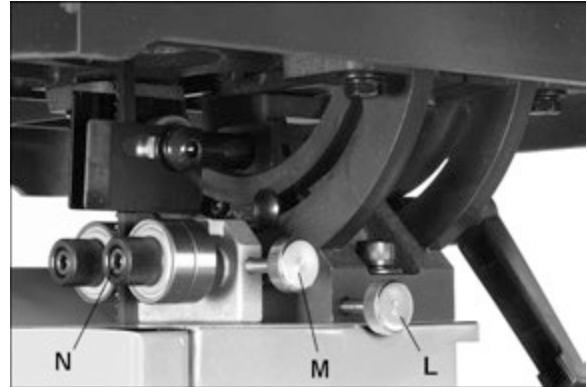


Figure 27 (Blade guard removed for clarity; install lower blade guard before operating)

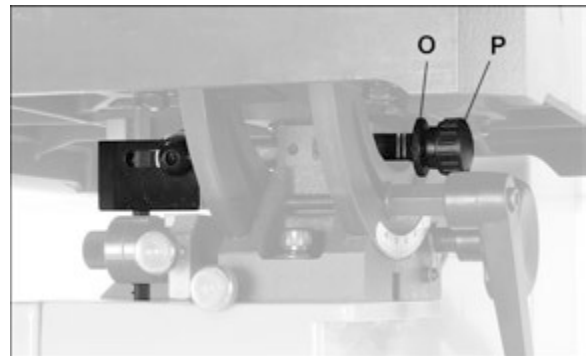


Figure 28

### 8.16 Guide Post

Refer to Figure 29.

1. Disconnect band saw from power source.
2. Loosen lock knob (A) and raise or lower guide post (B) using handwheel (C).
3. Position blade guide assembly so that bottom of guide bearings are about 1/8" above material to be cut. Or, simply lower guide post until scale pointer (D) indicates the height of your workpiece. This provides minimal clearance between workpiece and bottom of guide bearings, which will minimize blade deflection as well as enhance operator safety.
4. Tighten lock knob (A).

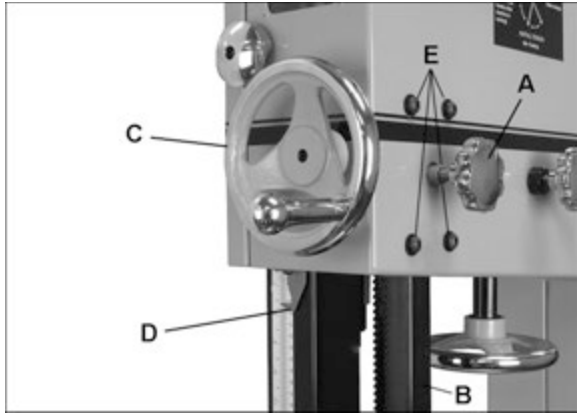


Figure 29

### 8.17 Guide Post Parallelism

The guide post should be parallel to blade throughout vertical travel of the guide post; thus the guide bearings will maintain their relationship to blade at any height from the table and won't require re-setting each time guide post is moved. This setting has been accurately made by the manufacturer and should not require immediate attention, but may be checked in future as follows:

1. Disconnect band saw from power source.
2. Move blade tension lever to "Full Tension" position.
3. The guide bearings in low position should already be set in relation to blade (see section 8.13). Also, the table must be square with blade (see section 8.4)
4. Loosen lock knob (A, Figure 28) and raise guide post to a high position.
5. Confirm that guide post travels straight up and down, and guide bearings maintain their relationship to blade.
6. If guide post does not go straight up and down (blade begins deflecting when guide post is raised), slightly loosen the four screws (E, Figure 29) and adjust guide post assembly as needed.
7. When finished adjusting, securely tighten the four screws (E).
8. Verify the setting by raising and lowering guide post.

### 8.18 Resaw Pin

Refer to Figure 30.

The resaw pin provides a single contact point while ripping a workpiece into thinner boards.

Remove aluminum plate and mount resaw pin to slot in fence body, securing it with knob, as shown. The resaw pin is usually positioned so that its center is approximately even with the front edge of the blade.

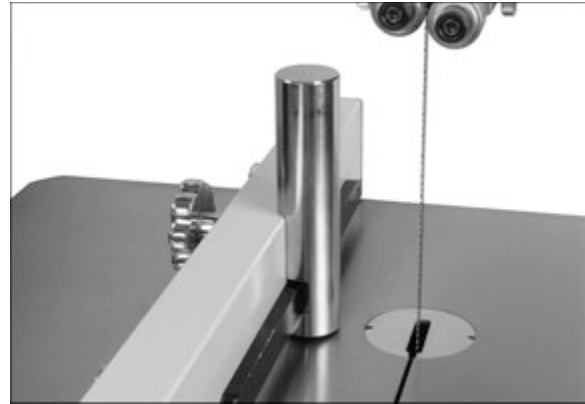


Figure 30

See section 10.4 for further information about using resaw pin.

### 8.19 Miter Gauge

Refer to Figures 31, 32, 32B, and 32C.

**CAUTION** For model PM1500T: The miter gauge has non-marring bottom surfaces to protect the table coating. To prevent damage to the table coating, only use the miter gauge supplied with this machine.

A miter gauge is provided for crosscutting operations. Install miter gauge by sliding end of miter gauge bar into table T-slot.

The miter gauge should fit snugly within miter slot while still sliding easily. The miter gauge bar has two slots, each with a set screw (Figure 31). Rotate one or both set screws with a 4mm hex key as needed, to eliminate any play between miter gauge bar and miter slot.

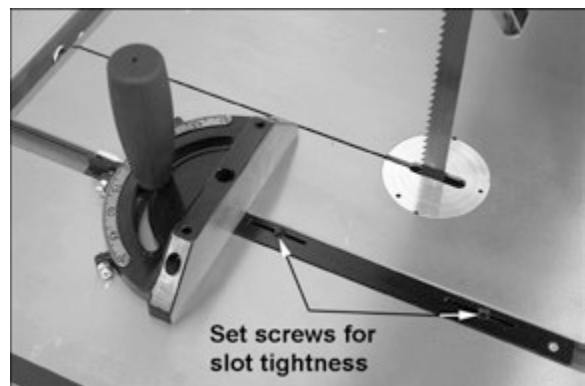


Figure 31

If table/miter slot is square to blade (see section 8.5) the miter gauge will also be square to blade. Before operating, however, the 90° setting (model PM1500) or 0° setting (model PM1500T) of miter gauge should be checked in relation to blade, as follows.

#### Squaring Miter Gauge (model PM1500):

1. Place a square against miter gauge face, and against flat of blade, as shown in Figure 32. (Place square against flat of blade, not against

the teeth which are set wider than the blade body). A wide blade is preferred for this procedure.

2. Flip 90° stop plate (C) out of the way and loosen handle (A). Shift miter gauge body until it is flush with square, then re-tighten handle (A).
3. Flip stop plate (C) back down and loosen 90° stop hex nut. Adjust screw until it contacts 90° stop plate.
4. Re-tighten hex nut.
5. Loosen set screw at base of pointer (B) and shift pointer so that it lines up with 90° mark on scale.
6. Re-tighten set screw.

The 45° stops can be checked in similar fashion, using an angle gauge similar to that shown in Figure 32.

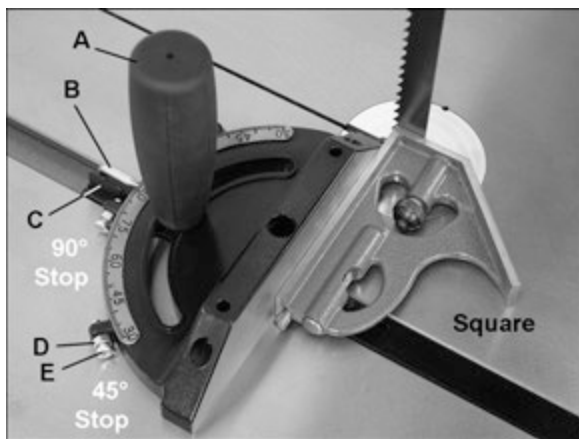


Figure 32

#### Squaring Miter Gauge (model PM1500T):

1. Place a square against miter gauge face, and against flat of blade, as shown in Figure 32. (Place square against flat of blade, not against the teeth which are set wider than the blade body). A wide blade is preferred for this procedure.
2. Loosen screws A and B as shown in Figure 32C.
3. Adjust the miter gauge fence to make it square to the blade. Tighten screws A and B.
4. After squaring, if the red pointer (C) is not pointing at 0°, loosen the pointer setscrew (see Figure 32B), rotate the pointer to 0°, and re-tighten the pointer setscrew.

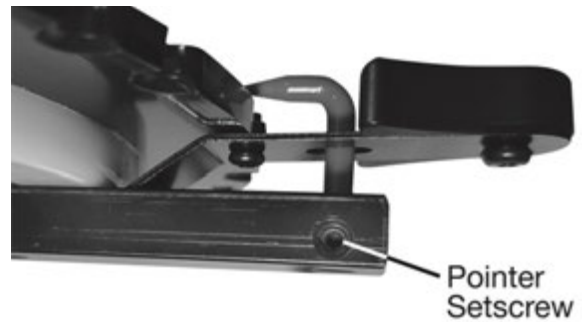


Figure 32B

#### Adjusting Miter Gauge Angle for Operations (model PM1500, refer to Figure 32):

1. Unscrew handle (A) just enough to loosen it.
2. Rotate gauge body until pointer (B) lines up with desired angle on scale. You may have to pivot 90° stop plate (C) out of the way to allow the body to rotate.
3. Tighten handle (A).
4. There are three stops: at 90°, and 45° left and right. Each of these can be adjusted by loosening hex nut (D) and turning screw (E) as needed. Re-tighten hex nut (D) after adjustment.

#### Adjusting Miter Gauge Angle for Operations (model PM1500T, refer to figure 32C):

1. Unscrew handle (D) just enough to loosen it.
2. Press black tab (E) to release it from stop 0°.
3. Rotate gauge body until red pointer (C) lines up with desired angle on scale.
4. Tighten handle (D).
5. There are 13 stops at 0°, 15°, 22.5°, 30°, 45°, 60°, and 67.5° left and right. Each of these can be adjusted to by allowing the spring stop to lock into each location. Press black tab (E) to move past each stop location.

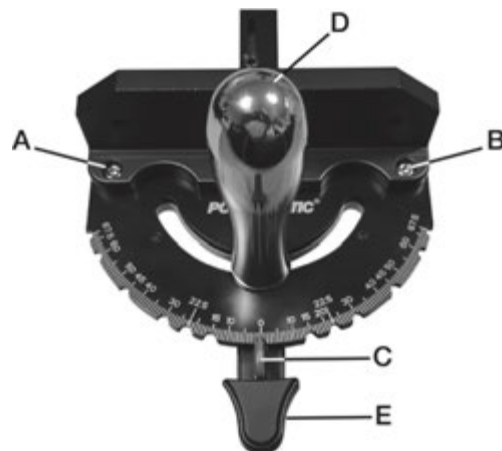


Figure 32C

## 8.20 Drive Belt Replacement and Tensioning

The drive belt and pulleys are properly adjusted at the factory. However, belt tension should be occasionally checked when the band saw is new, as a new belt may stretch slightly during the breaking-in process.

If belt becomes worn, cracked, frayed or glazed, it should be replaced as follows:

Refer to Figures 33 and 34.

1. Disconnect machine from power source.
2. Open upper and lower doors and remove blade.
3. Remove screw (F, Figure 33) from lower wheel shaft with a 6mm hex key and remove lower wheel.

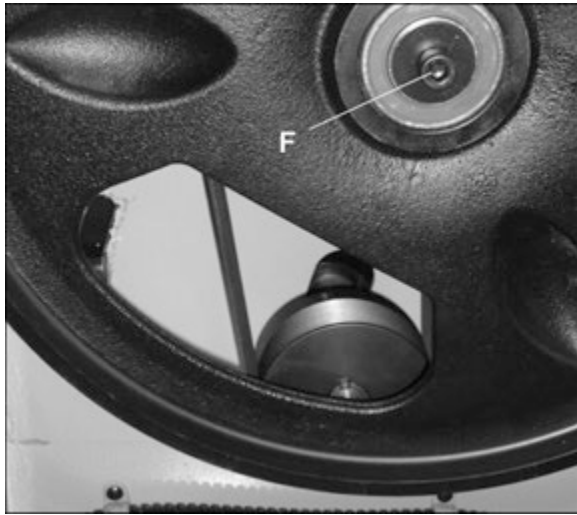


Figure 33

4. Loosen motor lock handle (G, Figure 34).
5. Raise motor lift handle (H) and retighten motor lock handle to hold motor in raised position.
6. Remove old belt and install new one, making sure it seats properly in pulley grooves.
7. Loosen motor lock handle (G) and allow motor to lower.



Figure 34

8. The weight of the motor itself should produce proper tension for the belt. Check tension by

pushing with moderate pressure on the belt halfway between the pulleys. An adequately tensioned belt will deflect about 1/2". If tension isn't strong enough, push down on motor.

9. Tighten motor lock handle (G).
10. Reinstall lower wheel and tighten screw (F) securely.
11. Install blade and verify blade tension and tracking before operating (*sections 8.11 and 8.12*).

## 8.21 Brushes

Refer to Figure 35.

Two adjustable brushes are located in lower wheel housing. They should remain in constant contact with blade or wheel to prevent buildup of gum and debris.



Figure 35

## 9.0 Operating Controls

### 9.1 Start/Stop

Refer to Figure 36.

**Power Indicator Light** – The start switch (A) has a power indicator lamp which is on *whenever there is power connected* to the band saw, not just when the band saw is running.

**WARNING** 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 for power first. Failure to comply may cause serious injury!

**Start** – Press green start switch (A).

When power is connected to machine, the green light is always on regardless of whether band saw is running or not.

**Stop** – Press red switch (B) to stop.

**Reset** – If band saw stops without pressing the stop button (as result of tripped fuse or circuit breaker, etc.) proceed as follows:

1. Press red switch to reset.
2. Press green switch to restart machine.

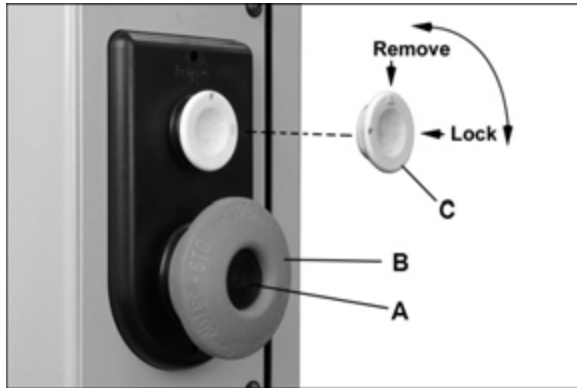


Figure 36

## 9.2 Safety Key

The start/stop switch on the Band Saw comes equipped with a magnetic safety key (C, Figure 36). When in place on the switch, the magnetic safety key trips a relay which will allow the machine to start and stop when the respective switches are pressed. Being magnetic, the lock can be removed to make the machine inoperable and can be hidden for safe storage by attaching it to another magnetic surface.

When using the band saw, place the key on the switch cover, lining up arrow on key with REMOVE arrow on cover. Then rotate key so that arrow lines up with LOCK arrow on cover. This will prevent the safety key coming loose from vibration when machine is in use.

## 9.3 Brake Pedal

When the stop button is used to shut off the band saw, the blade will coast slowly to a stop. An alternate method of stopping the machine is to press and hold the brake pedal, shown in Figure 37. The blade will stop moving in approximately three to four seconds after pedal is pressed. Restart saw by pressing start switch on column.

NOTE: Unnecessary and excessive use of brake pedal may shorten life of brake pad.

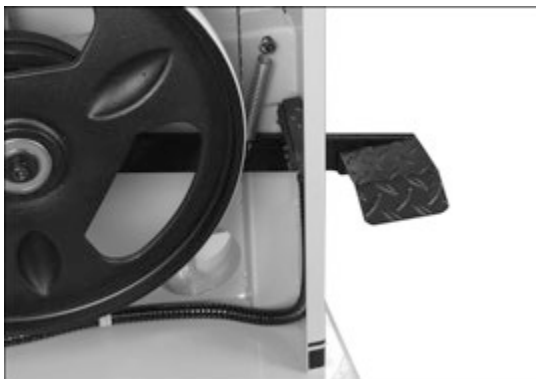


Figure 37

**WARNING** After machine is shut off, allow wheels and blade to come to a complete stop before opening guards/doors, making adjustments, or leaving the area.

## 10.0 Operation

The following section contains basic information and is not intended to cover all possible applications or techniques using the band saw. Consult published sources of information, acquire formal training, and/or talk to experienced band saw users to gain proficiency and knowledge of band saw operations.

(The following figures may or may not show your specific model, but procedures are the same.)

**CAUTION** Model PM1500T has an industrial-grade low-friction corrosion-resistant table coating. While the coating is durable, it can be damaged if metal or other hard and/or sharp objects strike, gouge, or scratch the surface. Significant damage to the coating may affect its performance. Use care when operating the machine.

### 10.1 General Procedure

1. Make sure blade is adjusted correctly for tension and tracking, and that upper and lower guide bearings and thrust bearings are set in proper relation to blade.
2. Adjust guide post so that guide bearings are just above workpiece (about 1/8") allowing minimum exposure to blade.
3. If using the fence, move it into position and lock it to guide rail. If using miter gauge for a crosscut, the fence should be moved safely out of the way.
4. Turn on band saw and allow a few seconds for machine to reach full speed.

**WARNING** Whenever possible, use a push stick, hold-down, power feeder, jig, or similar device while feeding stock, to prevent your hands getting too close to the blade.

5. Place the straightest edge of the workpiece against the fence for a rip cut; or against the miter gauge for a crosscut. Push workpiece slowly into blade, while also keeping it pressed against fence or held against miter gauge. Do not force workpiece into blade.

Additional operating tips:

Make *relief cuts* whenever possible. A relief cut is an extra cut made through the waste portion of a workpiece up to the layout line. When that intersection is reached by the blade while following the layout line, the waste portion comes free. This

helps prevent pinching of the back edge of the blade in the cut.

**CAUTION** When cutting, do not overfeed blade; overfeeding will reduce blade life, and may cause blade to break.

When cutting long stock, the operator should use roller stands, support tables, or an assistant to help stabilize the workpiece.

## 10.2 Ripping

Ripping is cutting lengthwise down the workpiece, along the grain of wood. See Figure 38.

**WARNING** Always use a push stick or similar device when ripping narrow pieces.

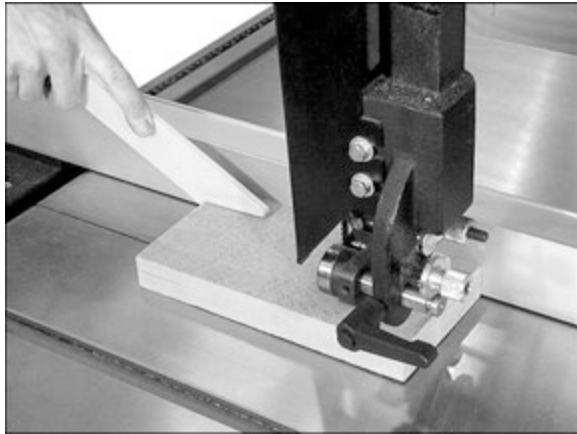


Figure 38 (ripping)

## 10.3 Crosscutting

Crosscutting is cutting across the grain of the workpiece, while using the miter gauge to feed the workpiece into the blade.

The right hand should hold workpiece steady against miter gauge, while left hand pushes miter gauge past blade, as shown in Figure 39.

Do not use fence in conjunction with miter gauge. The offcut of the workpiece must not be constrained during or after the cutting process.

**CAUTION** Using the fence in conjunction with miter gauge can cause binding and possible damage to blade.

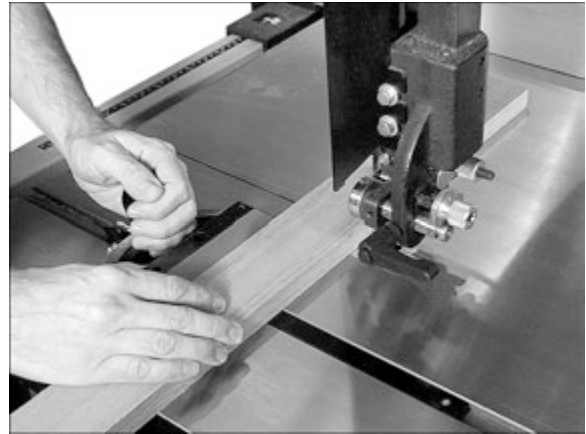


Figure 39 (crosscut)

## 10.4 Resawing

Resawing is the process of slicing stock to reduce its thickness, or to produce boards that are thinner than the original workpiece, such as veneers.

The ideal blade for resawing is the widest one the machine can handle, as the wider the blade the better it can hold a straight line.

Resawing can be performed using the aluminum fence plate or the resaw pin. When using the plate, use a push block, push stick, or similar device to keep your hands away from the blade. The resaw pin offers a pivot point by which you can carefully follow your layout line; it is especially useful for sawing curves, when the fence cannot be used and it is difficult to control the cut freehand.

Figure 40 demonstrates resawing with the aluminum plate; Figure 41, with the resaw pin.

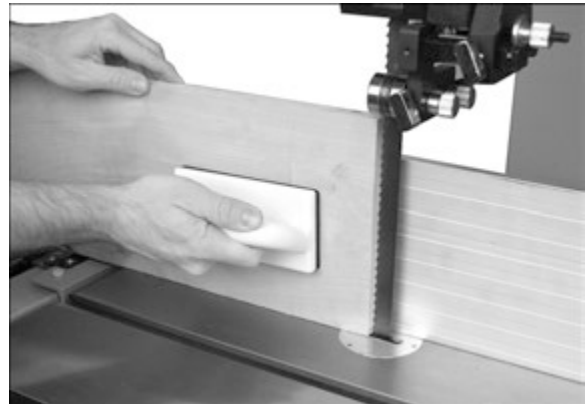


Figure 40 (resawing)

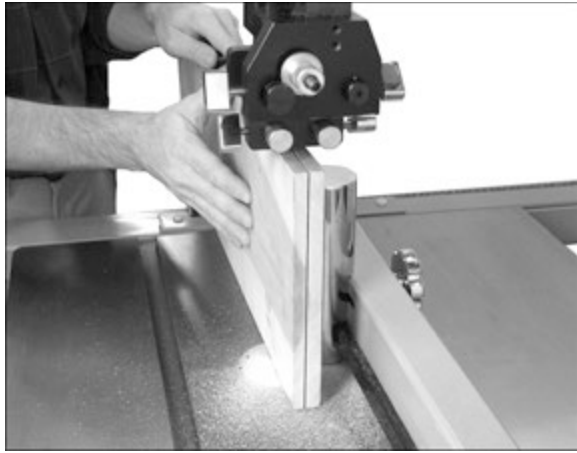


Figure 41 (resaw pin)

## 10.5 Blade Lead

Blade lead, or drift, is when the blade begins to wander off the cutting line even when the band saw fence is being used. Figure 42 shows an example of blade lead. It is more common with small, narrow blades, and is almost always attributable to poor blade quality, or lack of proper adjustments. Inspect the band saw for the following:

- Fence not parallel to miter slot and blade.
- Blade not tensioned correctly.
- Blade is dull.
- Teeth have excessive “set” on one side of blade.
- Workpiece being fed too quickly.

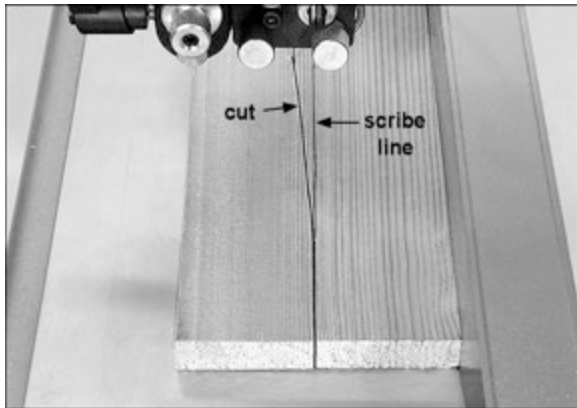


Figure 42

If the blade is suspect, but replacing it is not currently an option, the blade lead can be temporarily compensated for by skewing the fence:

1. Cut a scrap piece of wood about the same length as the band saw table, and joint one edge along its length, or rip it on a table saw to give it a straight edge.
2. Draw a line on the board parallel with the jointed, or straight edge of the board.
3. Move the band saw fence out of the way, and carefully make a freehand cut along your drawn line on the board. Stop about midway on the board, and shut off the band saw (allow blade

to come to a complete stop) but do not allow the board to move.

4. Clamp the board to the table.
5. Slide the band saw fence over against the board until it contacts the straight edge of the board at some point. Lock the fence down.
6. Use the back adjustment screws (F, Figure 13) to line up fence against board.

NOTE: Skewing the fence to correct blade lead is effective for that particular blade; when a new blade is installed, the fence will need re-adjustment and re-squaring to miter slot. See appropriate sections in this manual.

## 11.0 Maintenance

**⚠WARNING** Before doing maintenance on the machine, disconnect it from electrical supply by pulling out plug or switching off main switch! Failure to comply may cause serious injury.

**⚠CAUTION** Model PM1500T has an industrial-grade low-friction corrosion-resistant table coating. While the coating is durable, it can be damaged if metal or other hard and/or sharp objects strike, gouge, or scratch the surface. Significant damage to the coating may affect its performance. Use care when cleaning and maintaining the machine.

Clean band saw regularly to remove any resinous deposits and sawdust.

Keep miter slot, and guide bearings, clean and free of resin.

Keep blade clean and sharp. Check it periodically for cracks or other signs of wear.

The drive belt should be checked periodically. If it looks worn, frayed, glazed, or otherwise damaged, replace it.

Remove any deposits from band wheels to avoid vibration and potential blade breakage.

Vacuum or blow out dust from inside cabinet. (Use proper dust mask equipment).

**For model PM1500 only:** The table surface must be kept clean and free of rust for best results. If rust appears, it can often be removed with a mixture of household ammonia, good commercial detergent and #000 steel wool. Alternatively, commercial rust removers can be found at many hardware stores.

**For model PM1500 only:** Apply a light coat of paste wax to table. There are also products in aerosol form available in major hardware stores and supply catalogs. Whatever method is chosen, the coating should protect the metal and provide a smooth surface, without staining workpieces.

If the power cord is worn, cut, or damaged in any way, have it replaced immediately.



## 11.1 Lubrication Points

1. Periodically apply a light, non-hardening grease to rack and pinion system of guide post (Figure 43).

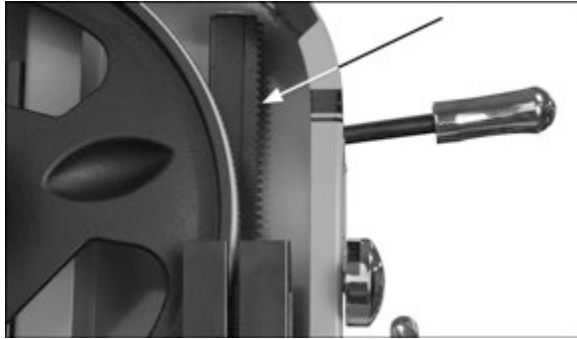


Figure 43

2. Grease the sliding surfaces of the table trunnions (Figure 44).



Figure 44

3. Grease blade tension screw (Figure 45).

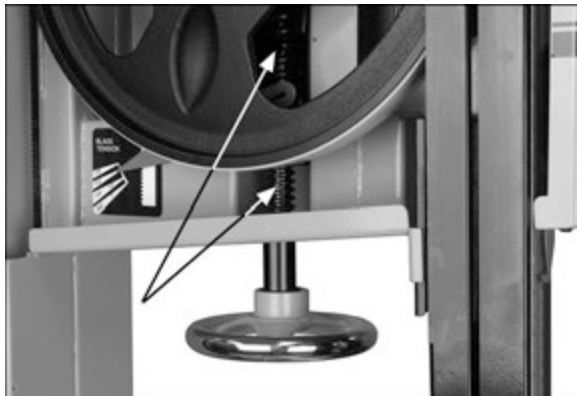


Figure 45

4. Oil any pins, shafts, and joints. (Do not get oil on pulleys or belts.)

Note: Bearings on the band saw are pre-lubricated and sealed, and do not require attention.

## 12.0 Blade Selection

Using the proper blade for the job will increase the operating efficiency of your band saw, help reduce necessary saw maintenance, and improve your

productivity. Thus, it is important to follow certain guidelines when selecting a saw blade.

Here are factors to consider during selection:

- Type of material you will be cutting.
- Thickness of workpiece.
- Features of workpiece, such as bends or curves with small radii.

These factors are important because they involve basic concepts of saw blade design. There are five (5) blade features that are normally changed to meet certain kinds of sawing requirements. They are:

1. Width
2. pitch (number of teeth per inch)
3. tooth form (or shape)
4. “set” of the teeth
5. the blade material itself

### Width

Band saw blades come in different standard widths, measured from back edge of blade to tip of tooth. Generally, wider blades are used for ripping or making straight cuts, such as resawing. Narrower blades are often used when the part being cut has curves with small radii. When cutting straight lines with a narrow blade, the blade may have a tendency to drift (see *section 10.5*).

### Pitch

Pitch is measured in “teeth per inch” (TPI) and can be constant or variable. Figure 46 shows blades with different pitches.

A fine pitch (more teeth per inch) will cut slowly but more smoothly. A coarse pitch (fewer teeth per inch) will cut faster but more roughly.

As a rule of thumb, the thicker the workpiece, the coarser will be the blade pitch. If you have to cut a hard or very brittle material, you will probably want to use a blade with a finer pitch in order to get clean cuts.

Using a blade with too few teeth may cause vibration and a rough cut, while too many teeth may cause the gullets to fill with sawdust and overheat the blade.

As a general rule, use a blade that will have from 6 to 12 teeth in the workpiece at any given time.

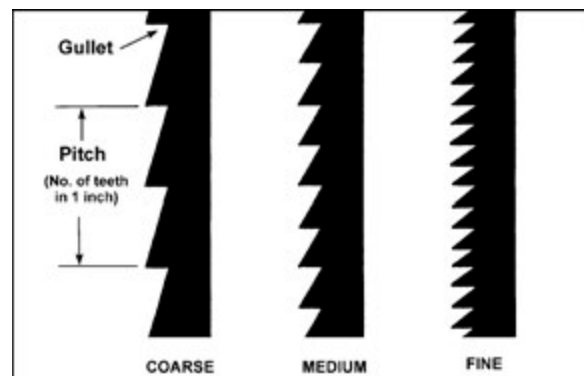


Figure 46 – Blade Pitch

## Shape

Figure 47 shows common types of tooth shape, or form. Tooth shape has an effect on cutting rate.

The *Regular*, or standard blade, has evenly spaced teeth that are the same size as the gullets, and a zero-degree rake (i.e. cutting angle). These offer precise, clean cuts at slower rates. It is usually a good choice for cutting curves and making crosscuts.

The *Skip* type has fewer teeth and larger gullets with a zero rake. It allows faster cutting rates than the Regular type, with a slightly coarser finish. It is useful for resawing and ripping thick stock, as well as cutting softwoods.

The *Hook* type blade has larger teeth and gullets and a positive rake angle for more aggressive, faster cutting when resawing or ripping thick stock, especially hardwoods.

*Variable-tooth* blades combine features of the other shapes, with tooth style and spacing varying on the same blade. This produces smooth cuts while dampening vibration.

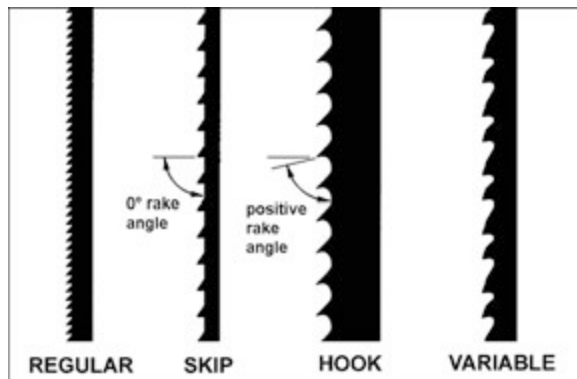


Figure 47 – Blade Tooth Shape

## Set

The term “set” refers to the way in which the saw teeth are bent or positioned. Bending the teeth creates a kerf that is wider than the back of the blade. This helps the operator more easily pivot a workpiece through curve cuts and decreases friction between blade and workpiece on straight cuts.

Set patterns are usually selected depending upon the type of material that needs to be cut. Three common set patterns are shown in Figure 48.

Generally, the *Raker* set is used for cutting metal workpieces; the *Wavy* set, when the thickness of the workpiece changes, such as cutting hollow tubing or structurals. The *Straight*, or *Alternate*, set is the one most used for woodworking blades, and is also used to cut plastics.

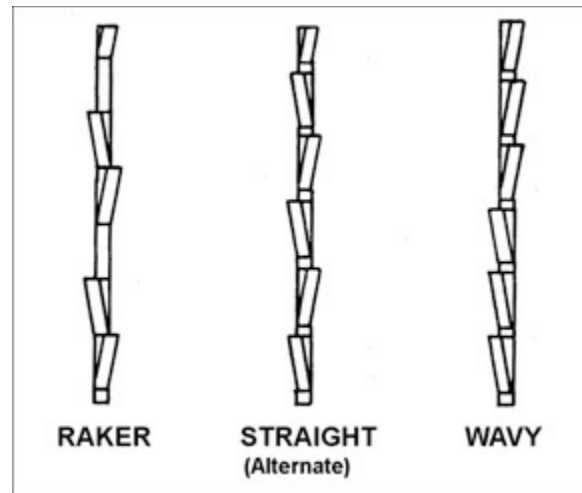


Figure 48 – Blade Set

## Material

Band saw blades can be made from different types of metals. The most common include spring steel, carbon steel, bimetal (alloy steel equipped with a high-speed cobalt steel edge welded to it), or carbide tips.

Because of the importance of blade selection, it is recommended that you use the blade selection guide (section 13.0). Also, listening to experienced band saw users will produce valuable information as to blade types currently on the market along with their pros and cons.

## Blade Breakage

Band saw blades are subject to high stresses and breakage may sometimes be unavoidable. However, many factors can be controlled to help prevent most blade breakage. Here are some common causes for breakage:

1. Misalignment of blade guides.
2. Feeding workpiece too quickly.
3. Using a wide blade to cut a tight radius curve.
4. Excessive tension.
5. Teeth are dull or improperly set.
6. Upper guides set too high off workpiece.
7. Faulty weld on blade.

Although not essential, some users round or “stone” the back edge of their blade. This is done by placing a sharpening stone on the table and in light contact with the back corners of the blade as the blade is running. Rounding can help the back blade edge move more smoothly through the kerf, smooths the weld, and helps prevent cracks from starting at the back corners.

## 13.0 Blade Selection Guide

Identify the material and thickness of your workpiece. The chart will show recommended PITCH, blade TYPE, and FEED RATE.

Key: H – Hook      L – Low  
 S – Skip      M – Medium  
 R – Regular      H – High

Example: 10/H/M means 10 teeth per inch / Hook Type Blade / Medium Feed

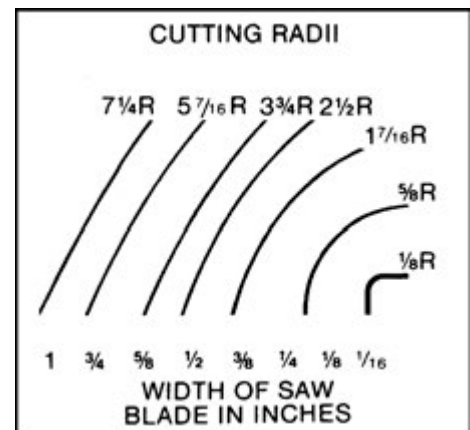
MATERIAL/S		WORKPIECE THICKNESS			
		½"	1"	3"	6+"
WOODS	HARDWOOD	10/R/L	8/R/L	3/H/M	3/H/M
	SOFTWOOD	10/R/L	8/R/L	3/H/M	3/H/M
NON-METALS	CARBON	10/R/L	6/R/L	3/S/M	3/S/M
	MICA	32/R/L	—	—	—
	HARD RUBBER	10/R/L	8/R/L	6/R/M	2/S/H
PLASTICS	FORMICA	14/R/M	10/R/M	4/H/H	4/H/H
	MASONITE	10/R/L	4/S/L	3/S/M	3/H/M
	MICARTA	14/R/M	10/R/M	4/H/H	3/H/H
	PLEXIGLAS	10/R/L	6/R/L	3/S/M	3/S/M
	PAPER	14/R/L	10/R/L	4/S/L	3/S/M

Tables 3 and 4

### For Radius Cutting

Study the part drawing or prototype, or actually measure the smallest cutting radius required, and locate this radius (in inches) on the chart at the right. Follow the curve to where the approximate blade width is specified. If a radius falls between two of the curves, select the widest blade that will saw this radius.

This procedure should be used for making initial blade selections. These recommendations can, of course, be adjusted to meet specific requirements of a cutting job. Compromises may be necessary if you cannot find all needed specifications in a single blade.



# 14.0 Troubleshooting

## 14.1 Operational Problems

Table 5

Trouble	Probable Cause	Remedy
Table tilt does not hold position under load.	Lock handle not tight.	Tighten lock handle.
	Trunnion locking mechanism is broken or worn.	Replace trunnion locking mechanism.
Table will not tilt.	Trunnion not lubricated.	Lubricate trunnion.
	Trunnion jammed.	Disassemble and replace jammed parts.
Table vibration while sawing.	Drive belt too slack.	Increase tension on drive belt ( <i>sect. 8.20</i> ). Replace belt if worn.
	Incorrect choice of saw blade pitch.	Check blade selection chart and use correct blade ( <i>sect. 13.0</i> ).
	Saw dust or debris on band wheel. Or tire is worn/damaged.	Keep band wheels clean. Replace tires if necessary.
Surface finish on workpiece is rough.	Blade pitch too coarse.	Change to finer pitch blade.
	Workpiece being fed too strongly.	Reduce feed force.
Blade cutting inaccurately. Cuts not straight.	Gum or pitch on blade.	Clean blade.
	Worn blade teeth or damaged blade.	Replace blade.
	Fence not parallel to blade.	Align fence properly ( <i>sect. 8.6</i> ).
	Incorrect adjustment of blade guides.	Adjust blade guides properly ( <i>sect. 8.13 thru 8.15</i> ).
	Workpiece being fed too strongly.	Reduce feed force.
	Upper blade guides not located close enough to workpiece.	Position guides about 1/8" above workpiece.
	Incorrect choice of saw blade for that particular operation.	Install correct blade.
	Blade tension too light.	Increase tension ( <i>sect. 8.11</i> ).
Blade cannot be tensioned properly.	Tension spring is fatigued.	Replace tension spring (contact Walter Meier service representative).
Blade binds in workpiece.	Incorrect blade tension or damaged blade.	Correct accordingly.
	Blade too wide for desired radius.	Select narrower blade ( <i>sect. 13.0</i> ).
Blade forms cracks at base of teeth.	Teeth not suitable for operation, or incorrectly set.	Replace with proper blade.
	Blade thickness not suitable for band wheel diameter.	Replace with proper thickness blade.
	Blade sharpened incorrectly, becomes overheated.	Sharpen blade properly or replace.

<b>Trouble</b>	<b>Probable Cause</b>	<b>Remedy</b>
	Band wheels have become misaligned.	Contact service representative.
Cracks on back edge of blade.	Workpiece being fed too quickly.	Reduce feed speed to lessen strain on blade.
	Welding on blade not perfectly aligned.	Eliminate welded part, and re-weld properly; or acquire a new blade. Round the back edge of a new blade.
	Thrust bearing is worn; caused by constant contact with back of blade.	Replace thrust bearing. Adjust new bearing according to instructions ( <i>sect. 8.14</i> ).
Blade breaks prematurely.	Feed force too great.	Reduce feed force.
	Blade pitch too coarse.	Refer to blade selection chart; use finer pitch blade.
	Guide bearings not properly supporting blade.	Check guide bearings for correct position and signs of wear. Adjust or replace as needed.
	Blade tensioned too tightly.	Reduce tension.
Blade breaks close to weld.	Blade overheated during welding.	Have blade annealed or eliminate brittle part and weld correctly.
	Blade cooled too rapidly after welding.	Have blade annealed or eliminate brittle part and weld correctly.
Premature dulling of saw teeth.	Blade pitch too fine.	Refer to blade selection chart ( <i>sect. 13.0</i> ). Use blade with coarser pitch.
	Feed pressure too light.	Increase feed pressure.
	Cutting rate too low.	Increase feed pressure and cutting rate.
	Incorrect choice of blade.	Re-examine material. Select proper blade from chart ( <i>sect. 13.0</i> ).
	Chipped tooth or foreign object lodged in cut.	Stop saw and remove lodged particle. Replace blade if damaged.

## 14.2 Mechanical and Electrical Problems

Table 6

Trouble	Probable Cause	Remedy
Machine will not start/restart or repeatedly trips circuit breaker or blows fuses.	No incoming power.	Verify machine is connected to power source, and safety key is installed on switch.
	Cord damaged.	Replace cord.
	Overload automatic reset has not been reset.	Reset overload by pushing in completely the OFF (red) button on the magnetic switch. Allow a few minutes for machine to cool. If problem persists, check amp setting on motor starter.
	Band Saw frequently trips.	One cause of overloading trips which are not electrical in nature is too heavy a cut. The solution is to reduce feed pressure into the blade. If too heavy a cut is not the problem, then check the amp setting on the overload relay. Match the full load amps on the motor as noted on the motor plate. If amp setting is correct, there is probably a loose electrical lead.
	Building circuit breaker trips or fuse blows.	Verify that band saw is on a circuit of correct size. If circuit size is correct, there is probably a loose electrical lead. Check amp setting on motor starter.
	Upper limit switch is engaged.	Adjust limit switch plate (#13, sect. 15.2.1) so that limit switch disengages when blade is tensioned. NOTE: Plate must still activate limit switch when blade is not tensioned.
	Switch or motor failure (how to distinguish).	If you have access to a voltmeter, you can separate a starter failure from a motor failure by first, verifying incoming voltage at 230+/-10% and second, checking the voltage between starter and motor at 230+/-10%. If incoming voltage is incorrect, you have a power supply problem. If voltage between starter and motor is incorrect, you have a starter problem. If voltage between starter and motor is correct, you have a motor problem.
	Motor overheated.	Clean motor of dust or debris to allow proper air circulation. Allow motor to cool down before restarting.
Motor failure.	If electric motor is suspect, you have two options: Have a qualified electrician test the motor for function or remove the motor and take it to a qualified electric motor repair shop for testing.	

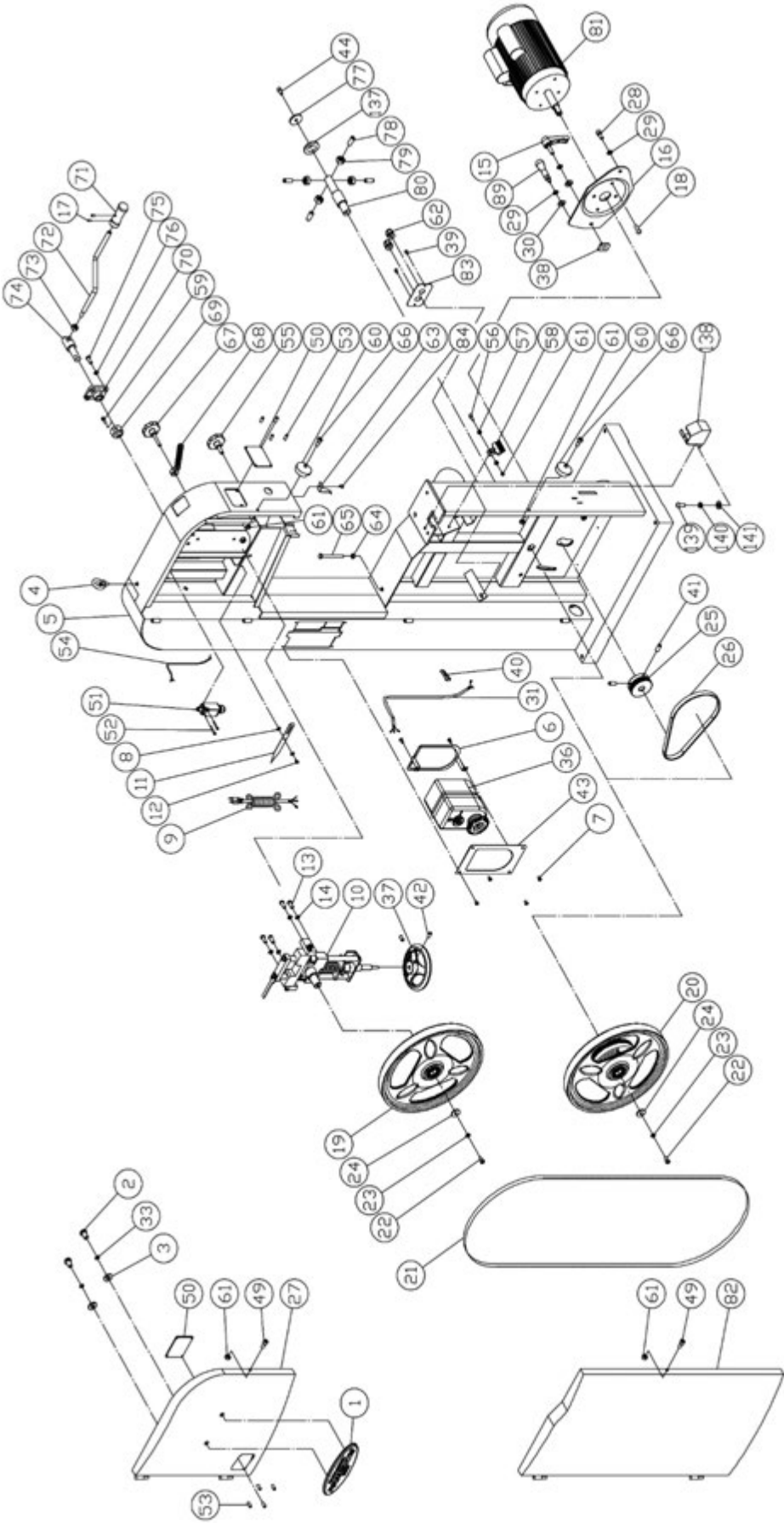
Trouble	Probable Cause	Remedy
Machine will not start/restart or repeatedly trips circuit breaker or blows fuses. (continued)	Miswiring of unit.	Double check to confirm all electrical connections are correct. Refer to wiring diagram to make any needed corrections.
	Switch failure.	If the start/stop switch is suspect, you have two options: Have a qualified electrician test the switch for function, or purchase a new start/stop switch and establish if that was the problem on change-out.
Band Saw does not attain full speed.	Extension cord too light or too long.	Replace with adequate size and length cord.
	Low current.	Contact a qualified electrician.

## 15.0 Replacement Parts

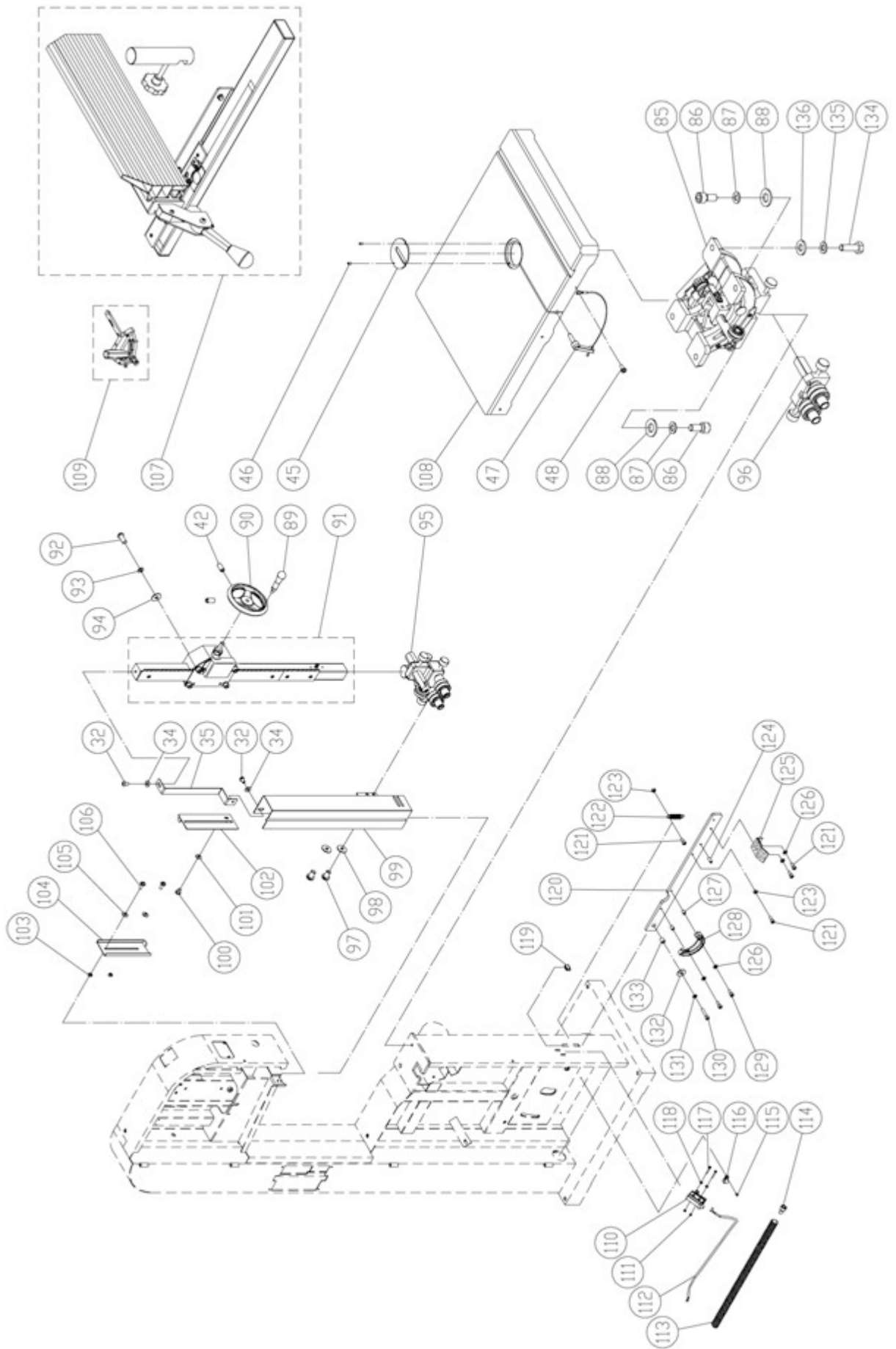
Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 Monday through Friday, 8:00 a.m. to 5:00 p.m. CST. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Non-proprietary parts, such as fasteners, can be found at local hardware stores, or may be ordered from Powermatic. Some parts are shown for reference only and may not be available individually.

15.1.1 Complete Machine with Accessories – Exploded View







## 15.1.2 Complete Machine with Accessories – Parts List

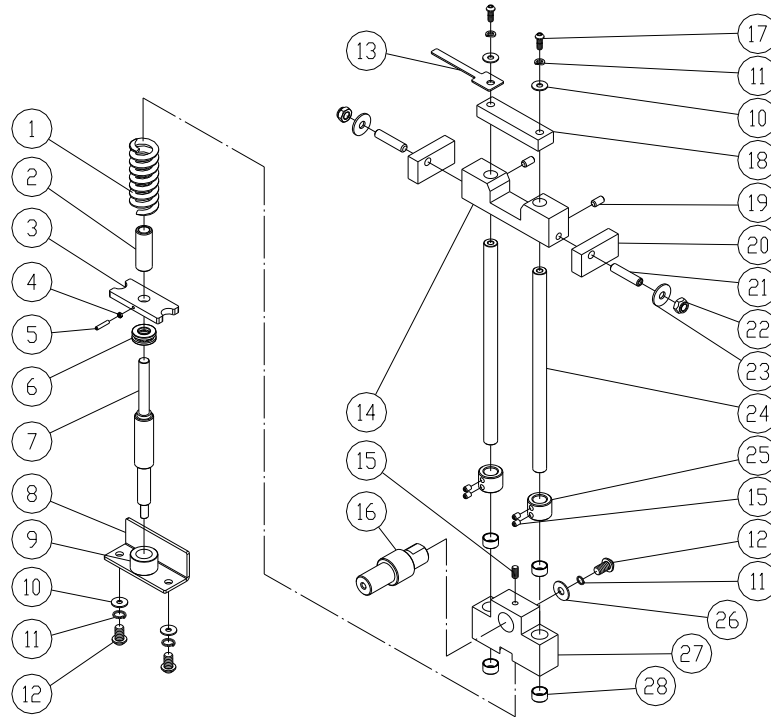
Index No	Part No	Description	Size	Qty
1	PM2000-105	Powermatic Nameplate, Large		1
2	TS-0254011	Socket Head Button Screw	1/4"-20UNCx3/8"L	2
3	TS-1550041	Flat Washer	M6 x Ø16	2
4	PM1500-004	Lifting Eye	M10	1
5	PM1500-005	Machine Main Body Frame		1
6	PM1500-006	Switch Bracket		1
7	TS-2246082	Socket Head Button Screw	M6x8	6
8	TS-1550041	Flat Washer	M6 x Ø13	2
9	PM1500-009	Power Cord	14AWGx3Cx3.4M	1
10	PM1500-010	Upper Wheel Sliding Bracket Assembly		1
11	PM1500-011	Tension Pointer		1
12	PM1500-012	Step Screw		1
13	TS-2248202	Socket Head Button Screw	M8x20	4
14	TS-2361081	Lock Washer	M8	4
15	PM1500-015	Motor Bracket Lock Handle	M10x33	1
16	PM1500-016	Motor Mount Plate		1
17	TS-1524011	Set Screw	M8x8	2
18	TS-2248202	Socket Head Button Screw	M8x20	4
19	PM1500-019	Upper Wheel Assembly	Ø15"	1
20	PM1500-020	Lower Wheel Assembly	Ø15"	1
21	PM1500-021	Saw Blade	153"L / 3/8"W / 0.65mm Thk	1
22	TS-1504041	Hex Socket Screw	M8x20	2
23	TS-2361081	Lock Washer	M8	2
24	TS-1550061	Flat Washer	M8 x Ø30	2
25	PM1500-025	Motor Pulley		1
26	PM1500-026	Poly-V Belt	290J9	1
27	PM1500-027	Upper Cabinet Door		1
28	TS-1505031	Socket Head Cap Screw	M10x25	1
29	TS-2361101	Lock Washer	M10	3
30	TS-1550071	Flat Washer	M10 x Ø20	2
31	PM1500-031	Motor Cord	14AWGx3Cx1.7M	1
32	TS-2246082	Socket Head Button Screw	M6x8	2
33	TS-2361061	Lock Washer	M6	1
34	TS-1550041	Flat Washer	M6 x Ø16	2
35	PM1500-035	Support Plate		1
36	PM1500-036	Magnetic Switch Assembly	230V/60Hz/1PH	1
	PM2000-298	Safety Key for Magnetic Switch		1
37	PM1500-037	Handwheel	6"	1
38	PM1500-038	Locating Block		1
39	PM1500-039	Tapping Screw	M4x8	2
40	PM1500-040	Wire Connector	224-201	1
41	TS-1523041	Socket Set Screw	M6x12	2
42	TS-1523051	Socket Set Screw	M6x16	4
43	PM1500-043	Face Plate		1
44	TS-1504041	Socket Head Cap Screw	M8x20	1
45	PM1500-045	Table Insert (Aluminum)		1
46	PM1500-046	Roll Pin	Ø4x8	2
47	PM1500-047	Table Pin Assembly		1
48	TS-1534032	Pan Head Bolt w/Flange	M6x10	1
49	TS-1503021	Socket Head Cap Screw	M6x10	2
50	PM1500-050	Viewing Window		2
51	PM1500-051	Limit Switch	AZD-1112	1
52	TS-2284302	Phillips Pan Head Machine Screw	M4x30	2
53	TS-1521031	Socket Set Screw	M4x8	8
54	PM1500-054	Switch Cord	18AWGx2Cx1.2M	1
55	PM1500-055	Lock Knob	M10x30	1
56	TS-1482051	Hex Cap Screw	M6x25	2
57	TS-1550041	Flat Washer	M6 x Ø13	4
58	PM1500-058	Brush		2
59	TS-1503061	Socket Head Cap Screw	M6x25	1

Index No	Part No	Description	Size	Qty
60	PM1500-060	Door Lock Knob		2
61	TS-1541021	Nylon Lock Hex Nut	M6	6
62	PM1500-062	Strain Relief	PG13.5	2
63	PM1500-063	Pointer		1
64	TS-2311101	Hex Nut	M10	1
65	TS-1491151	Hex Cap Screw	M10x90	1
66	TS-1503061	Socket Head Cap Screw	M6x25	2
67	PM1500-067	Blade Tracking Adjustment Knob	M10x50	1
68	PM1500-068	Lock Handle	M10	1
69	PM1500-069	Cam		1
70	PM1500-070	Shaft Fixed Block		1
71	PM1500-071	Tension Quick release Handle		1
72	PM1500-072	Tension Quick release Lever		1
73	TS-1540081	Hex Nut	M12	1
74	PM1500-074	Tension Quick release Lever Shaft		1
75	TS-2248202	Socket Head Button Screw	M8x20	4
76	TS-2361081	Lock Washer	M8	4
77	PM1500-077	Washer		1
78	TS-1524051	Socket Set Screw	M8x20	4
79	TS-1540061	Hex Nut	M8	4
80	PM1500-080	Lower Wheel Shaft		1
81	PM1500-081	Motor	3HP, 1PH, 230V	1
	PM1500-081-01	Motor Fan (not shown)		1
	PM1500-081-02	Motor Fan Cover (not shown)		1
	PM1500-081-03	Start Capacitor (not shown)	200MFD, 250VAC	1
	PM1500-081-04	Running Capacitor (not shown)	60µF, 300VAC	1
	PM1500-081-05	Junction Box (not shown)		1
	PM1500-081-06	Junction Box Cover (not shown)		1
	PM1500-081-07	Centrifugal Switch (not shown)		1
82	PM1500-082	Lower Cabinet Door		1
83	PM1500-083	Strain Relief Fixed Plate		1
84	JMS12SCMS-81	Pan Head Bolt w/Flange	M5x8	1
85	PM1500-085	Trunnion Support Bracket Assembly		1
86	TS-1505051	Socket Head Cap Screw	M10x35	2
87	TS-2361101	Lock Washer	M10	2
88	TS-1550071	Flat Washer	M10 x Ø23	2
89	3520B-126	Handle		2
90	PM1500-090	Handwheel		1
91	PM1500-091	Guide Bar Bracket Assembly		1
92	TS-2248202	Socket Head Button Screw	M8x20	4
93	TS-2361081	Lock Washer	M8	4
94	TS-1550061	Flat Washer	M8 x Ø18	4
95	PM1500-095	Upper Blade Guide Support Assembly		1
96	PM1500-096	Lower Blade Guide Support Assembly		1
97	TS-2246082	Socket Head Button Screw	M6x8	2
98	TS-1550041	Flat Washer	M6 x Ø16	2
99	PM1500-099	Blade Guard Cover		1
100	PM1500-012	Shoulder bolt		1
101	PM1500-101	Plastic Washer	M6xØ13, Thk 1.5mm	1
102	PM1500-102	Sliding Plate		1
103	TS-1541011	Nylon Lock Hex Nut	M5	2
104	PM1500-104	Protect Cover		1
105	PM1500-101	Plastic Washer	M6xØ13,Thk 1.5mm	2
106	TS-1533032	Phillips Pan Head Machine Screw	M5x10	2
107	PM1500-107	Fence Assembly		1
108	PM1500-108	Table (for PM1500)	21½"x16"	1
	PM1500-108T	Table (for PM1500T)	21½"x16"	1
109	PM1500-109	Miter Gauge Assembly (for PM1500)		1
	PM1500-109T	Miter Gauge Assembly (for PM1500T)		1
110	PM1500-110	Limit Switch	KL7141	1
111	TS-1540021	Hex Nut	M4	2
112	PM1500-112	Limit Switch Cord	18AWGx2Cx2.2m	1

Index No	Part No	Description	Size	Qty
113	PM1500-113	Wire Jacket	½"x1100mm(L)	1
114	PM1500-114	Wire Bushing		1
115	JWTS10-217	Tapping Screw	M4x8	2
116	PM1500-116	Wire Fixed Clamp	5/8"	2
117	TS-2284302	Phillips Pan Head Machine Screw	M4x30	2
118	TS-1550021	Flat Washer	M4xØ8	2
119	PM1500-119	Plastic Bumper	9mmx10mm	1
120	PM1500-120	Foot Brake Lever		1
121	TS-1503041	Socket Head Cap Screw	M6x16	4
122	PM1500-122	Spring		1
123	TS-2311061	Hex Nut	M6	2
124	PM1500-124	Nylon Set Screw	M7x10	1
125	PM1500-125	Foot Brake Pedal		1
126	TS-2361061	Lock Washer	M6	4
127	PM1500-127	Bushing		2
128	PM1500-128	Brake Pad		1
129	TS-1503061	Socket Head Cap Screw	M6x25	2
130	TS-1504051	Socket Head Cap Screw	M8x25	1
131	TS-2361081	Lock Washer	M8	1
132	TS-1550061	Flat Washer	M8 x Ø30	1
133	PM1500-133	Bushing		1
134	TS-1490041	Hex Cap Screw	M8x25	4
135	TS-2361081	Lock Washer	M8	4
136	TS-1550061	Flat Washer	M8 x Ø18	4
137	PM1500-137	Plate		1
138	PM1500-138	Lower Blade Guard		1
139	TS-2246082	Socket Head Button Screw	M6 x 8	2
140	TS-2361061	Lock Washer	M6	2
141	TS-1550041	Flat Washer	M6 x Ø13	2
	3520B-157	Upper (Narrow) Stripe, 50"L ( <i>not shown</i> )		4
	3520B-158	Lower (Wide) Stripe, 50"L ( <i>not shown</i> )		2
	PM1500-WL	Warning Label ( <i>not shown</i> )	4"H x 5-1/4"W	1
	PM1500-ID	I.D. Label ( <i>for PM1500, not shown</i> )		1
	PM1500-IDT	I.D. Label ( <i>for PM1500T, not shown</i> )		1
	PM1500-GS	Guide Post Scale ( <i>not shown</i> )		1
	PM1500-TLL	Tension Lever Label ( <i>not shown</i> )		1
	PM1500-BTL	Blade Tension Label ( <i>not shown</i> )		1

## 15.2.1 Upper Wheel Sliding Bracket & Tension Mechanism Assembly – Exploded View

Part Assembly No.: PM1500-010

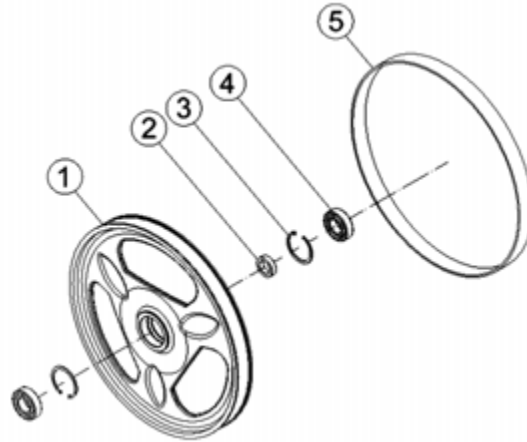


## 15.2.2 Upper Wheel Sliding Bracket & Tension Mechanism Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	PM1500-010-01	Spring		1
2	PM1500-010-02	Bushing		1
3	PM1500-010-03	Plate		1
4	TS-1540021	Hex Nut	M4	1
5	A077	Socket Set Screw	M4x25	1
6	BB-51201	Thrust Bearing		1
7	PM1500-010-07	Adjustment Screw Rod		1
8	PM1500-010-08	Adjustment Plate		1
9	PM1500-010-09	Screw Bushing		1
10	TS-1550061	Flat Washer	M8 x Ø18	4
11	TS-2361081	Lock Washer	M8	5
12	TS-2248202	Socket Head Button Screw	M8x20	3
13	PM1500-010-13	Limit Switch Plate		1
14	PM1500-010-14	Fixed Position Block		1
15	TS-1524011	Hex Socket Screw	M8x6	5
16	PM1500-010-16	Wheel Shaft		1
17	TS-2248302	Socket Head Button Screw	M8x30	2
18	PM1500-010-18	Locating Block		1
19	TS-1523031	Socket Set Screw	M6x10	2
20	PM1500-010-20	Fixed Block		2
21	PM1500-010-21	Socket Set Screw	M10x50	2
22	TS-1541041	Nylon Lock Hex Nut	M10	2
23	TS-1550071	Flat Washer	M10	2
24	PM1500-010-24	Guide Post		2
25	PM1500-010-25	Collar		2
26	TS-1550061	Flat Washer	M8 x Ø30	1
27	PM1500-010-27	Upper Wheel Sliding Bracket		1
28	PM1500-010-28	Bushing	DU1610	4

### 15.3.1 Upper Wheel Assembly – Exploded View

Part Assembly No.: PM1500-019

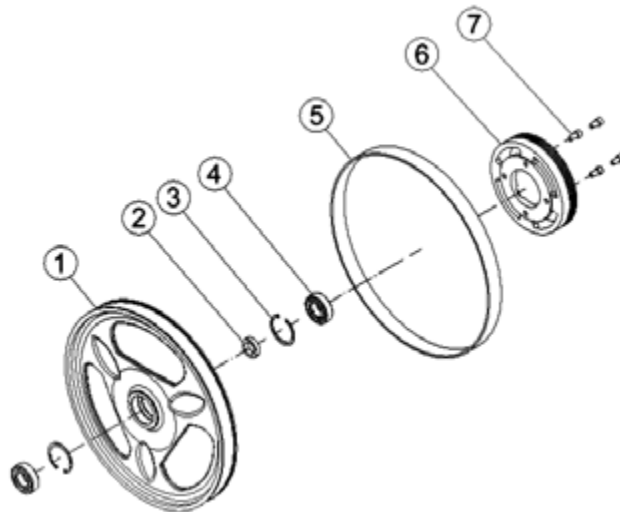


### 15.3.2 Upper Wheel Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	PM1500-019-01	Upper Wheel	Dia. 15 inches	1
2	PM1500-019-02	Spacer		1
3	JWBS20QT-504	Retaining Ring	R52	2
4	BB-6205LLU	Ball Bearing	6205LLU	2
5	PM1500-019-05	Tire		1

### 15.4.1 Lower Wheel Assembly – Exploded View

Part Assembly No.: PM1500-020

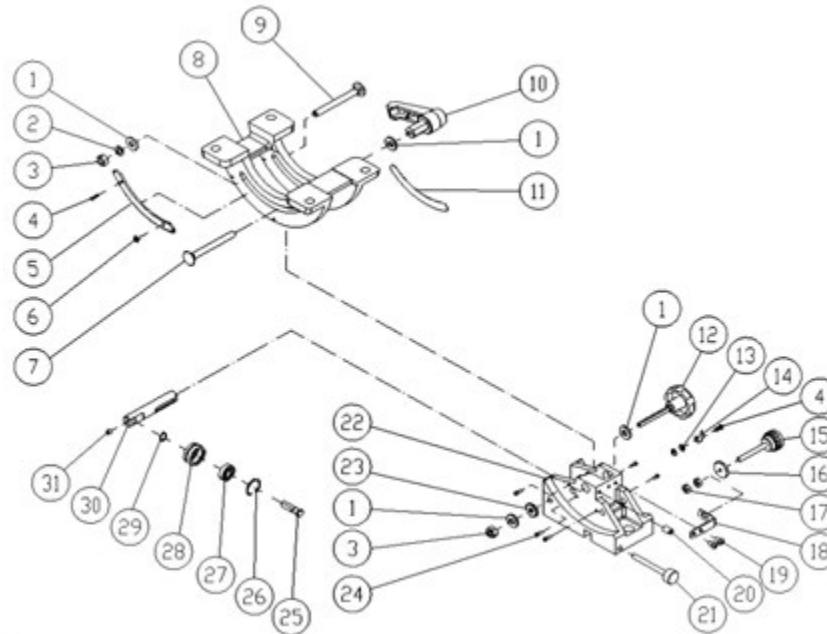


### 15.4.2 Lower Wheel Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	PM1500-020-01	Lower Wheel	Dia. 15 inches	1
2	PM1500-019-02	Spacer		1
3	JWBS20QT-504	Retaining Ring	R52	2
4	BB-6205LLU	Ball Bearing	6205LLU	2
5	PM1500-019-05	Tire		1
6	PM1500-020-06	Drive Pulley		1
7	TS-1504031	Socket Head Cap Screw	M8x16	4

## 15.5.1 Trunnion Support Bracket Assembly – Exploded View

Part Assembly No.: PM1500-085

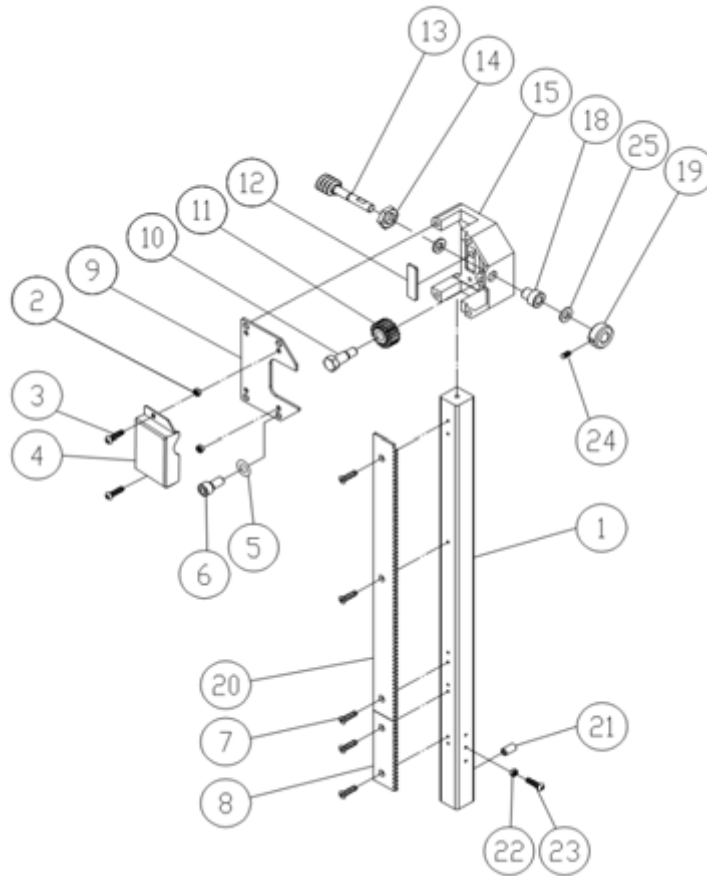


## 15.5.2 Trunnion Support Bracket Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	TS-1550061	Flat Washer	M8 x Ø18	4
2	TS-2361081	Lock Washer	M8	1
3	TS-1541031	Nylon Lock Hex Nut	M8	2
4	TS-2284062	Phillips Pan Head Machine Screw	M4x6	2
5	PM1500-085-05	Gear Rack		1
6	TS-2284061	Phillips Flat Head Machine Screw	M4x6	1
7	PM1500-085-07	Carriage Bolt	M8x85	1
8	PM1500-085-08	Trunnion Block		1
9	PM1500-085-09	Carriage Bolt	M8x80	1
10	PM1500-085-10	Lock Handle		1
11	PM1500-085-11	Tilt Scale		1
12	PM1500-085-12	Adjustment Knob Bolt		1
13	TS-1550021	Flat Washer	M4 x Ø8	2
14	PM1500-085-14	Angle Pointer		1
15	PM1500-085-15	Adjustment Knob Bolt	M6	1
16	PM1500-085-16	Locking Ring		1
17	TS-1540041	Hex Nut	M6	2
18	PM1500-085-18	Adjustment Plate		1
19	TS-1533032	Phillips Pan Head Machine Screw	M5x8	2
20	PM1500-085-20	Set Screw		1
21	PM1500-085-21	Lock Knob		1
22	PM1500-085-22	Trunnion Support Bracket		1
23	PM1500-085-23	Gear		1
24	TS-2235061	Socket Head Cap Screw	M5x6	6
25	PM1500-085-25	Adjustment Shaft		1
26	PM1500-085-26	Retaining Ring	R22	1
27	BB-608ZZ	Ball Bearing	608ZZ	1
28	PM1500-085-28	Thrust Bearing Holder		1
29	PM1500-085-29	Retaining Ring	S8	1
30	PM1500-085-30	Adjustment Bar		1
31	TS-1523011	Socket Set Screw	M6x6	1

## 15.6.1 Guide Bar Bracket Assembly – Exploded View

Part Assembly No.: PM1500-091



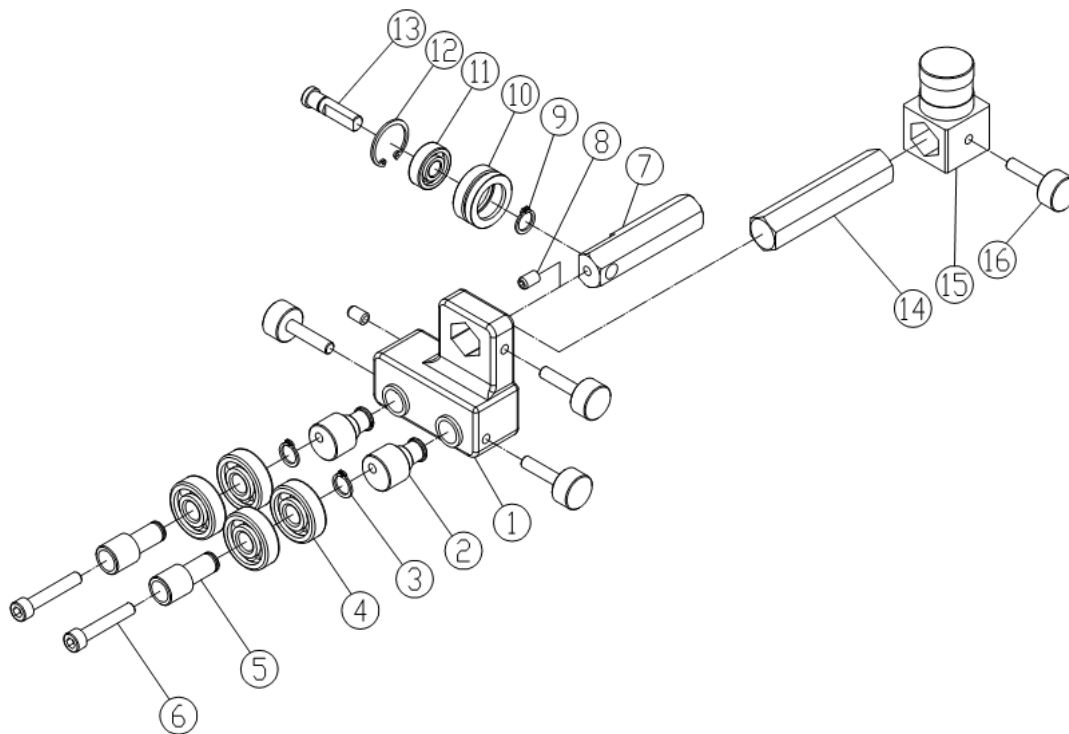
## 15.6.2 Guide Bar Bracket Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	PM1500-091-01	Guide Bar		1
2	TS-1540031	Hex Nut	M5	2
3	TS-1533032	Phillips Pan Head Machine Screw	M5x10	2
4	PM1500-091-04	Cover		1
5	TS-2361081	Lock Washer	M8	4
6	TS-1504031	Hex Socket Screw	M8x16	4
7	6286927	Phillips Flat Head Machine Screw	M4x10	1
8	PM1500-091-08	Guide Bar Rack (short)		1
9	PM1500-091-09	Cover		1
10	PM1500-091-10	Fixed Pin		1
11	PM1500-091-11	Gear		1
12	PM1500-091-12	Fixed Plate		1
13	PM1500-091-13	Worm Shaft		1
14	TS-154010	Hex Nut	M16	1
15	PM1500-091-15	Guide Bracket		1
18	PM1500-091-18	Bushing		1
19	PM1500-091-19	Collar		1
20	PM1500-091-20	Guide Bar Rack (long)		1
21	TS-1523021	Socket Set Screw	M6x8	2
22	TS-1540021	Hex Nut	M4	1
23	TS-1532032	Phillips Pan Head Machine Screw	M4x10	1
24	TS-1522011	Socket Set Screw	M5x5	1
25	PM1500-091-25	Plastic Washer		2



## 15.7.1 Upper Blade Guide Assembly – Exploded View

Part Assembly No.: PM1500-095

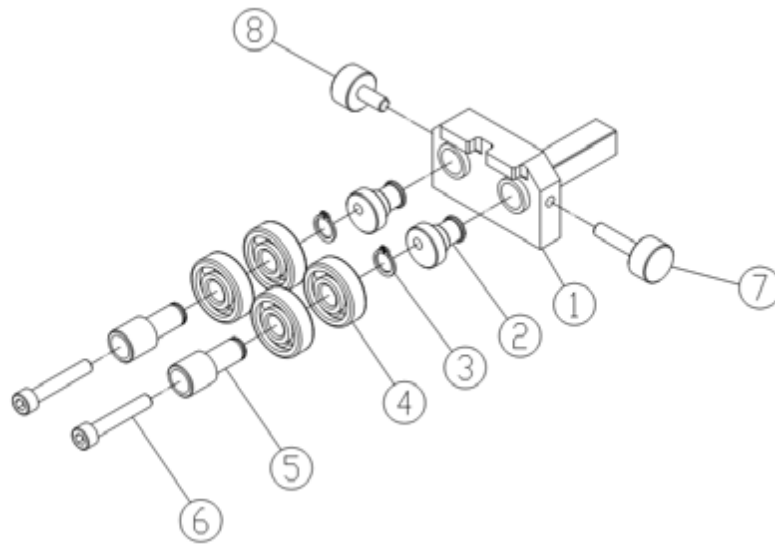


## 15.7.2 Upper Blade Guide Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	PM1500-095-01	Upper Blade Guide Support		1
2	PM1500-095-02	Eccentric Shaft		2
3	6286478	Retaining Ring	S12	2
4	BB-6201ZZ	Ball Bearing	6201ZZ	4
5	PM1500-095-05	Knurled Knob		2
6	TS-1503081	Socket Head Cap Screw	M6x35	2
7	PM1500-095-07	Upper Spacing Sleeve		1
8	TS-1523011	Socket Set Screw	M6x6	2
9	PM1500-085-29	Retaining Ring	S8	1
10	PM1500-085-28	Thrust Bearing Holder		1
11	BB-608ZZ	Ball Bearing	608ZZ	1
12	PM1500-085-26	Retaining Ring	R22	1
13	PM1500-085-25	Adjustment Shaft		1
14	PM1500-095-14	Hex Post		1
15	PM1500-095-15	Upper Blade Guide Support Block		1
16	PM1500-095-16	Lock Knob		4

### 15.8.1 Lower Blade Guide Assembly – Exploded View

Part Assembly No.: PM1500-096

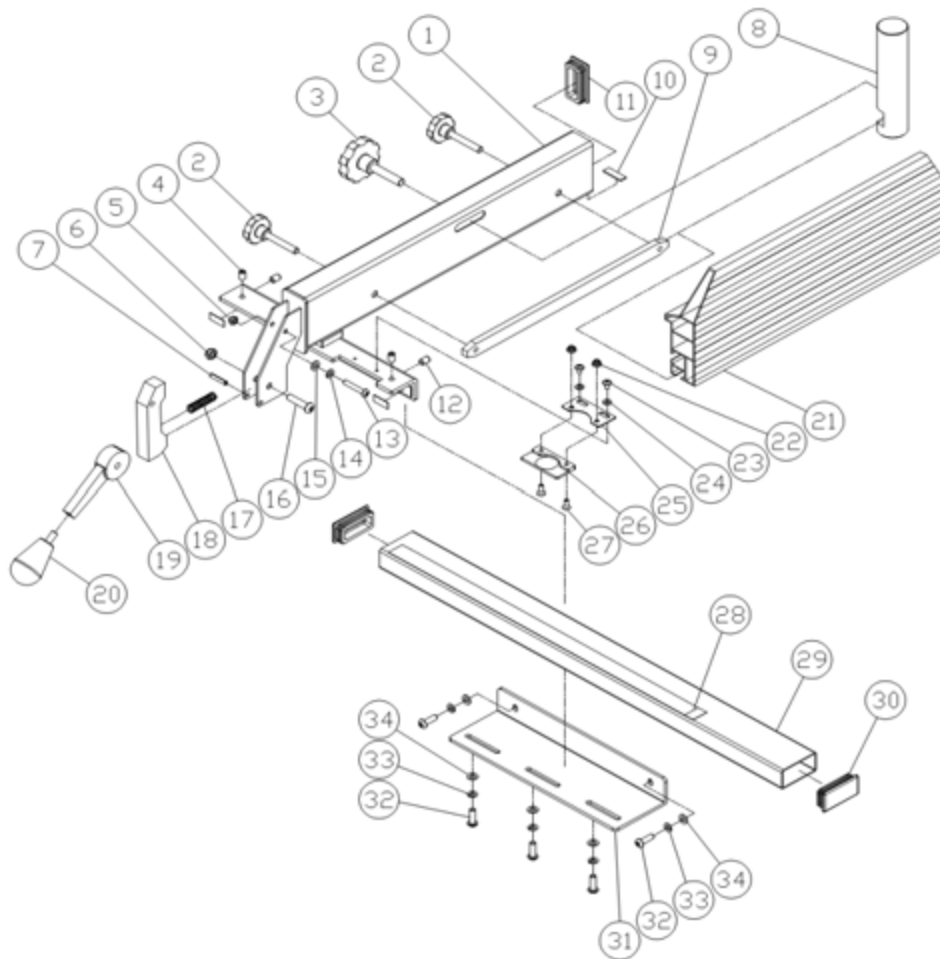


### 15.8.2 Lower Blade Guide Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	PM1500-096-01	Lower Blade Guide Support		1
2	PM1500-096-02	Eccentric Shaft		2
3	PM1500-095-03	Retaining Ring	S12	2
4	BB-6201ZZ	Ball Bearing	6201ZZ	4
5	PM1500-095-05	Knurled Knob		2
6	TS-1503081	Hex Socket Screw (Black)	M6x35	2
7	PM1500-095-16	Lock Knob		1
8	PM1500-096-08	Lock Knob		2

## 15.9.1 Fence Assembly – Exploded View

Part Assembly No.: PM1500-107



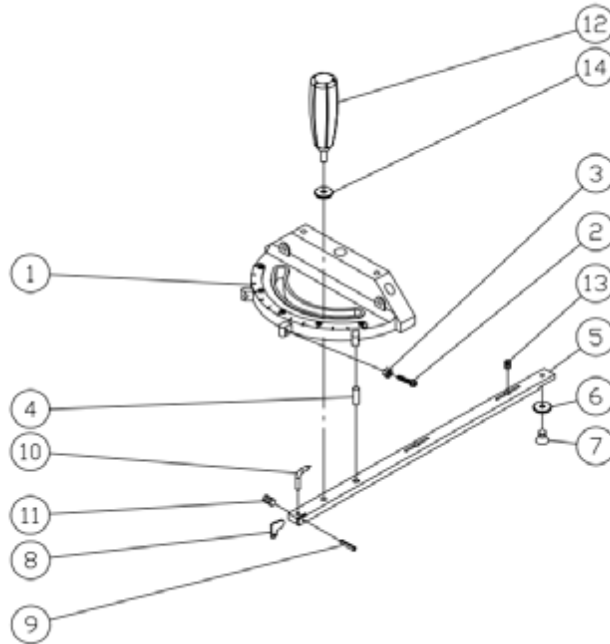
## 15.9.2 Fence Assembly – Parts List

Index No	Part No	Description	Size	Qty
1	PM1500-107-01	Fence Body		1
2	PM1500-107-02	Lock Knob	M8x52	2
3	PM1500-107-03	Resaw Lock Knob	M10x50	1
4	PM1500-107-04	Nylon Set Screw	M10x12	2
5	TS-1541021	Nylon Lock Hex Nut	M6	1
6	TS-1541031	Nylon Hex Nut (Black)	M8	1
7	992322	Roll Pin	Ø5x26	1
8	PM1500-107-08	Resaw Pin	1½" x 6½" (Dia.xH)	1
9	PM1500-107-09	Lock Bar		1
10	PM1500-107-10	Nylon Pad		3
11	PM1500-107-11	Tube Plug	40x80mm	1
12	TS-1525011	Socket Set Screw	M10x10	2
13	TS-2246352	Socket Head Button Screw	M6x35	1
14	TS-2361061	Lock Washer	M6	1
15	TS-1550041	Flat Washer	M6 x Ø13	1
16	9180-56	Socket Head Button Screw	M8x35	1
17	PM1500-107-16	Spring		1
18	PM1500-107-17	Handle Lock Bracket		1
19	PM1500-107-18	Lock Handle		1
20	PM1500-107-19	Knob	M8x21	1
21	PM1500-107-20	Fence Plate	19½" x 6½" (LxW)	1
22	PM1500-107-22	Hex Flange Nut	M5	2

<b>Index No</b>	<b>Part No</b>	<b>Description</b>	<b>Size</b>	<b>Qty</b>
23	PM1900-108-6	Phillips Pan Head Machine Screw	M5x8	2
24	TS-1550031	Flat Washer	M5 x Ø12	2
25	PM1500-107-25	Cursor Bracket		1
26	PM1500-107-26	Convex Cursor		1
27	TS-2285121	Phillips Flat Head Machine Screw	M5x12	2
28	PM1500-107-28	Scale Label		1
29	PM1500-107-29	Guide Rail Tube		1
30	PM1500-107-30	Tube Plug	30x60mm	2
31	PM1500-107-31	Guide Rail		1
32	TS-1482031	Hex Cap Screw	M6x16	5
33	TS-2361061	Lock Washer	M6	5
34	TS-1550041	Flat Washer	M6 x Ø16	5

## 15.10.1 Miter Gauge Assembly – PM1500 Exploded View

Part Assembly No.: PM1500-109

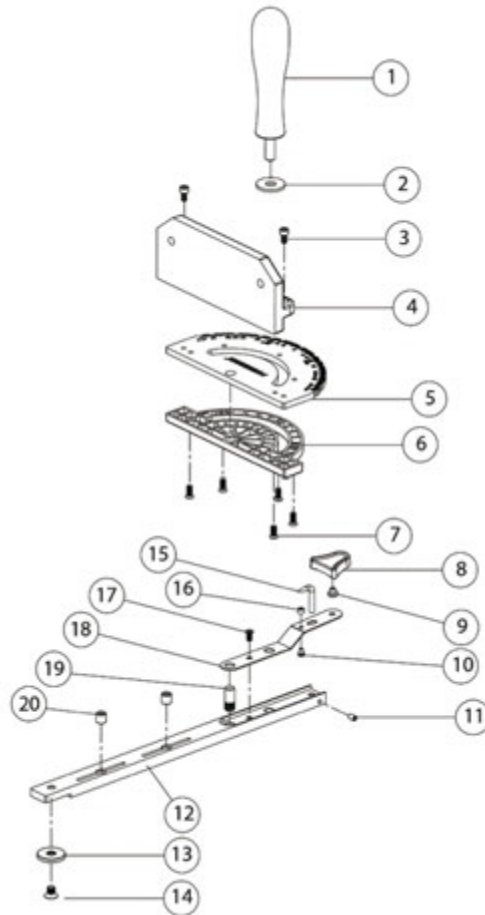


## 15.10.2 Miter Gauge Assembly – PM1500 Parts List

Index No	Part No	Description	Size	Qty
1	6295167	Miter Gauge Body		1
2	TS-1533062	Pan Head Screw	M5 x 0.8 x 20	3
3	TS-1540031	Hex Nut	M5	3
4	6295168	Steel Pin	6.2 x 16	1
5	PM1500-109-05	Guide Bar		1
6	6295163	Guide Disc		1
7	PM1800-461	Flat Head Screw	M6 x 8	1
8	6295171	Stop Tab		1
9	PM1800-462	Spring Pin	ø3 x 6mm	1
10	6295169	Pointer		1
11	SS050100	Socket Set Screw	M5 x 0.8 x 5	1
12	PM1800-451	Handle	M8 x 20	1
13	PM2000-343	Socket Set Screw	M8 x 1.25 x 6	2
14	TS-0680031	Flat Washer	M8 x ø18	1

### 15.10.3 Miter Gauge Assembly – PM1500T Exploded View

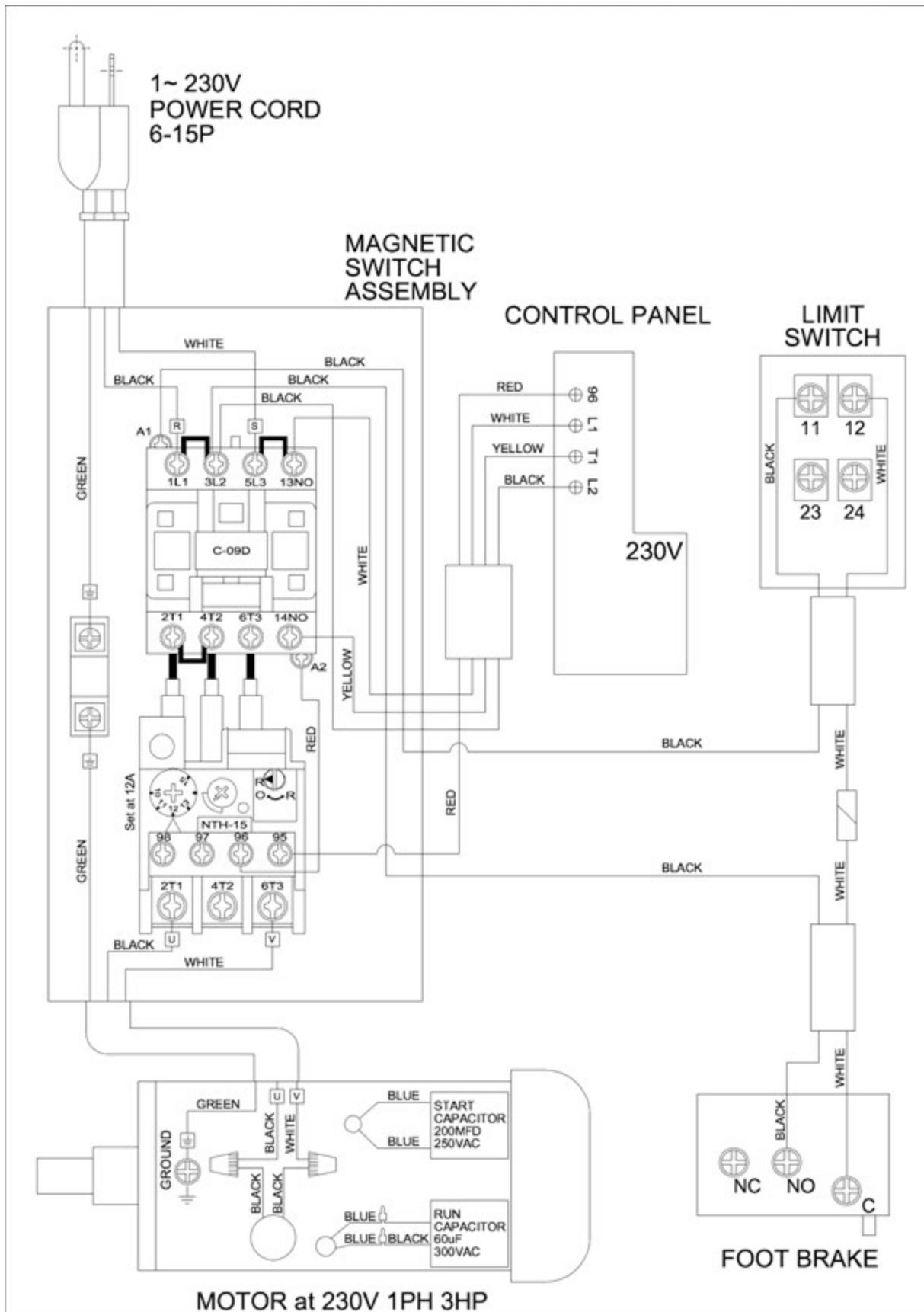
Part Assembly PM1500-109T



### 15.10.4 Miter Gauge Assembly – PM1500T Parts List

Index No	Part No	Description	Size	Qty
1	PM1500-109T-01	Gauge Plate Locking Handle		1
2	TS-1550061	Flat Washer	8.5 x 23 x 2T	1
3	PM1500-109T-03	Socket Head Cap Screw	M4 x 0.7P x 8L	2
4	PM1500-109T-04	Fence Rest		1
5	PM1500-109T-05	Gauge Plate		1
6	PM1500-109T-06	Non-Marring Bottom Plate		1
7	TS-2284121	Phillips Flat Head Screw	M4 x 0.7P x 12L	5
8	PM1500-109T-08	Thumb Tab		1
9	PM1500-109T-09	Phillips Pan Head Screw	M4 x 0.7P x 5L	1
10	PM1500-109T-10	Phillips Pan Head Screw	M3 x 0.5P x 4L	1
11	PM1500-109T-11	Socket Heat Set Screw	M4 x 0.7P x 6L	1
12	PM1500-109T-12	Guide Bar		1
13	PM1500-109T-13	Guide Disc		1
14	PM1500-109T-14	Phillips Flat Head Screw	M6 x 1.0P x 8L	1
15	PM1500-109T-15	Pointer		1
16	PM1500-109T-16	Positive Tab		1
17	TS-2284081	Phillips Flat Head Screw	M4 x 0.7P x 8L	1
18	PM1500-109T-18	Bracket		1
19	PM1500-109T-19	Pivot Shaft		1
20	PM1500-109T-20	Socket Head Set Screw	M8 x 1.25P x 6L	2

# 16.0 Electrical Connections – 3HP 1PH 230V





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