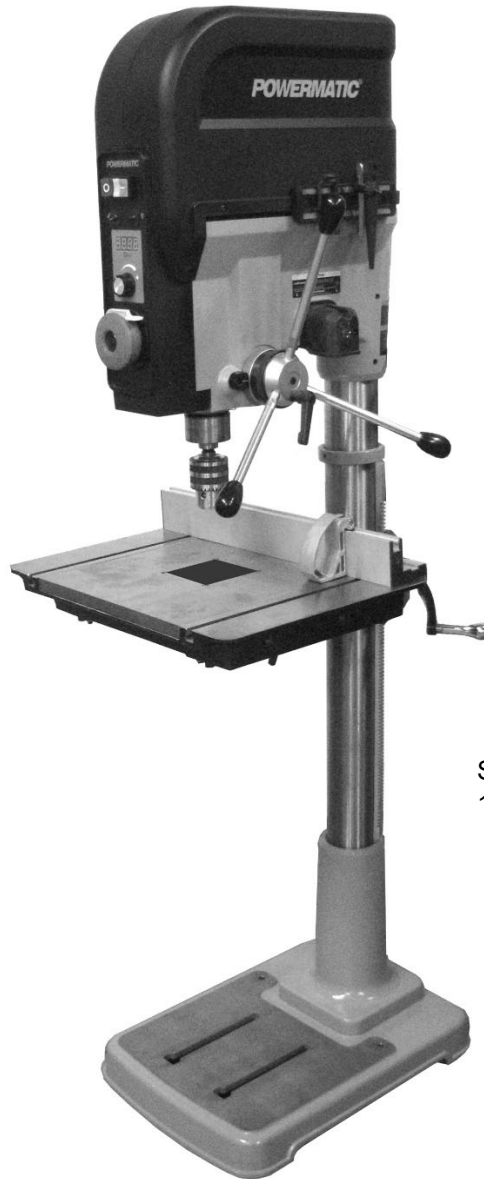


POWERMATIC®

Operating Instructions and Parts Manual 20-inch Variable Speed Drill Press Model PM2820EVS



Shown with optional
1792822 Tool Holder

Powermatic
427 New Sanford Road
LaVergne, Tennessee 37086
Ph.: 800-274-6848
www.powermatic.com

Part No. M-1792820
Edition 1 05/2020
Copyright © 2020 Powermatic



1.0 IMPORTANT SAFETY INSTRUCTIONS

Warning – To reduce risk of injury:

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This drill press 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 drill press, do not use until proper training and knowledge have been obtained.
5. Do not use this drill press for other than its intended use. If used for other purposes, Powermatic disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using machine. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this drill press, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do not wear gloves.
8. Wear ear protectors (plugs or muffs) during extended periods of operation
9. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
10. Make certain the switch is in the OFF position before connecting the machine to the power supply.
11. Make certain the machine is properly grounded.
12. Make all machine adjustments or maintenance with the machine unplugged from the power source.
13. Remove adjusting keys and wrenches. Form a habit of checking to see that keys and adjusting wrenches are removed from the machine before turning it on.
14. Keep safety guards in place at all times when the machine is in use. If removed for maintenance purposes, use extreme caution and replace the guards immediately after completion of maintenance.
15. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
16. Provide for adequate space surrounding work area and non-glare, overhead lighting.
17. Keep the floor around the machine clean and free of scrap material, oil and grease.
18. Keep visitors a safe distance from the work area. **Keep children away.**
19. Make your workshop child proof with padlocks, master switches or by removing starter keys.
20. Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
21. Maintain a balanced stance at all times so that you do not fall into the blade or other moving parts. Do not overreach or use excessive force to perform any machine operation.
22. 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.
23. Use recommended accessories; improper accessories may be hazardous.
24. Maintain tools with care. Keep drill bits sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
25. Turn off machine and disconnect from power before cleaning. Use a brush to remove chips or debris — do not use bare hands.
26. Do not stand on the machine. Serious injury could occur if the machine tips over.
27. Never leave machine running unattended. Turn the power off and do not leave the machine until spindle comes to a complete stop.
28. Remove loose items and unnecessary work pieces from the area before starting the machine.

29. Don't use in dangerous environment. Don't use power tools in damp or wet location, or expose them to rain. Keep work area well lighted.

⚠ WARNING: This product can expose you to chemicals including lead which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov>.

⚠ WARNING: Drilling, sawing, sanding or machining wood products generates wood dust and other substances known to the State of California to cause cancer. Avoid inhaling dust generated from wood products or use a dust mask or other safeguards for personal protection.

Wood products emit chemicals known to the State of California to cause birth defects or other reproductive harm. For more information go to <http://www.p65warnings.ca.gov/wood>.

SAVE THESE INSTRUCTIONS

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

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


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

2.0 About this manual

This manual is provided by Powermatic covering the safe operation and maintenance procedures for a Powermatic Model PM2820EVS Drill Press. 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.

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

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

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

Record your purchase information here for quick reference:

Stock no.:
Model no.:
Date of purchase:
Place of purchase:

3.0 Table of contents

Section	Page
1.0 IMPORTANT SAFETY INSTRUCTIONS	2
2.0 About this manual	4
3.0 Table of contents	5
4.0 Specifications	6
4.1 Base Hole Centers for PM2820EVS	7
5.0 Unpacking	8
5.1 Shipping contents	8
5.2 Cleanup	8
6.0 Assembly	9
6.1 Tools required for assembly	9
6.2 Procedure	9
7.0 Electrical connections	12
7.1 Grounding instructions	12
7.2 Extension cords	13
8.0 Adjustments	13
8.1 Table movement	13
8.2 Chuck and arbor removal	13
8.3 Depth stop	14
8.4 Quill retraction lock	15
8.5 Work stop	15
8.6 Laser adjustment	15
8.7 LED lights	16
9.0 Operating controls	16
10.0 Operation	17
10.1 Installing bits	17
10.2 Positioning work piece	17
10.3 General Inspection	17
10.4 Speed setting	17
11.0 User-maintenance	17
12.0 Troubleshooting the PM2820EVS Drill Press	18
12.1 Mechanical and electrical	18
12.2 Error codes on digital readout	19
13.0 Replacement Parts	20
13.1.1 PM2820EVS Gear Box Assembly – Exploded View	20
13.1.2 PM2820EVS Gear Box Assembly – Parts List	21
13.2.1 PM2820EVS Quill and Laser Assembly – Exploded View	23
13.2.2 PM2820EVS Quill and Laser Assembly – Parts List	24
13.3.1 PM2820EVS Control Panel – Exploded View	26
13.3.2 PM2820EVS Control Panel – Parts List	27
13.4.1 PM2820EVS Top Cover & PCB Assembly – Exploded View	28
13.4.2 PM2820EVS Top Cover & PCB Assembly – Parts List	28
13.5.1 PM2820EVS Work Table Assembly – Exploded View	29
13.5.2 PM2820EVS Work Table Assembly – Parts List	30
13.6.1 PM2820EVS Fence Assembly – Exploded View	31
13.6.2 PM2820EVS Fence Assembly – Parts List	31
13.7.1 PM2820EVS Column Assembly – Exploded View	32
13.7.2 PM2820EVS Column Assembly – Parts List	32
14.0 Optional accessories	33
15.0 Electrical Connections for PM2820EVS Drill Press	34
16.0 Warranty and Service	35

4.0 Specifications

Table 1

Model number	PM2820EVS
Stock number	1792820
Motor and electrical	
Motor type	brushed DC
Horsepower	1HP
Phase	Single
Voltage	120 V
Cycle	60 Hz
Listed FLA (full load amps)	8 A
Main on/off switch	manual push button, with safety key and power indicator lamp
Power transfer	Gears
Power cord	14 AWG, 6-1/2 ft. (198cm)
Power plug included	15 amp
Recommended circuit size ¹	20A for 115V
Sound emission ²	80 dB at 20 inches (508mm) from headstock
Laser	Class II
Work lamp	LED
Head and Capacities	
Swing	20" (508mm)
Chuck style and shank capacity	keyed, 5/8 in. (16mm)
Chuck arbor taper	JT-3/MT-2
Spindle taper	MT2
Spindle maximum travel	6" (152mm)
Quill diameter	2.6" (66mm)
Maximum speed range (RPM)	High: 600 - 3600 Low: 150 - 870
Maximum spindle to table distance	23 in. (584 mm)
Maximum chuck to table distance	19-1/4 in. (488 mm)
Maximum spindle to base distance	45 in. (1143 mm)
Maximum chuck to base distance	41-1/4 in. (1047 mm)
Table	
Table size, L x W	20-1/2" L x 15-1/3" W (521 x 389mm)
Table T-slots (2)	5/8 w x 3/8 w in.
Distance between table slots (centers)	14.76" (375mm)
Table tilt	0 to 90 deg. L and R
Table rotation around column	360 deg.
Table insert	3.7" x 3.9" (94 x 99mm)
Fence size, L x H	19.76" L x 2.67" H (502 x 68mm)
Base and Column	
Base size, L x W x H	22.7 x 16.33 x 2.75 in. (577 x 415 x 70 mm)
Base working surface, L x W	11.81 x 12.05 in. (300 x 306mm)
Base slots	5/8 x 15/32 in. (15.65 x 12 mm)
Distance between base slots (centers)	5.11" (130mm)
Column diameter	3.35 in. (85 mm)
Main materials	
Head	cast iron
Table	cast iron
Column	steel
Base	cast iron
Fence	extruded aluminum
Main dimensions	
Overall dimensions assembled, LxWxH (approx.)	24.5 x 20.5 x 71.85 in. (622 x 521 x 1825 mm)
Shipping dimensions, LxWxH (approx.)	55.51 x 30.9 x 19.69 in. (1410 x 785 x 500 mm)
Weights	
Net weight (approx.)	336.6 lbs. (153 kg)
Shipping weight (approx.)	413.6 lbs. (188 kg)

¹ subject to local/national electrical codes

² The specified values are emission levels and are not necessarily to be seen as safe operating levels. As workplace conditions vary, this information is intended to allow the user to make a better estimation of the hazards and risks involved only.

L = length, W = width, H = height

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

4.1 Base Hole Centers for PM2820EVS

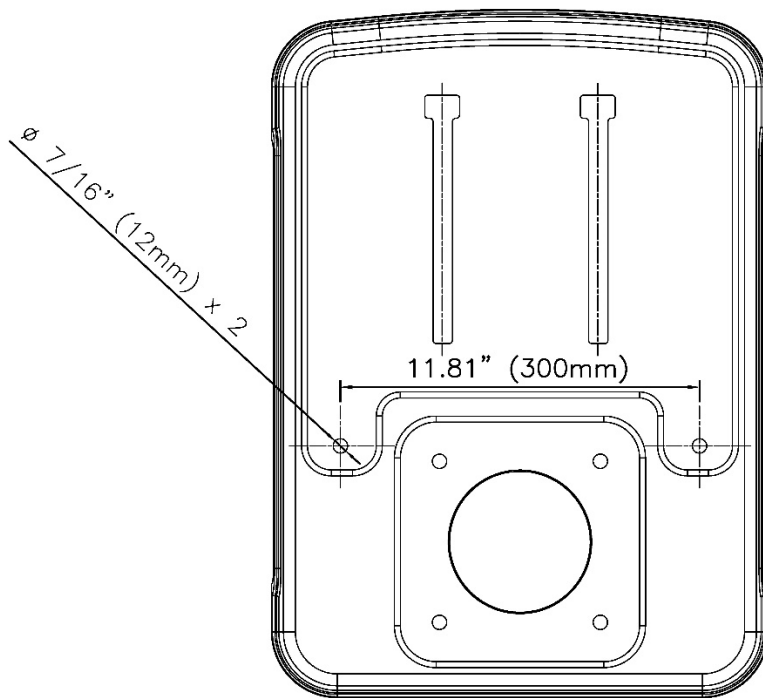


Figure 4-1: hole centers

⚠WARNING

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

5.0 Unpacking

Remove all smaller items (Figure 5-1) from shipping carton. Lift off upper styrofoam packing to expose the larger components (Figure 5-2). The base is underneath the table.

Remove table and base in preparation for assembly.

Inspect all contents for shipping damage – if any damage is identified, report it to your distributor and shipping agent.

If any parts are missing, contact your distributor or Powermatic. (Check machine first to see if any parts were pre-assembled.)

Do not discard carton or packing material until drill press is assembled and running satisfactorily.

5.1 Shipping contents

Qty.	Description	Item
1	Drill press head assembly	A
1	Column assembly	B
1	Base	C
1	Table assembly	D
1	Fence	E
1	Work stop	F
3	Turret handles	G
1	Keyed chuck	H
1	Arbor	J
1	Chuck key	K
1	Table lock handle	L
1	Drift key	M
1	Lock handle with washer	N
4	Socket hd cap screws & lock wshrs	O
1	Crank handle	P
1	Worm drive	R
3	Hex wrenches, 3,5,10 mm	S
1	Owner's manual	
1	Product registration card	

Table 2

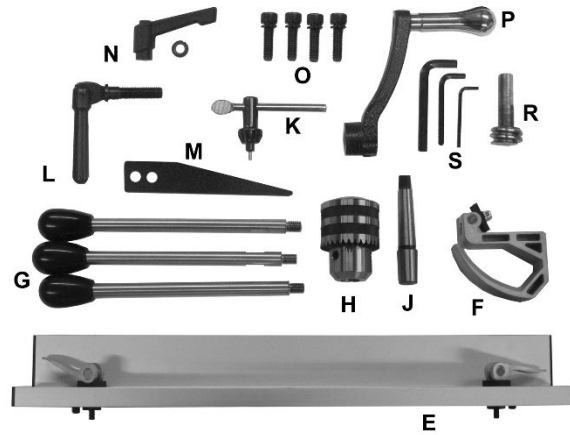


Figure 5-1

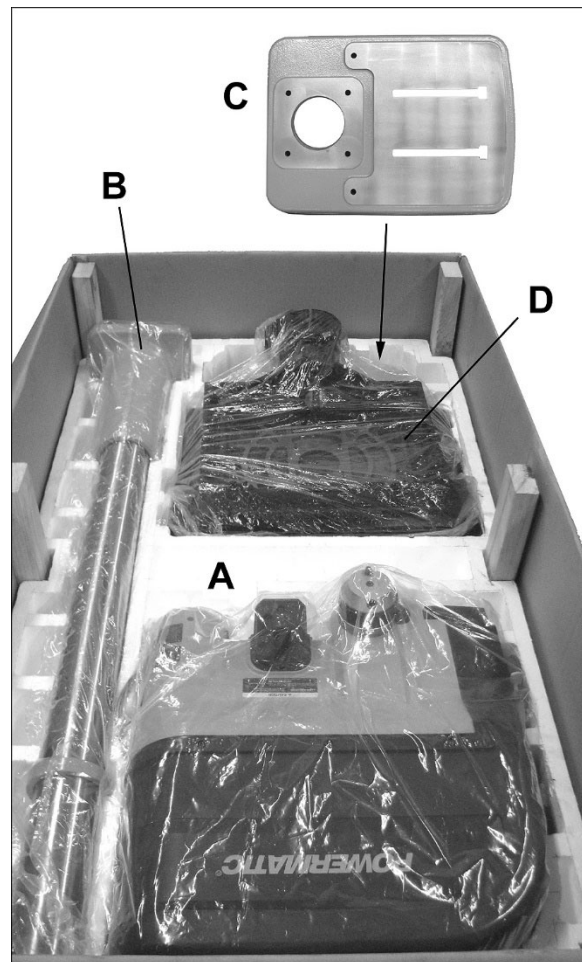


Figure 5-2

5.2 Cleanup

Exposed metal surfaces on the drill press have been factory-coated with a rust protectant. Remove this with a soft rag moistened with a light solvent, such as mineral spirits. Do not use an abrasive pad as this may scratch surfaces, and do not use gasoline, paint thinner or acetone, as these will damage plastic components and painted surfaces.

6.0 Assembly

The drill press should be placed in a dry area, with a level floor and good lighting. Provide enough space around machine to allow for operations and any adjustments or servicing.

6.1 Tools required for assembly

3/5/10 mm hex wrenches (provided)
Rubber mallet (or hammer and wood block)

Additional tools may be needed for certain adjustments.

6.2 Procedure

⚠WARNING Larger components are very heavy; Multiple assistants are mandatory for assembly. Failure to comply may cause serious injury and/or machine damage.

1. Lay column across carton supports, as shown in Figure 6-1.

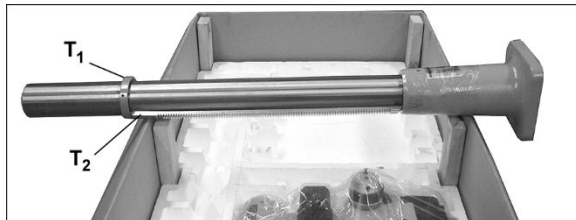


Figure 6-1

2. Have an assistant position the base, then insert four (4) lock washers and (4) screws finger-tight. See Figure 6-2. Make sure base is parallel to column stand, then **firmly tighten** all screws, with hex wrench.



Figure 6-2

3. Place column and base upright. The base may be secured to floor with lag screws (not provided) through two holes in the base. Refer to Figure 1 for hole spacing.

NOTE: If you do not wish permanent attachment to the floor, the drill press can be bolted to a plywood panel which will serve as an expanded base and further stabilize the

machine. Use a high grade of plywood at least 3/4" thick. It should be large enough to prevent vibration, sliding or moving of drill press during operation. Do not use a mobile base with this machine.

4. Insert shaft of worm (R, Figure 6-3) through table bracket hole, while meshing worm with the preinstalled gear.

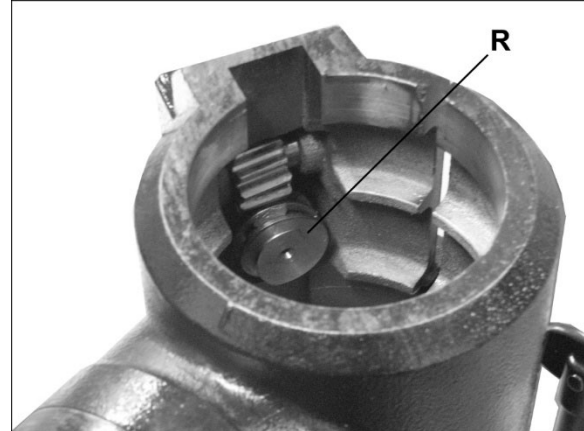


Figure 6-3

5. Remove collar (T₁) and rack (T₂) from column. See Figure 6-1.
6. Remove replacement table from main table.
7. Insert rack (Figure 6-4) into slot in table bracket, meshing the rack teeth with the worm gear. NOTE: The longer un-toothed section of the rack is toward the top.
8. Hold the rack in the slot, while setting the table bracket over the column. Then slide table bracket and rack together down the column.

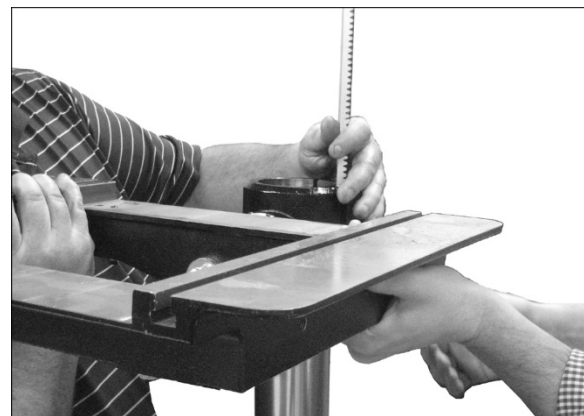


Figure 6-4

9. The lower end of the rack should rest in the lip of the column holder.
10. Place collar onto column and slide it down over top edge of rack. Tighten set screw on collar. Figure 6-5.
11. Slide crank handle (P) onto protruding shaft of worm, and tighten set screw in handle with a 3mm hex wrench.

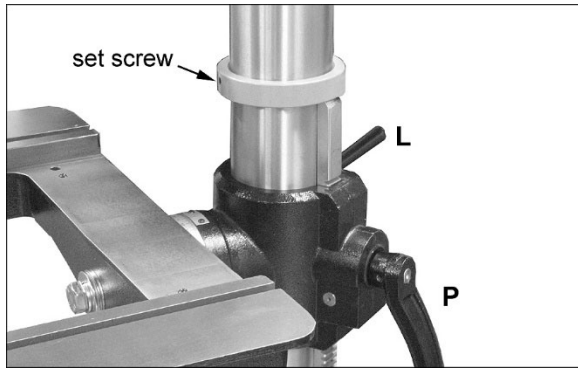


Figure 6-5

12. Screw locking handle (L, Figure 6-5) into table bracket. Tighten locking handle to secure table bracket's position on column.

6.2.1 Drill head mounting

CAUTION Drill head weighs over 150 lbs. Hoist or forklift is the preferred method of lifting. If these are not available, use minimum 3 persons to lift.

If lifting with hoist/forklift, see Figure 6-6 thru 6-8.

1. Prepare a solid wood block, about 16" L x 4" W x 2.5" t. Drill a 3 inch hole through center of block, and through-holes near each end to accept eye bolts with fasteners, as shown.
2. Place this block onto main spindle, run straps through the eyebolts, and another strap toward the rear of head as shown in Figure 6-8.
3. Carefully lift head and place on column.

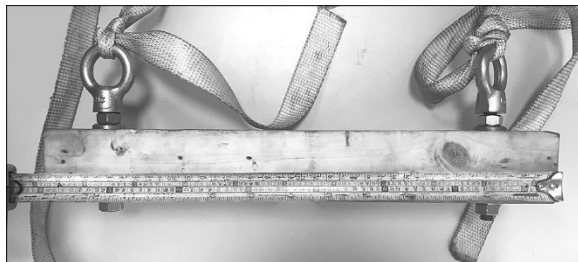


Figure 6-6

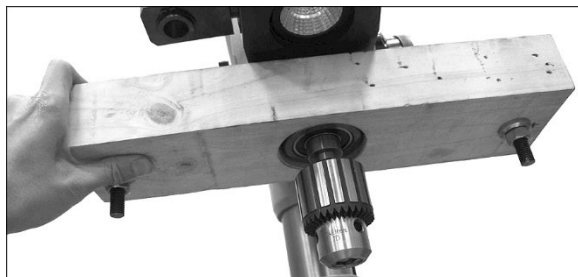


Figure 6-7



Figure 6-8

If lifting by hand:

1. Loosen handle (L, Figure 6-5) and turn crank handle counterclockwise to lower table to a convenient position near the head and tighten the locking handle. Place cardboard pieces atop the table to protect the surface.
2. Cut the corners of the shipping box and fold down the cardboard sides to better expose the drill head (Figure 6-9). Trim away excess to prevent a potential tripping hazard.



Figure 6-9

3. Carefully lift head and place on table. Orient head to correct mounting position.
4. Turn crank handle to raise head to highest point on column. NOTE: Stabilize head, and lift up beneath table to lessen the weight upon table and allow easier cranking.
5. Lift head and place on column.

Continue assembly as follows:

1. Adjust head parallel to base, and tighten four (4) set screws (Figure 6-10).

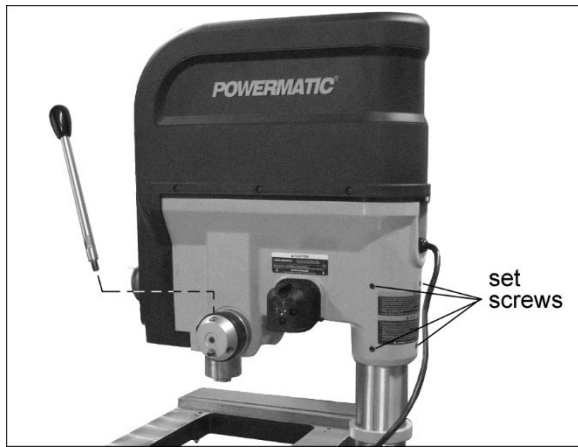


Figure 6-10

2. Install three downfeed handles into hub on either side of drill head (Figure 6-10). Screw them in completely; use a wrench on the shaft flats to tighten.
3. Install replacement table into main table (Figure 6-11).

NOTE: The replacement table is removable to allow installation of an optional specialty table. See accessories, *sect. 14.0*.

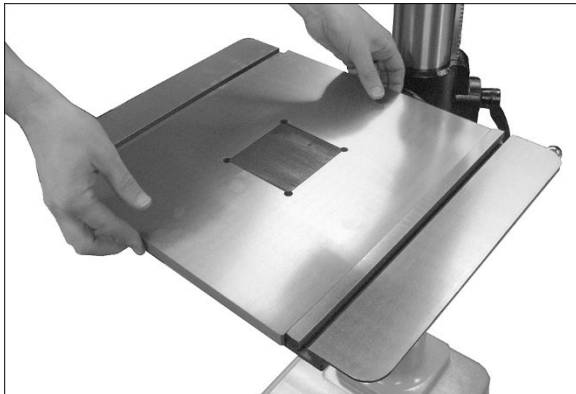


Figure 6-11

4. The replacement table and table insert have been pre-set so that they are flush. However, this setting should be checked by the user. See *sect. 6.3*.

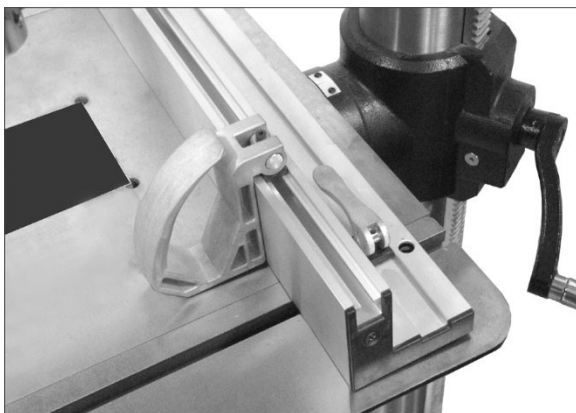


Figure 6-12

5. Slide fence into t-slots from front edge of table. To secure fence, push down cam handles. See Figure 6-12.

6.2.2 Table and insert leveling

1. Position fence across tables and check for gaps between fence and tables. Do this at several points front to back.

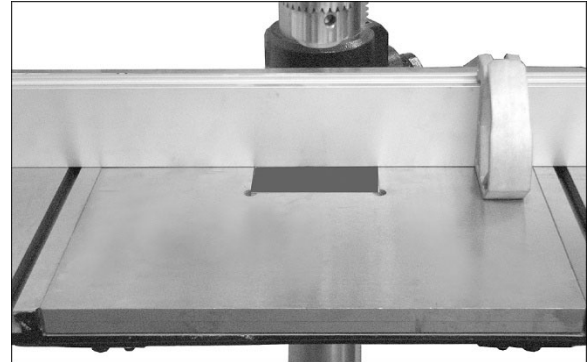


Figure 6-13

If adjustment is needed:

2. At corner(s) where table is not level, loosen socket head screw (A, Figure 6-14) slightly. Then loosen hex nut (B) and turn set screw to raise (or lower) table at that point.
3. Tighten hex nut (B) and socket head screw (A) to secure position.
4. Check table insert by positioning fence across it and tightening down fence.

If adjustment is needed:

5. Remove two screws beneath table insert (C, Figure 6-14).
6. Loosen nuts (D), then turn set screws as needed until insert is level with table surface. Re-tighten nuts (D) up against table.
7. Reinstall the two screws (C) into the table insert.

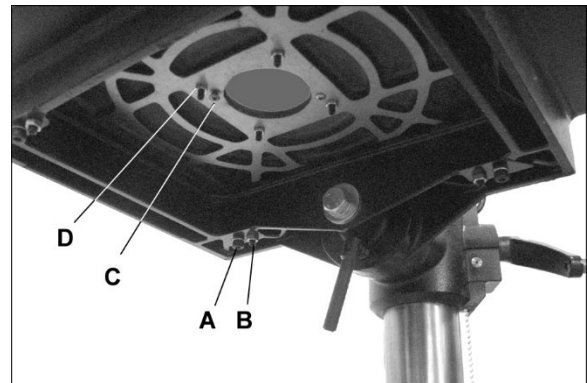


Figure 6-14

6.2.3 Arbor and chuck

1. Thoroughly clean entire arbor and inside of chuck (Figure 6-15) with a soft rag and solvent, such as mineral spirits. Any grease or residue in these areas can cause the pieces to separate, creating a safety hazard and potential damage to the tool.

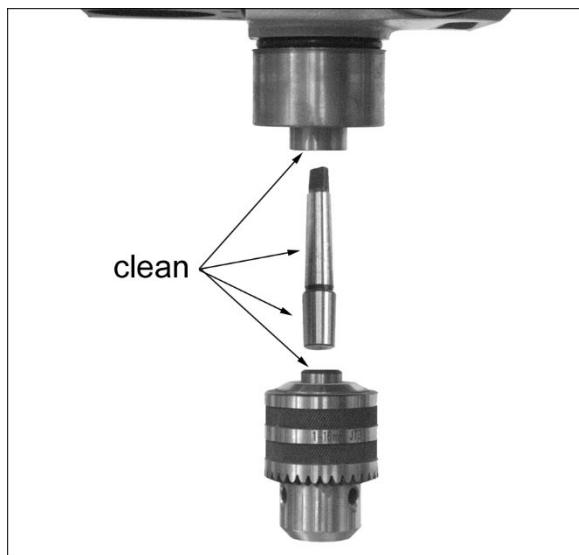


Figure 6-15

2. Slide arbor up into spindle.
3. Firmly push chuck by hand onto taper of arbor.
4. Use chuck key to completely retract jaws (to prevent damage to jaws). Use two or three sharp taps from a rubber mallet, or a hammer and a block of wood, against bottom of chuck to seat chuck securely onto arbor.

CAUTION Do not use a steel hammer directly against chuck, as this may damage chuck.

7.0 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 PM2820EVS drill press is rated and prewired for 120V power. The drill press comes with a plug designed for use on a circuit with a grounded outlet that looks like the one pictured in **A**, Figure 14.

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

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

7.1 Grounding instructions

1. All Grounded, Cord-connected Tools:

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

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

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

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

Use only 3-wire extension cords that have 3-prong grounding plugs and 3-pole receptacles that accept the tool's plug. Repair or replace damaged or worn cord immediately.

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

This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in **A**, Figure 14. An adapter, shown in **B** and **C**, may be used to connect this plug to a 2-pole receptacle as shown in **B** if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. *This adapter is not permitted in Canada.* The green-colored rigid ear, lug, and the like, extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

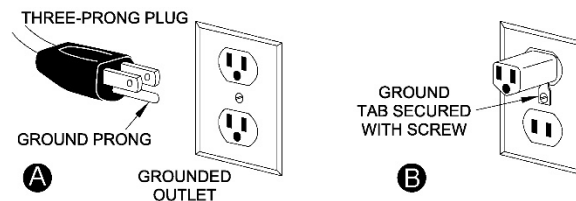


Figure 7-1

7.2 Extension cords

The use of extension cords is discouraged; try to position equipment near the power source. If an extension cord becomes necessary, 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 2 shows correct size to use depending on cord length and nameplate ampere rating. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Amp Rating		Volts	Total length of cord in feet			
More Than	Not More Than	120	25	50	100	150
		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	

Extension Cord Recommendations

Table 2

8.0 Adjustments

Note: All Figures may not match your particular Drill Press model, or may show optional accessories mounted.

8.1 Table movement

8.1.1 Raise and lower

Loosen column locking handle (A, Figure 8-1). Turn crank handle (B) to raise or lower table along column rack. Re-tighten locking handle (A) before attempting to drill.

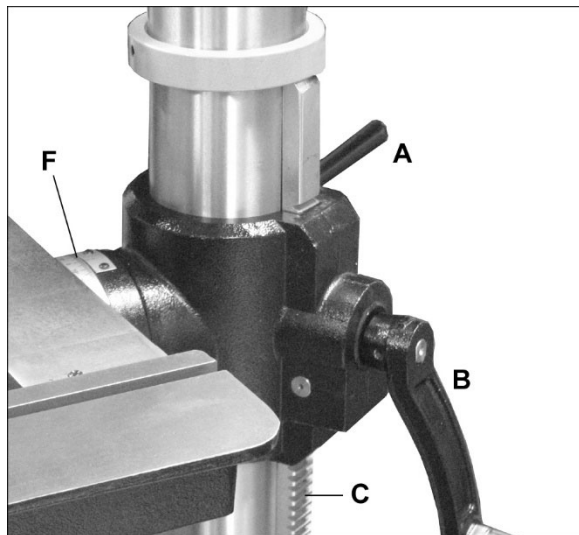


Figure 8-1

8.1.2 Swing table away

Refer to Figure 8-1.

When drilling into a long workpiece, swing table out of the way and use drill press base as your table. Slots in the base can be used to mount work holding devices.

1. Loosen column locking handle (A).
2. Swing table to desired position. If rack (C) tends to bind, you will need to nudge the top or bottom end of the rack around the column while swinging table. Keeping a light coat of oil on the column will help prevent any binding.
3. Tighten column locking handle (A).

8.1.3 Tilt table

Refer to Figure 8-2.

1. Loosen lock handle (D) to tilt. If table will not move, slightly loosen hex screw (E).
2. Pivot table to desired angle by referring to scale and indicator plate (F, Figure 8-1).

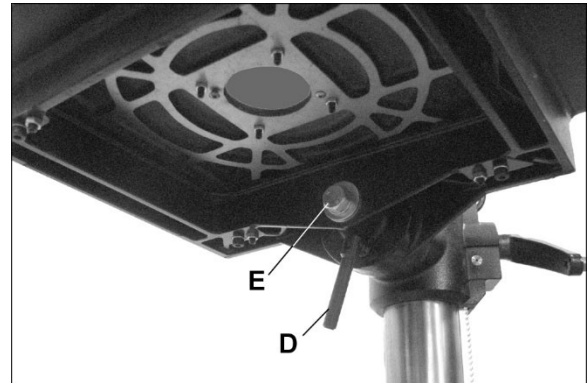


Figure 8-2

8.2 Chuck and arbor removal

Refer to Figure 8-3

1. Disconnect machine from power source.
2. Lower quill assembly with downfeed handles to expose slot. Rotate chuck to align slots.
3. Insert drift key into slot.
4. Tap drift key into slot until chuck and arbor fall out. **NOTE:** Hold on to chuck to prevent it being damaged as it falls.

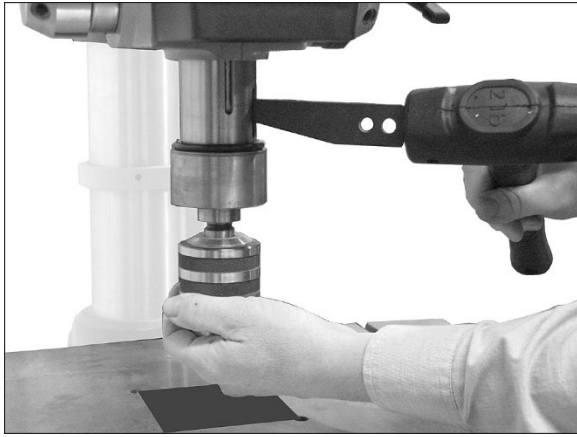


Figure 8-3

8.3 Depth stop

The depth stop is used for repetitive drilling of holes of identical depth.

Depth stop can be established by one of two procedures (see Figures 8-4 thru 8-6):

Method #1:

1. Loosen lock handle (H).
2. Use downfeed handles (D) to lower the bit until it just contacts the top surface of workpiece, as shown in Figure 8-5.

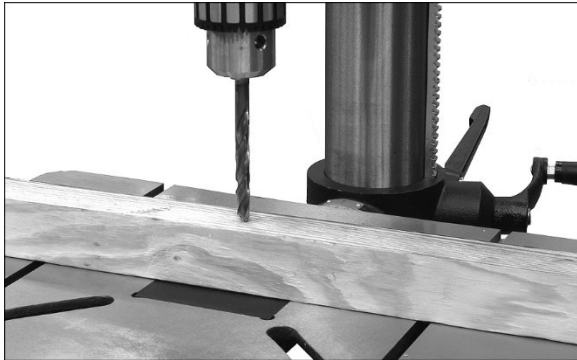


Figure 8-5: method #1

3. Hold downfeed handle in position, and rotate scale ring (K) to zero. This sets the workpiece surface as your zero reference point.
4. Move workpiece out from under bit, and rotate downfeed handle to lower bit until scale ring (K) reads your desired depth.
5. Hold downfeed handle in this position, and rotate lock ring (J) *counterclockwise* as far as it will turn. You should be able to feel and hear when the lock ring reaches the end of its rotation.
6. Tighten lock handle (H).
7. The bit can now be repeatedly lowered to the pre-set depth using the downfeed handles.
8. To release the depth stop, loosen lock handle (H).

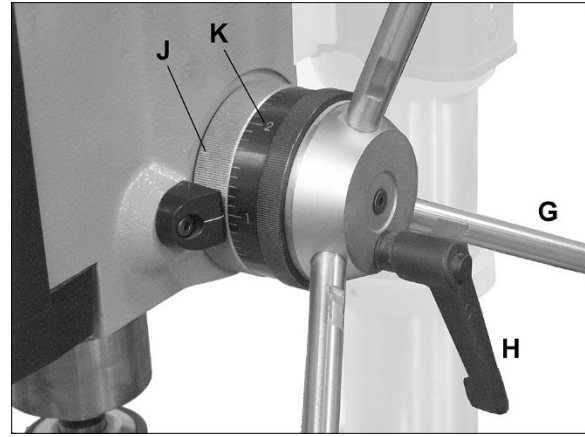


Figure 8-4

Method #2:

1. Mark the desired depth of cut on the side of the workpiece (Figure 8-6).
2. Loosen lock handle (H) and use downfeed handle (G) to lower the bit to the mark. Hold downfeed handle in position.
3. Rotate lock ring (J) *counterclockwise* as far as it will turn. You should be able to feel and hear when lock ring reaches the end of its rotation.
4. Tighten lock handle (H).
5. The bit will now stop at the marked depth when the downfeed handle is rotated.
6. To release depth stop, loosen lock handle (H).

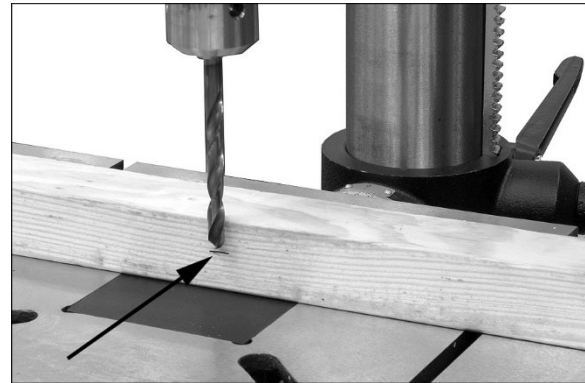


Figure 8-6: method #2

NOTE: Method #2 allows rapid, fine adjustment to the setting, as follows:

If the depth setting is found to be *too shallow*:

7. Hold downfeed handle (G) stationary while slightly loosening lock handle (H).
8. Slightly rotate downfeed handle to lower bit to the more accurate position.
9. Retighten lock handle (H). Depth is now set to more accurate position.

If the depth setting is found to be *too deep*:

10. Loosen lock handle (H) while holding downfeed handle stationary.

11. Slightly back off the lock ring (J), that is, rotate it *clockwise*.
12. Slightly rotate downfeed handle to bring bit up to more accurate depth.
13. Rotate lock ring (J) all the way *counter-clockwise*.
14. Tighten lock handle (H). Depth is now set to more accurate position.

8.4 Quill retraction lock

The quill can be held in the down position and prevented from retracting, such as for operating a sanding drum or to facilitate removal of chuck and arbor.

To lock the quill in down position, proceed as follows (Figure 8-4):

1. Loosen lock handle (H).
2. Rotate downfeed handle (G) to lower spindle to the point at which it is to be locked, and hold downfeed handle stationary in this position.
3. Rotate lock ring (J) *clockwise* all the way until it stops. You should be able to feel and hear when lock ring reaches the end of its rotation.
4. Tighten lock handle (H). You can now release downfeed handle. The quill will remain in this lowered position until released.
5. To release the quill, loosen lock handle (H).

8.5 Work stop

The work stop (shown mounted in Figure 6-9) is used for repetitive drilling in boards of identical length. Flip up the work stop to slide it along the fence or to remove it. Pull it down to tighten in position.

8.6 Laser adjustment

⚠WARNING Do not look directly into the laser beam or view it directly with optical instruments. See Figure 8-7.



Figure 8-7

The Laser Assembly has been installed and pre-set at the factory. It should, however, be checked for alignment and any adjustments made before operating the drill press. It should be re-checked periodically, as long-term machine vibration may cause it to become misaligned.

1. Take a length of board (A, Figure 8-8) and draw a perpendicular line (B) on one side using a square.
2. Secure a small drill bit (C) in chuck (D), then place board (A) on the table on edge against drill bit with the marked-line side toward the back of the drill press.

Important: The table should be in horizontal position and locked. *Verify that the line (B, Figure 8-8) is perpendicular to the table.*

3. Connect power to the drill press, and turn on the laser using the switch at the front of the drill press head.

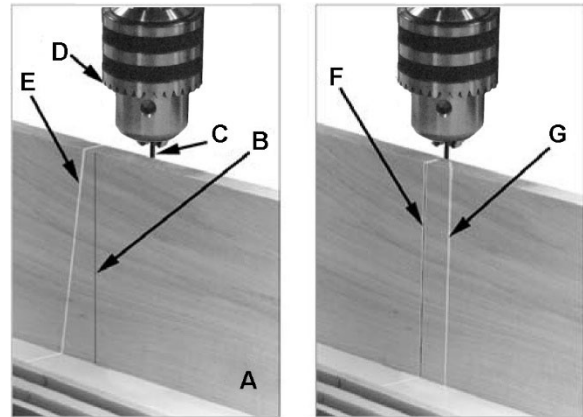


Figure 8-8

Vertical Alignment

4. Use the screw located toward *front* of laser assembly, to adjust verticality of laser line (Figure 8-9). Turn screw as needed (2.5mm hex wrench), and move board side-to-side as needed, until laser light (E) aligns with board marking (B).
5. Adjust the opposite laser in the same manner. Two parallel laser markings should look like F and G in Figure 8-8. The distance between the lines will vary with board thickness; however, the lines must be parallel.

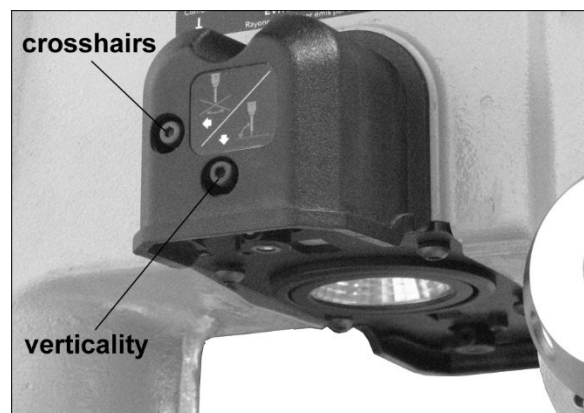


Figure 8-9

Cross Hair Alignment

- Place board (K, Figure 8-10) flat on table. Do not allow board to move from this position; use clamps if needed. Bring the bit down until it *leaves a slight perforation* in the board; then raise it back up.
- Use the screw (Figure 8-9) located toward *back* of laser assembly, to adjust the cross hair. Turn screw as needed until laser line (M) crosses perforation (L).
- Adjust the other laser assembly in the same manner until the laser lines form cross hairs exactly over perforation in board, as shown in Figure 8-10.

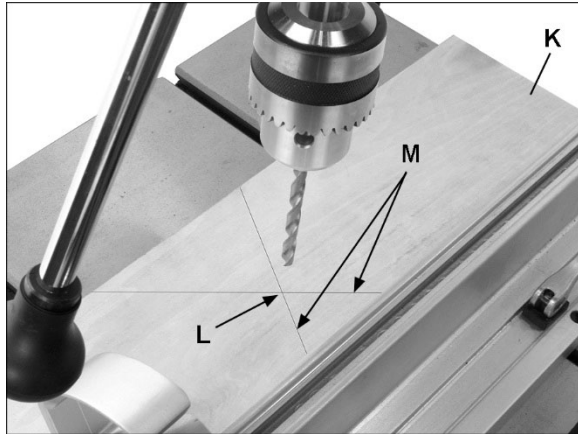


Figure 8-10

- Re-check vertical alignment to ensure that the laser lines did not shift during the procedure.

The laser is now calibrated properly and the location of your holes can be centered at the cross hairs for accurate drilling.

8.7 LED lights

The two LED lights are activated by the front panel switch. Press on the outer rim of a light to angle it.

9.0 Operating controls

Refer to Figures 9-1 and 9-2.

Main switch – (A). Pull out to engage power; push in to stop all functions of the drill press. Spindle coasting will stop within 5 seconds.

Safety key – (B). The main switch has a safety feature that prevents unauthorized or accidental starting of the drill press. Push in main switch and slide out safety key. This piece must be re-inserted before the drill press can operate.

Power indicator lamp (green) – (C). The lamp is on whenever there is power connected to the Drill Press, not just when the Drill Press 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 before use.

Spindle rotation ON – (D)

Spindle rotation OFF – (E). Spindle coasting will stop within 10 seconds from maximum RPM.

Laser switch – (F)

LED switch – (G)

Spindle speed dial – (H). Adjust during spindle rotation. Speed in RPM will show on the display.

Hi-Lo speed selector – (J) and Figure 9-2. Pull out on the handle and rotate selector to desired setting. Release the handle, making sure its pin falls into the detent within the head.

⚠ CAUTION Do not change Hi-Lo gear setting while machine is running. Failure to comply may result in damage to machine.

If a power outage occurs, when power resumes, push OFF button (E) then ON button (D) to restart the drill press.

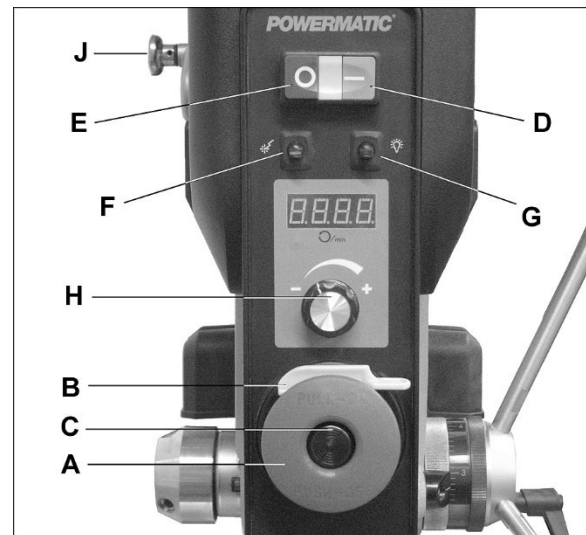


Figure 9-1

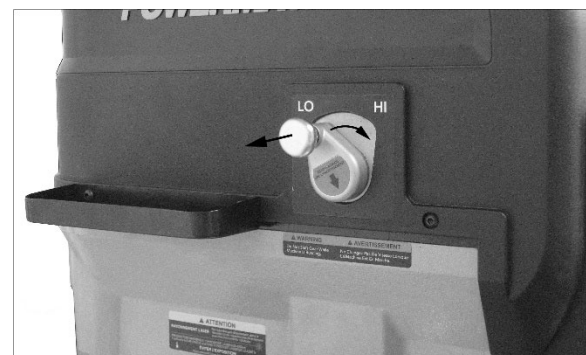


Figure 9-2

10.0 Operation

10.1 Installing bits

Insert bit (not provided) into chuck jaws with about 1" insertion. When using a small bit, do not insert it so far that the jaws touch the flutes of the bit. Make sure bit is centered in chuck before tightening chuck. Insert chuck key into hole in side of chuck, and turn key clockwise to tighten bit in chuck.

10.2 Positioning work piece

⚠WARNING Whenever possible, use clamps or work hold-downs to secure the work piece to the table.

Always secure the work piece to prevent it being torn from the operator's hand. Using the column as a work stop is not recommended; instead, use holding devices such as clamps. When using the table in tilted position, make sure the table is securely tightened and the work piece is clamped sufficiently.

For clean, splinter-free holes, place a piece of scrap wood on the table below the work piece.

Perform operations with a minimum extension of the quill. Adjust table position rather than using excessive quill travel.

Feed bit into the material with only enough force to allow the bit to work. Feeding too slowly may cause burning of the work piece. Feeding too quickly may cause the motor to slow and/or the bit to break.

10.3 General Inspection

Before each operation of your PM2820EVS drill press, make a habit of checking that all locking handles, set screws, bolts, etc., are tight on the table and head. Confirm that drill bit is securely inserted inside chuck jaws.

Clear all items, such as tools and rags, away from machine.

Before attempting regular work, get the feel of the drill press by practicing on scrap material. For best results, always use sharp bits and proper feed rates.

10.4 Speed setting

⚠CAUTION Do not change Hi-Lo gear setting while machine is running. Failure to comply may result in damage to machine.

There are several factors which determine the best speed to use in any drill press operation, such as

kind of material being worked, size of hole, type of drill, and quality of cut desired.

A general rule of thumb is, the smaller the drill, the greater the required RPMs. And the speed should be faster for soft materials and slower for harder materials.

11.0 User-maintenance

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

Bearings on the drill press are self-contained and permanently lubricated; no further lubrication is needed.

After each use:

Clean sawdust from the table with a brush (do not use bare hands).

Periodically:

Apply a light film of oil to the quill and column. This will reduce wear, prevent rust and assure ease of operation.

Apply grease to the rack on the column.

Check that bolts are tight and the electrical cord is in good condition.

Exposed metal surfaces of table and base should be kept clean and free of rust. Protective sprays or paste wax are available from most hardware stores. Note: Avoid wax that contains silicone or other synthetic ingredients; these materials can find their way into lumber and make staining and finishing difficult.

Annually:

The quill return spring should receive SAE 20 oil once yearly. Apply the oil beneath the coil spring cover (see Figure 11-1) using a squirt can.

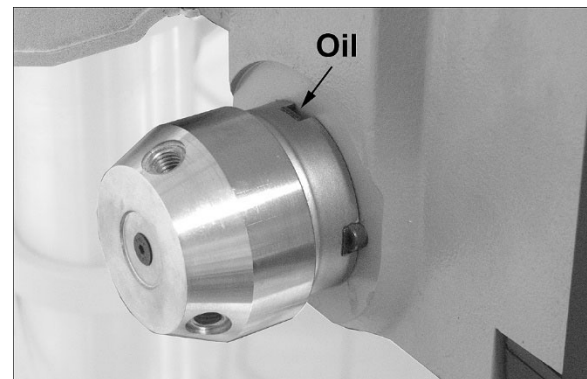


Figure 11-1

12.0 Troubleshooting the PM2820EVS Drill Press

12.1 Mechanical and electrical

Table 4

* **WARNING:** Some corrections may require a qualified electrician.

Symptom	Possible Cause	Correction *
Drill press will not start (power light is OFF).	Not connected to power.	Check all plug connections.
	Fuse blown, or circuit breaker tripped on main panel.	Replace fuse, or reset circuit breaker.
	Power cord damaged.	Replace cord.
Drill press will not start (power light is ON).	Safety key removed.	Install safety key.
	Switch malfunction.	Have switch tested and replaced if needed.
Drill press does not come up to speed.	Extension cord too light or too long.	Replace with adequate size and length cord.
	Low current.	Contact a qualified electrician.
	Motor malfunction.	Have motor tested by a qualified service center. Repair or replace as necessary.
Motor stalls.	Overfeeding the bit.	Reduce feed rate.
	Dull bit.	Sharpen or replace bit.
	Motor not reaching running speed.	Repair or replace motor.
	Motor malfunction.	Have motor tested by a qualified service center. Repair or replace as necessary.
Noisy Operation.	Excessive vibration.	Tighten any loose parts. Drill press should sit evenly on level floor. Secure drill press to floor or plywood base.
	Dry spindle.	Lubricate spindle.
Wood splinters on underside of work piece.	No backing board used.	Place scrap board beneath work piece to prevent splintering.
Drill or tool heats up or burns work piece.	Excessive speed.	Reduce speed.
	Chips not clearing from hole or bit.	Retract drill bit frequently to remove chips.
	Dull drill bit.	Resharpen, or replace drill bit.
	Feeding bit too slowly.	Increase feed rate.
Drill bit wanders.	Bit sharpened incorrectly.	Resharpen bit correctly.
	Bent drill bit.	Replace bit.
	Bit or chuck not installed properly.	Reinstall chuck or bit.
Drill bit binds in work piece.	Work piece pinching the bit.	Support or clamp work piece.
	Excessive feed rate.	Decrease feed rate.
	Chuck jaws not tight.	Tighten chuck jaws.
Spindle does not retract properly.	Return spring out of adjustment.	Contact Powermatic technical support.

12.2 Error codes on digital readout

Table 5

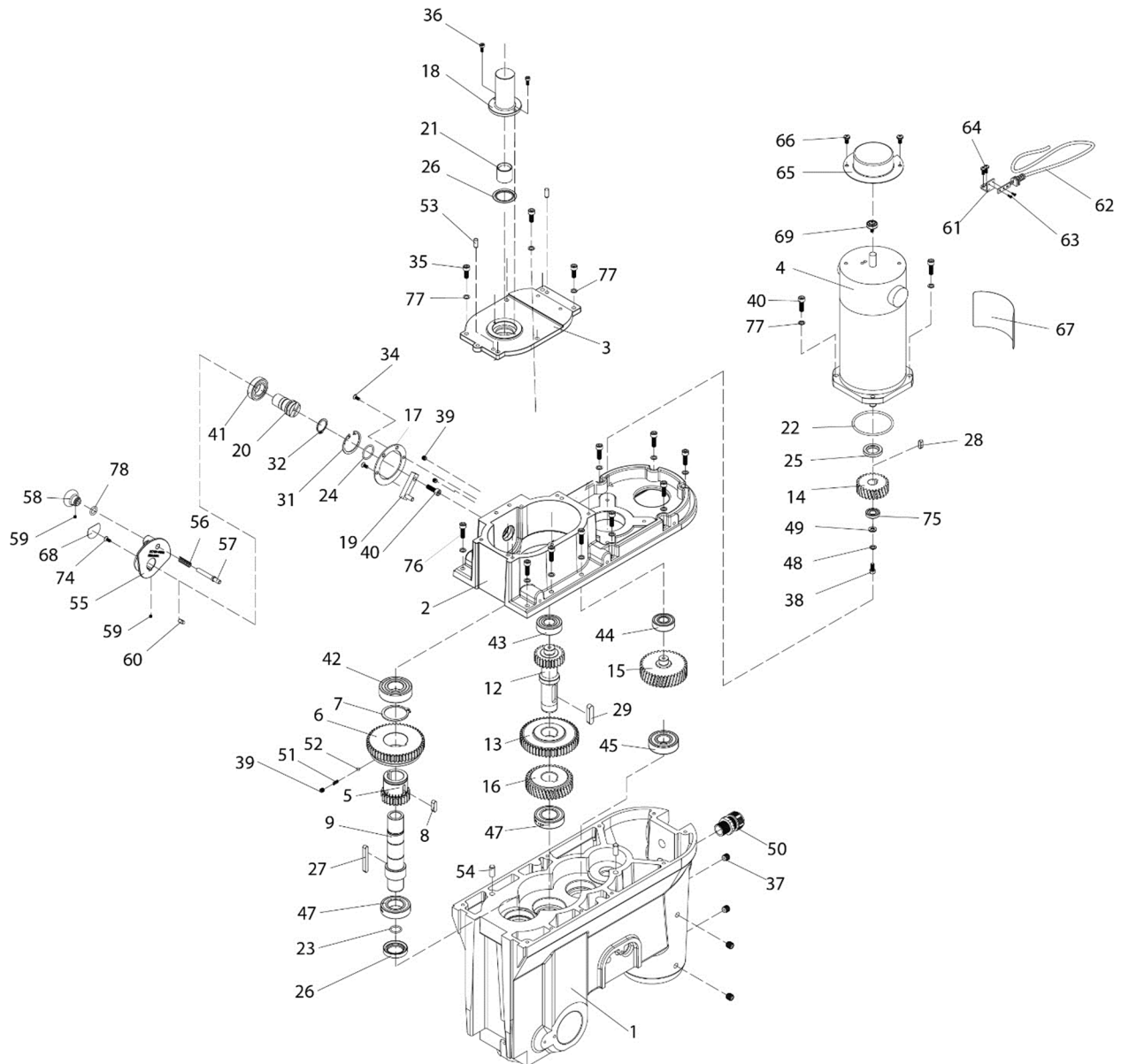
Error code	Error source	Description	Correction
ERR-1	Overload protector	If load exceeds 15A for over 5 seconds, PCB shuts off motor.	Press off button to clear error code, then press on to restart machine.
ERR-2	Motor revolution sensor	Motor won't start within 25 seconds of turning on switch; motor burned out.	Replace motor.
ERR-3	Motor revolution sensor	Spindle is blocked from turning longer than 1 sec.	Investigate reason for spindle blockage. Press off button to clear error code, and restart machine.
ERR-4	PCB broken, IGBT	Motor will not restart until PCB is replaced.	Replace PCB.
ERR-5	Clutch movement during spindle running.	Clutch action (Hi-Lo gear setting) not allowed while spindle is running.	Check that Hi-Lo lever is properly engaged in detent. Do not attempt to change lever while spindle is running. Press off button to clear error code, then press on to restart.
		Clutch not fully engaged (Hi-Lo lever not properly engaged in detent).	
ERR-6	Over voltage	AC input power is more than 140V, shuts off motor.	Press off button to clear error code, then press on to restart.
ERR-7	Low voltage	AC input power is less than 80V, shuts off motor.	Press off button to clear error code, then press on to restart.
ERR-8	Heat sink overheated	IGBT heated over 105 deg.C; shuts off motor.	Allow cool down. Press off button to clear error code, then press on to restart.

13.0 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.

13.1.1 PM2820EVS Gear Box Assembly – Exploded View

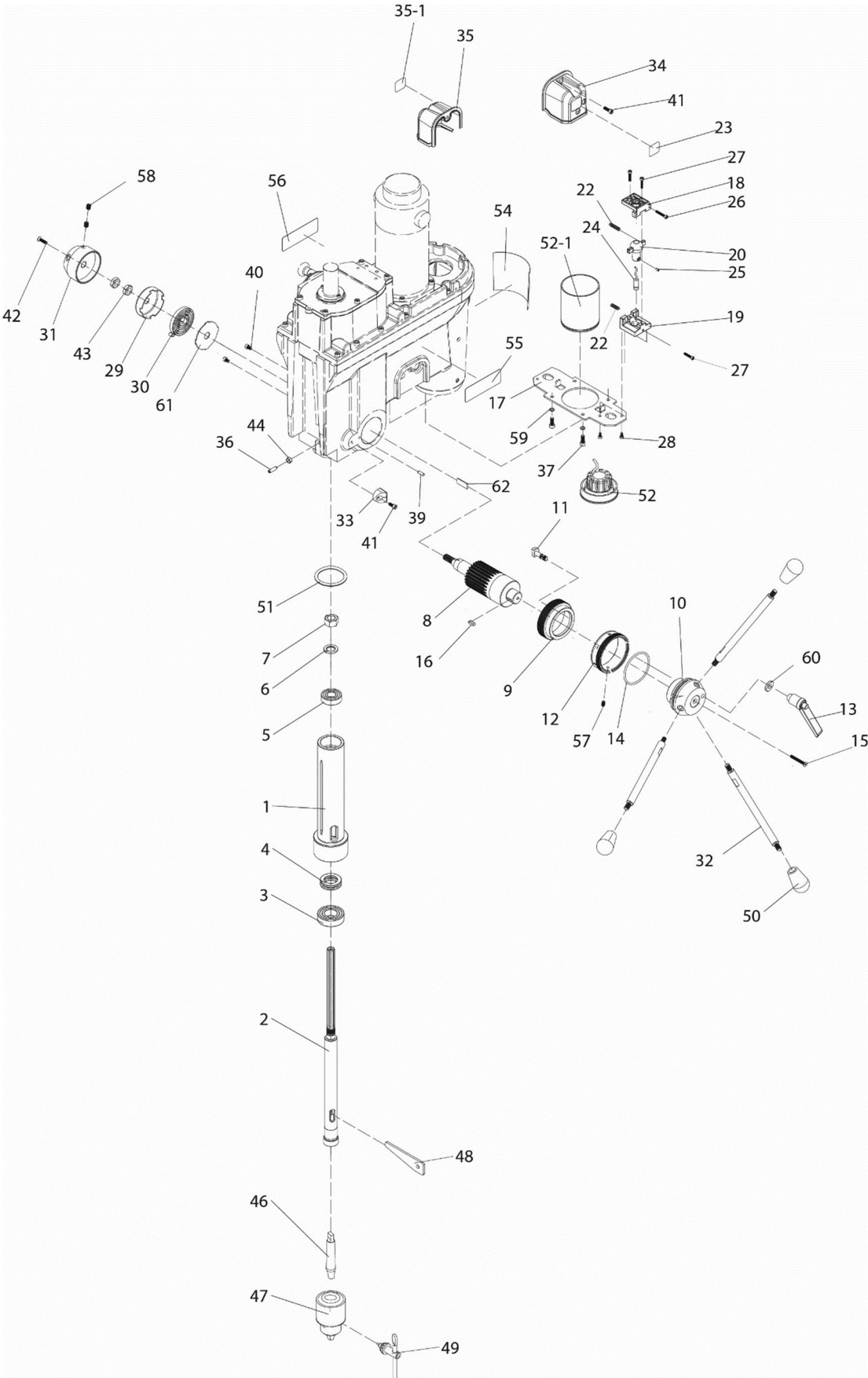


13.1.2 PM2820EVS Gear Box Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
1	PM2820EVS-101	Headstock		1
2	PM2820EVS-102	Gear Box		1
3	PM2820EVS-103	Gear Box Cover		1
	PM2820EVS-MA	Motor Assembly (item #4,14,25,28,38,46,48,49,61-67,75)		1
4	PM2820EVS-104	DC Motor (item #25 & 67)		1
	PM2820EVS-MCB	Motor Carbon Brush (not shown)		
	PM2820EVS-MCBC	Motor Carbon Brush Cap (not shown)		
5	PM2820EVS-105	Gear, 24T	24T	1
6	PM2820EVS-106	Gear, 50T	50T	1
7	PM2820EVS-107	C-Ring		1
8	PM2820EVS-108	Key, hardened	6x6x20 mm	1
9	PM2820EVS-109	Shaft		1
12	PM2820EVS-112	Gear, 25T with shaft	25T	1
13	PM2820EVS-113	Gear, 51T	51T	1
14	PM2820EVS-114	Gear, 26T	26T	1
15	PM2820EVS-115	Gear, 39T with shaft	39T	1
16	PM2820EVS-116	Gear, 39T	39T	1
17	PM2820EVS-117	Speed Seat Cover		1
18	PM2820EVS-118	Spindle Cover		1
19	PM2820EVS-119	Crank Lever		1
20	PM2820EVS-120	Speed Shaft		1
21	PM2820EVS-121	Bushing		1
22	PM2820EVS-122	O-Ring	59.4x3.1mm	1
23	PM2820EVS-123	O-Ring	15x2mm	1
24	PM2820EVS-124	O-Ring	21x2mm	1
25	PM2820EVS-125	Oil Seal	17x30x05V	1
26	PM2820EVS-126	Oil Seal	25x38x07V	2
27	PM2820EVS-127	Key, hardened	6x6x50mm	1
28	PM2820EVS-128	Key, hardened	5x5x15mm	1
29	PM2820EVS-129	Key, hardened	8x7x36mm	1
31	PM2820EVS-131	C-Ring	RTW-37	1
32	PM2820EVS-132	C-Ring	STW-20	1
34	TS-1512011	Socket Head Flat Screw	M4x10	2
35	TS-1503041	Socket Head Cap Screw	M6x16	6
36	TS-1501031	Socket Head Cap Screw	M4x10	2
37	PM2820EVS-137	Set Screw	M10x10	4
38	TS-1502031	Socket Head Cap Screw	M5x12	1
39	PM2820EVS-139	Set Screw	M6x6	3
40	TS-1503051	Socket Head Cap Screw	M6x20	15
41	BB-6904VV	Ball Bearing	6904LLB	1
42	BB-6205VV	Ball Bearing	6205LLB	1
43	BB-6203VV	Ball Bearing	6203LLB	1
44	BB-6202VV	Ball Bearing	6202LLB	1
45	BB-6204VV	Ball Bearing	6204LLB	1
47	BB-6005VV	Ball Bearing	6005LLB	2
48	TS-1550031	Flat Washer	M5	1
49	TS-1550041	Flat Washer	M6	1
50	PM2820EVS-150	Strain Relief	M20	1
51	PM2820EVS-151	Spring		1
52	PM2820EVS-152	Steel Ball	5mm	1
53	PM2820EVS-153	Pin	6x16mm	2
54	PM2820EVS-154	Pin	8x20mm	2
	PM2820EVS-CHA	Clutch Handle Assembly (item# 55-59, 78)		
55	PM2820EVS-155	Clutch Handle		1
56	PM2820EVS-156	Spring		1
57	PM2820EVS-157	Shaft		1
58	PM2820EVS-158	Knob		1
59	TS-1521011	Set Screw	M4x4	2
60	PM2820EVS-160	Key	5x5x10mm	1
61	PM2820EVS-161	Bracket		1
62	PM2820EVS-162	Motor Sensor kit		1
63	PM2820EVS-163	Pan Head Screw	M2x6	2
64	TS-1532032	Pan Head Screw	M4x10	2

Index No.	Part No.	Description	Size	Qty.
65	PM2820EVS-165	Cover		1
66	TS-1534041	Pan Head Screw	M5x10	2
67	PM2820EVS-167	Motor Label		1
68	PM2820EVS-168	Clutch Warning Label		1
69	PM2820EVS-169	Magnet Collar set		1
71	TS-152704	Hex Wrench, not shown	3mm	1
72	TS-152706	Hex Wrench, not shown	5mm	1
73	5628801	Hex Wrench, not shown	10mm	1
74	TS-1513031	Socket Head Flat Screw	M5X14	1
75	PM2820EVS-175	Flange		1
76	TS-1503061	Socket Head Cap Screw	M6x25	1
77	TS-0732041	Tooth Washer	1/4 in.	1
78	PM2820EVS-178	O-Ring	10x2.5mm	1

13.2.1 PM2820EVS Quill and Laser Assembly – Exploded View

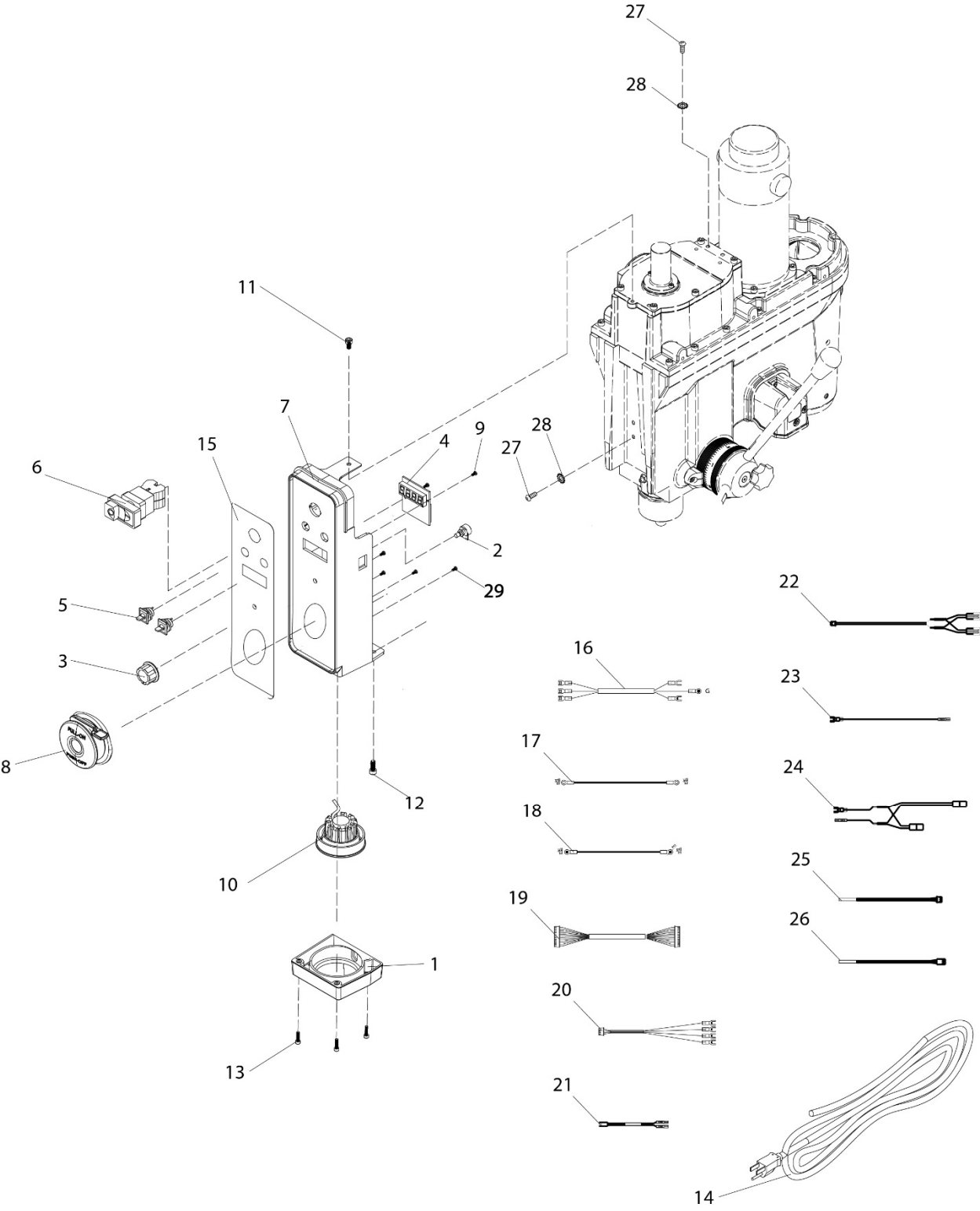


13.2.2 PM2820EVS Quill and Laser Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
	PM2820EVS-SA	Spindle Assembly (index #1-7)		
1	PM2820EVS-201	Quill		1
2	PM2820EVS-202	Spindle		1
3	BB-6205VV	Ball Bearing	6205LLB	1
4	BB-51105	Thrust Bearing	51105	1
5	BB-6203VV	Ball Bearing	6203LLB	1
6	TS-2361161	Lock Washer	M16	1
7	PM2820EVS-207	Hex Nut	M16xP1.0	1
8	PM2820EVS-208	Feed Shaft		1
9	PM2820EVS-209	Ring		1
10	PM2820EVS-210	Hub, Right		1
11	PM2820EVS-211	Lock Bolt		1
12	PM2820EVS-212	Depth Limited Scale		1
13	PM2820EVS-213	Locking Lever		1
14	PM2820EVS-214	O-Ring	64.4x3.1mm	1
15	PM2820EVS-215	Socket Head Flat Screw	M5x40mm	1
16	PM2820EVS-128	Key	5x5x15mm	1
17	PM2820EVS-217	Seat		1
	PM2820EVS-RLK	Right Laser Kit (item #18-22, 24-27)		1
	PM2820EVS-LLK	Left Laser Kit (item #18-22, 24-27)		1
18	PM2820EVS-218	Laser Upper bracket		2
19	PM2820EVS-219	Laser Lower bracket		2
20	PM2820EVS-220	Laser Adjustment Seat		2
22	PM2820EVS-222	Spring		4
23	PM2820EVS-223	Laser Label, Right		2
24	PM2820EVS-224	Laser Light		2
25	PM2820EVS-225	Plastic Set Screw	M4x6	2
26	TS-1501071	Socket Head Cap Screw	M4x25	2
27	TS-1501061	Socket Head Cap Screw	M4x20	6
28	TS-1532042	Machine Screw	M4x12	4
	PM2820EVS-CSA	Coil Spring Assembly (item #29-30,61)		1
29	PM2820EVS-229	Spring Cap		1
30	PM2820EVS-230	Coil Spring		1
31	PM2820EVS-231	Hub, Left		1
32	PM2820EVS-232	Feed Handle		3
33	PM2820EVS-233	Depth Pointer		1
34	PM2820EVS-234	Laser Seat Cover, Right (Includes #23)		1
35	PM2820EVS-235	Laser Seat Cover, Left (Includes #35-1)		1
35-1	PM2820EVS-2351	Laser Label, Left		1
36	PM2820EVS-236	Guide Pin		1
37	TS-1503041	Socket Head Cap Screw	M6x16	4
39	PM2820EVS-239	Pin		1
40	TS-1502011	Socket Head Cap Screw	M5x8	2
41	TS-1502041	Socket Head Cap Screw	M5x16	3
42	TS-1513041	Socket Head Flat Screw	M5x20	1
43	PM2820EVS-243	Nut	M12-1.25P	2
44	TS-1540041	Hex Nut	M6	1
46	PM2800-140	Arbor	MT2, JT3	1
47	PM2820EVS-247	Keyed Chuck		1
48	PM2800-136	Drift Key		1
49	PM2820EVS-249	Chuck Key		1
50	PM2820EVS-250	Knob		3
51	PM2820EVS-251	O-ring	51.6x 5.7mm	1
52	PM2820EVS-252	LED Light Kit		1
52-1	PM2820EVS-2521	LED Light Holder		1
53	PM2820EVS-253	I.D label (not shown)		1
54	PM2820EVS-254	Warning Label		1
55	PM2820EVS-255	Laser Warning Label, English version		1
56	PM2820EVS-256	Laser Warning Label, French version		1
57	TS-1523031	Set Screw	M6x10	1
58	TS-1524041	Set Screw	M8x15	2
59	TS-0732041	Tooth Washer	1/4 in	4

Index No.	Part No.	Description	Size	Qty.
60	TS-1550061	Flat Washer.....	M8	1
61	PM2820EVS-261	Spring Retainer.....		1
62	PM2820EVS-262	Insert Plate.....		1

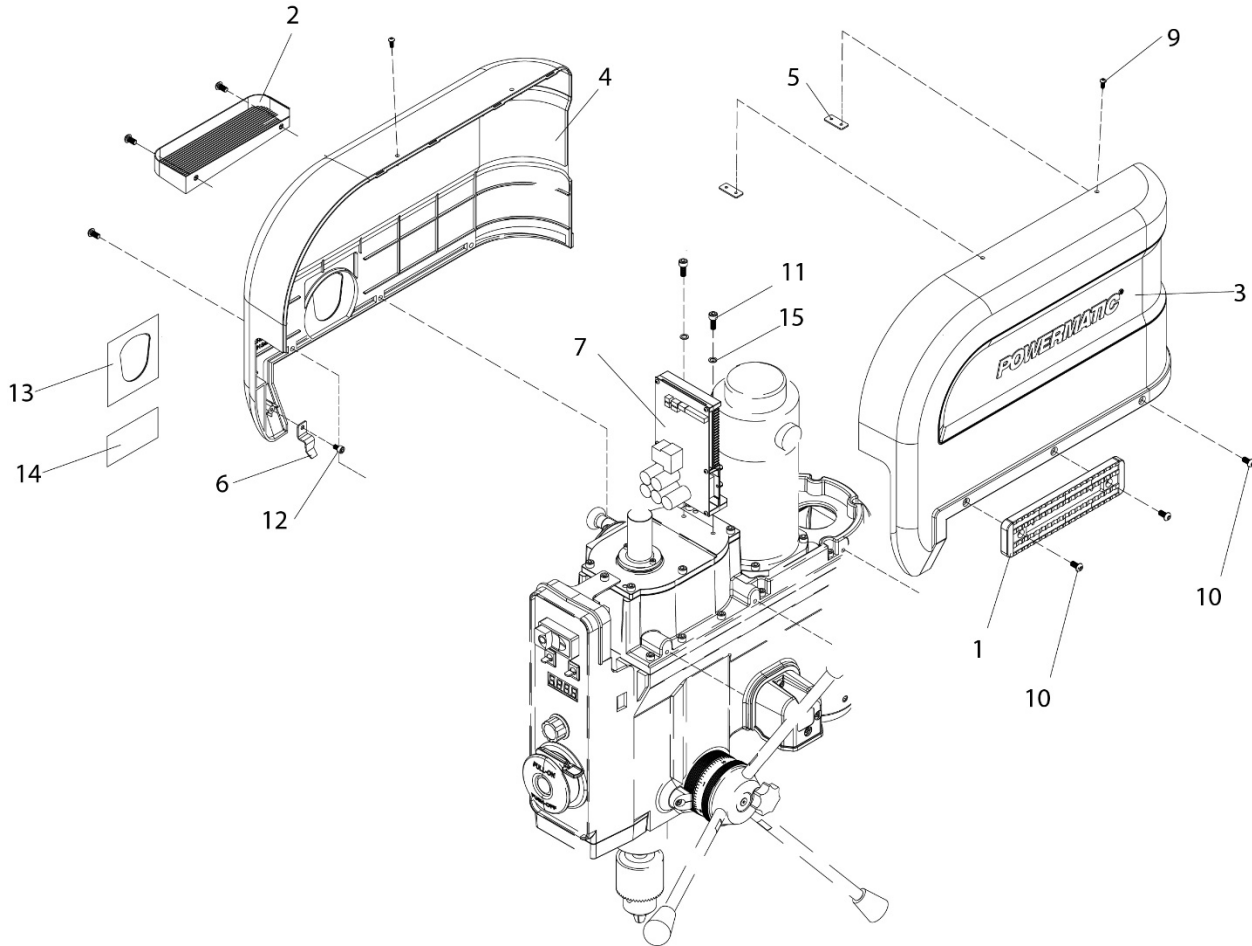
13.3.1 PM2820EVS Control Panel – Exploded View



13.3.2 PM2820EVS Control Panel – Parts List

Index No.	Part No.	Description	Size	Qty.
	PM2820EVS-CPA	Control Panel Assembly (item #2 - 9,15,29)		1
1	PM2820EVS-301	LED light Seat		1
2	PM2820EVS-302	Control Pot Assembly		1
3	PM2820EVS-303	Knob with Screw		1
4	PM2820EVS-304	Digital Readout		1
5	PM2820EVS-305	Momentary Switch		2
6	PM2820EVS-306	Control Switch		1
7	PM2820EVS-307	Front Panel Frame (Includes #15)		1
	PM2800-103-1	Switch Safety Key		
8	PM2820EVS-308	Main Switch (* includes Switch Safety Key)		1
9	TS-2283061	Machine Screw	M3x6	2
10	PM2820EVS-252	LED Light Kit		1
11	TS-1503021	Socket Head Cap Screw	M6x10	1
12	TS-1503031	Socket Head Cap Screw	M6x10	2
13	TS-2284201	Machine Screw	M4x20	4
14	PM2820EVS-314	Power Cable		1
15	PM2820EVS-315	Label, Control Panel		1
16	PM2820EVS-316	Power Cable, Terminal to PCB (not shown)		1
17	PM2820EVS-317	Grounding Wire, heat sink to headstock (not shown)		1
18	PM2820EVS-318	Grounding Wire, heat sink to headstock (not shown)		1
19	PM2820EVS-319	Signal wire, PCB to digital readout (not shown)		1
20	PM2820EVS-320	Connection Wire, digital to control switch (not shown)		1
21	PM2820EVS-321	Laser Wire, momentary switch to PCB (not shown)		1
22	PM2820EVS-322	Laser Wire, PCB to Laser (not shown)		1
23	PM2820EVS-323	LED Light Wire, momentary switch to Power (not shown)		1
24	PM2820EVS-324	LED Light wire, momentary switch & Power to LED light (not shown)		1
25	PM2820EVS-325	Sensor, High Speed Range (not shown)		1
26	PM2820EVS-326	Sensor, Low Speed Range (not shown)		1
27	TS-1501041	Socket Head Cap Screw	M4x12	4
28	TS-0733031	External Tooth Washer	#10	4
29	TS-2283102	Machine Screw	M3x10	4

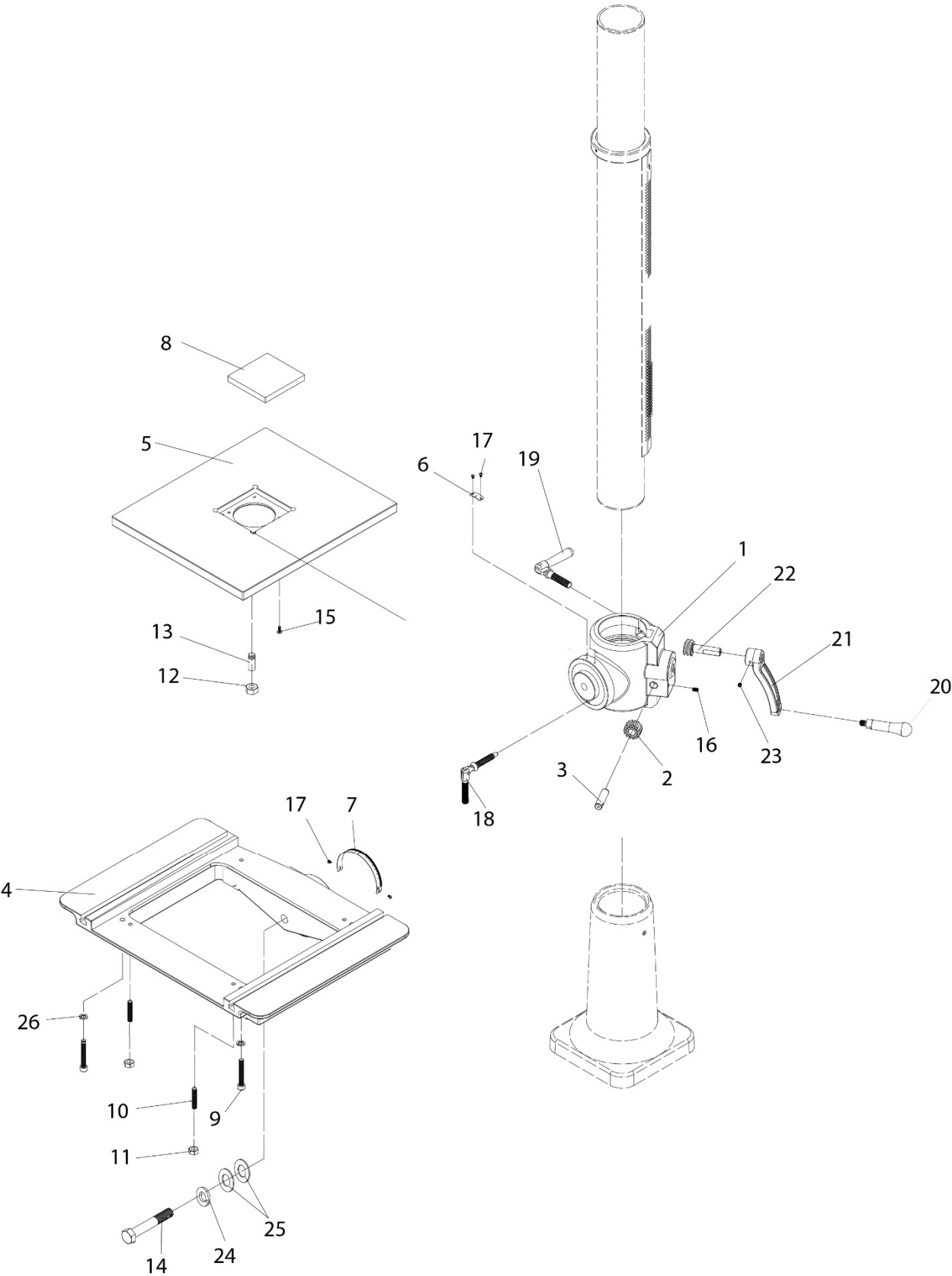
13.4.1 PM2820EVS Top Cover & PCB Assembly – Exploded View



13.4.2 PM2820EVS Top Cover & PCB Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
1	1792822	Tool Holder (OPTIONAL ACCESSORY)		1
2	1792821	Storage Set (OPTIONAL ACCESSORY)		1
3	PM2820EVS-403	Cover, Right		1
4	PM2820EVS-404	Cover, Left		1
5	PM2820EVS-405	Steel Plate		2
6	PM2820EVS-406	Hook		2
7	PM2820EVS-407	PCB Assembly		1
9	TS-2244102	Socket Head Button Screw	M4x10	4
10	TS-2246202	Socket Head Button Screw	M6x20	6
11	TS-1503041	Socket Head Cap Screw	M6x16	2
12	TS-2285121	Machine Screw	M5x12	1
13	PM2820EVS-413	Clutch H & L Speed Label		1
14	PM2820EVS-414	Clutch Warning Label		1
15	TS-0732041	Tooth Washer	1/4 in	1
16	PM2820EVS-416	Fuse, PCB (not shown)	20A	1

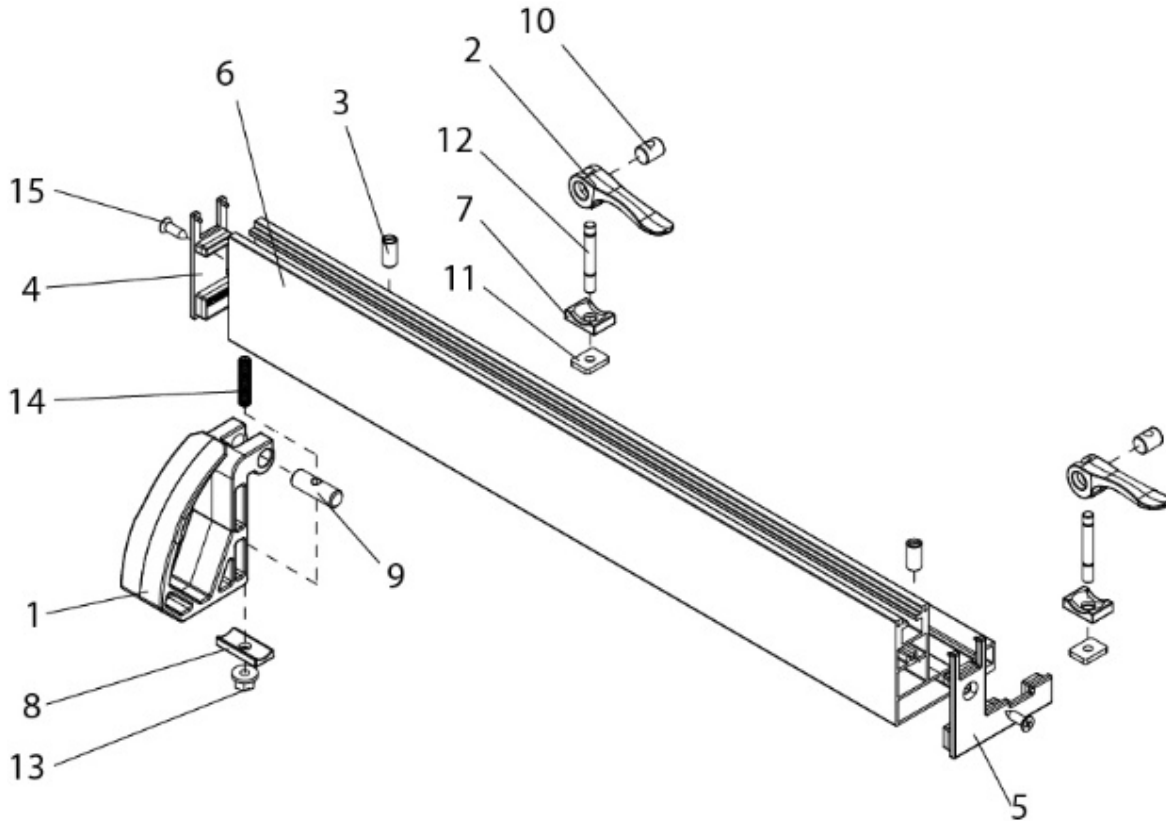
13.5.1 PM2820EVS Work Table Assembly – Exploded View



13.5.2 PM2820EVS Work Table Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
	PM2820EVS-TA	Table Assembly (item #1-26)		1
1	PM2820EVS-501	Table Bracket		1
2	PM2820EVS-502	Gear		1
3	PM2820EVS-503	Shaft		1
4	PM2820EVS-504	Main Table		1
5	PM2820EVS-505	Replacement Table		1
	1792823	Replacement Table with Insert (includes #5,8,12,13,15)		1
6	PM2820EVS-506	Pointer		1
7	PM2820EVS-507	Angle Scale		1
8	PM2820EVS-508	Table Insert		1
9	TS-1504121	Socket Head Cap Screw	M8x60	4
10	PM2820EVS-510	Set Screw	M8x60	4
11	TS-1540061	Hex Nut	M8	4
12	TS-1540041	Hex Nut	M6	4
13	PM2820EVS-513	Set Screw	M6x20	4
14	PM2820EVS-514	Hex Cap Screw	M16x110	1
15	TS-2284121	Machine Screw	M4x12	2
16	TS-1523031	Set Screw	M6x10	1
17	PM2820EVS-517	Socket Head Button Screw	M3x5	4
18	PM2820EVS-518	Lock Handle		1
19	PM2820EVS-519	Lock Handle		1
20	PM2820EVS-520	Handle		1
21	PM2820EVS-521	Crank Arm		1
22	PM2820EVS-522	Worm Shaft		1
23	TS-1523011	Set Screw	M6x6	1
24	TS-2361161	Lock Washer	M16	1
25	TS-155010	Flat Washer	M16	2
26	TS-2361081	Lock Washer	M8	4

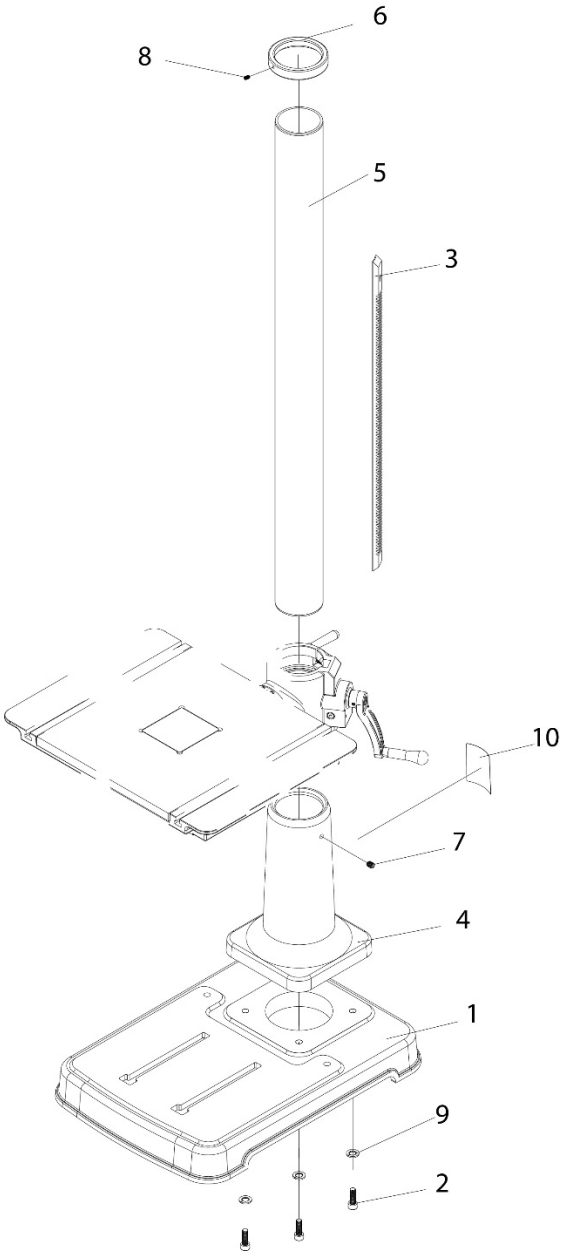
13.6.1 PM2820EVS Fence Assembly – Exploded View



13.6.2 PM2820EVS Fence Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
.....	PM2820EVS-FA.....	Fence Assembly (index #1-15)		
1.....	PM2800B-060.....	Work Stop		1
.....	PM2800B-WSA.....	Work Stop Assembly (index #1, 8, 9, 13, 14).....		1
2.....	PM2800B-040.....	Cam Lock Handle		2
3.....	PM2820EVS-603.....	Plastic Set Screw	M8x16	2
4.....	PM2800B-046.....	Left Fence Cap		1
5.....	PM2800B-061.....	Right Fence Cap		1
6.....	PM2820EVS-606.....	Fence		1
7.....	PM2800B-043.....	Cam Plate		2
8.....	PM2800B-057.....	Cam Plate, Work Stop		1
9.....	PM2800B-059.....	Center Shaft.....		1
10.....	PM2800B-041.....	Pivot.....		2
11.....	PM2800B-241.....	Rectangular Nut.....		2
12.....	PM2800B-042.....	Bolt.....		2
13.....	PM2800B-055A.....	Nut	M6	1
14.....	TS-1523081.....	Set Screw.....	M6x30	1
15.....	TS-1534041.....	Machine Screw	M5x10	2

13.7.1 PM2820EVS Column Assembly – Exploded View



13.7.2 PM2820EVS Column Assembly – Parts List

Index No.	Part No.	Description	Size	Qty.
1	PM2820EVS-701	Base		1
2	TS-1506041	Socket Head Cap Screw	M12x35	4
3	PM2820EVS-703	Rack		1
4	PM2820EVS-704	Column Holder Kit (Includes #5 & #7)		1
5		Column		1
6	PM2820EVS-706	Rack Ring		1
7	TS-1525021	Set Screw	M10x12	1
8	TS-1523031	Set Screw	M6x10	1
9	TS-2361121	Lock Washer	M12	4
10	LM-000417	I.D label, PM2820EVS		1

14.0 **Optional accessories**

The following items will add functionality to your machine. See our website for more details, and to order accessories.

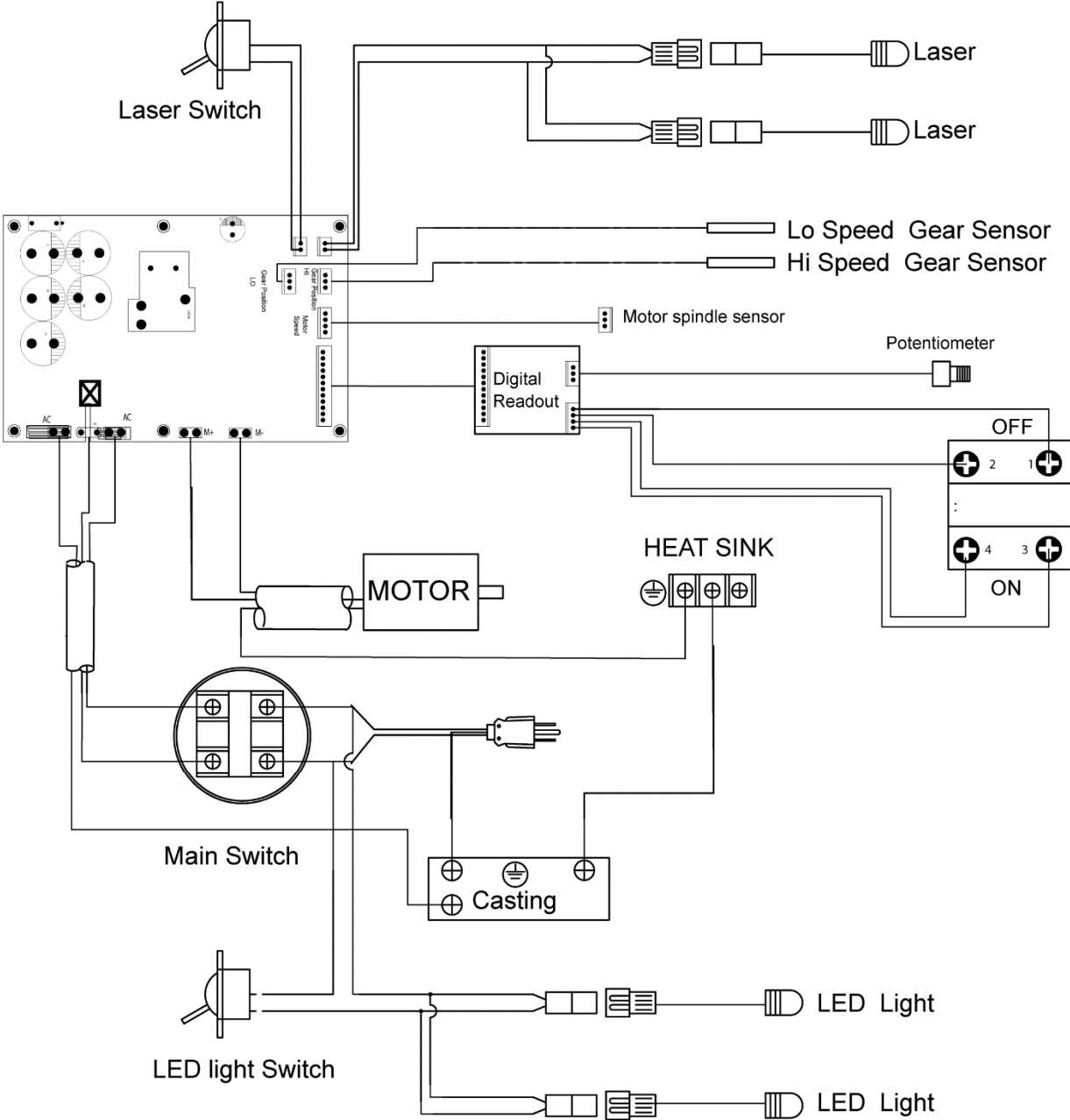
1792821 Storage Set

1792822 Tool Holder

1792824 Wood Table with Microjig accessory

1792825 Down Draft Table

15.0 Electrical Connections for PM2820EVS Drill Press



16.0 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.



427 New Sanford Road
LaVergne, Tennessee 37086
Phone: 800-274-6848
www.powermatic.com