

POWERMATIC[®]

WMH TOOL GROUP

Operating Instructions and Parts Manual

Single End Dovetailer

Model DT65



WMH TOOL GROUP

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Part No. M-1791305

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This manual has been prepared for the owner and operators of a Powermatic Model DT65 Single End Dovetailer. Its purpose, aside from machine operation, is to promote safety using accepted operating and maintenance procedures. To obtain maximum life and efficiency from your dovetailer and to aid in using it safely, please read this manual thoroughly and follow the instructions carefully.

Warranty and Service

WMH Tool Group warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Repair Stations located throughout the United States can provide quick service or information.

In most cases, a WMH Tool Group Repair Station can assist in authorizing repair work, obtaining parts, or perform routine or major maintenance repair on your Powermatic product.

For the name of an Authorized Repair Station in your area, please call 1-800-274-6848, or visit our web site at www.wmhtoolgroup.com

More Information

Remember, WMH Tool Group is consistently adding new products to the line. For complete, up-to-date product information, check with your local WMH Tool Group distributor, or visit our web site at www.wmhtoolgroup.com

WMH Tool Group Warranty

WMH Tool Group makes every effort to assure that its products meet high quality and durability standards and warrants to the original retail consumer/purchaser of our products that each product be free from defects in materials and workmanship as follows: 1 YEAR LIMITED WARRANTY ON ALL PRODUCTS UNLESS SPECIFIED OTHERWISE. This Warranty does not apply to defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, repair or alterations outside our facilities, or to a lack of maintenance.

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To take advantage of this warranty, the product or part must be returned for examination, postage prepaid, to an Authorized Repair Station designated by our office. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, we will either repair or replace the product at our discretion, or refund the purchase price if we cannot readily and quickly provide a repair or replacement. We will return the repaired product or replacement at WMH Tool Group's expense, but if it is determined there is no defect, or that the defect resulted from causes not within the scope of WMH Tool Group's warranty, then the user must bear the cost of storing and returning the product. This warranty gives you specific legal rights; you may also have other rights, which vary from state to state.

WMH Tool Group sells through distributors only. Members of the WMH Tool Group reserve the right to effect at any time, without prior notice, alterations to parts, fittings and accessory equipment, which they may deem necessary for any reason whatsoever.

Table of Contents

| | |
|--|----|
| Warranty and Service | 2 |
| Warning..... | 4 |
| Introduction..... | 6 |
| Description | 6 |
| Specifications | 6 |
| Features of the DT65 Dovetailer | 7 |
| Terminology..... | 7 |
| Unpacking | 8 |
| Contents of the Shipping Container | 8 |
| Installation & Assembly..... | 9 |
| Attaching Dust Hose..... | 9 |
| Installing Dust Chute | 10 |
| Dust Collection..... | 10 |
| Grounding Instructions | 10 |
| 230 Volt Operation | 11 |
| Extension cords..... | 11 |
| Air Connection..... | 11 |
| Adjustments..... | 12 |
| Clamping Cylinders | 12 |
| Clamping Pressure..... | 13 |
| Locking Handles..... | 13 |
| Template Bar | 13 |
| Indication Template..... | 14 |
| Fixed Chaser..... | 14 |
| Horizontal and Vertical Fences..... | 15 |
| Buffer Pads..... | 17 |
| Cutter Height..... | 17 |
| Mortise Depth..... | 17 |
| Thickness of Tenon Cut..... | 18 |
| Tightness of Mortise/Tenon Fit | 18 |
| Drive Belt Tension..... | 19 |
| Replacing cutter | 19 |
| Oil Output..... | 19 |
| Operation..... | 20 |
| Preventing Chip Out | 22 |
| Dovetails in Plywood | 22 |
| Maintenance..... | 23 |
| Lubrication | 23 |
| Replacement Parts | 26 |
| Parts List: Base Assembly | 27 |
| Base Assembly | 28 |
| Parts List: Headstock Assembly | 29 |
| Headstock Assembly..... | 31 |
| Parts List: Hold-Down Assembly..... | 32 |
| Hold-Down Assembly | 33 |
| Parts List: Cabinet Assembly..... | 34 |
| Cabinet Assembly | 35 |
| Electrical Connections | 36 |



Warnings

1. Read and understand the entire owners 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 dovetailer 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 dovetailer, do not use until proper training and knowledge have been obtained.
5. Do not use this dovetailer for other than its intended use. If used for other purposes, WMH Tool Group disclaims any real or implied warranty and holds itself harmless from any injury that may result from that use.
6. Always wear approved safety glasses/face shields while using this dovetailer. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this dovetailer, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
8. Wear ear protectors (plugs or muffs) during extended periods of operation.
9. Some dust created by power sanding, sawing, grinding, drilling and other construction activities contain chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:
 - Lead from lead based paint.
 - Crystalline silica from bricks, cement and other masonry products.
 - Arsenic and chromium from chemically treated lumber.Your risk of exposure varies, depending on how often you do this type of work. To reduce your exposure to these chemicals, work in a well-ventilated area and work with approved safety equipment, such as face or dust masks that are specifically designed to filter out microscopic particles.
10. Do not operate this machine while tired or under the influence of drugs, alcohol or any medication.
11. Make certain the switch is in the **OFF** position before connecting the machine to the power supply.
12. Make certain the machine is properly grounded.
13. Make all machine adjustments or maintenance with the machine unplugged from the power source.
14. 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.
15. 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.
16. Check damaged parts. Before further use of the machine, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function. Check for alignment of moving parts, binding of moving parts, breakage of parts, mounting and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
17. Provide for adequate space surrounding work area and non-glare, overhead lighting.
18. Keep the floor around the machine clean and free of scrap material, oil and grease.
19. Keep visitors a safe distance from the work area. **Keep children away.**
20. Make your workshop child proof with padlocks, master switches or by removing starter keys.



Warnings

21. Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
22. Maintain a balanced stance at all times so that you do not fall or lean against the cutter or other moving parts. Do not overreach or use excessive force to perform any machine operation.
23. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
24. Use recommended accessories; improper accessories may be hazardous.
25. Maintain tools with care. Keep cutters sharp and clean for the best and safest performance. Follow instructions for lubricating and changing accessories.
26. Make sure the work piece is securely clamped to the table. Never use your hand to hold the work piece.
27. Turn off the machine before cleaning. Use a brush or compressed air to remove chips or debris — do not use your hands.
28. Do not stand on the machine. Serious injury could occur if the machine tips over.
29. Never leave the machine running unattended. Turn off the electrical power and the air supply, and do not leave the machine until cutter comes to a complete stop.
30. Remove loose items and unnecessary work pieces from the area before starting the machine.

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.

- - SAVE THESE INSTRUCTIONS - -

Introduction

This manual is provided by Powermatic covering the safe operation and maintenance procedures for a Model DT65 Single End Dovetailer. This manual contains instructions on installation, safety precautions, general operating procedures, maintenance instructions and parts breakdown. This machine has been designed and constructed to provide years of trouble free operation if used in accordance to instructions set forth in this manual. If there are any questions or comments, please contact either your local supplier or WMH Tool Group. WMH Tool Group can also be reached at our web site: www.wmhtoolgroup.com.

Description

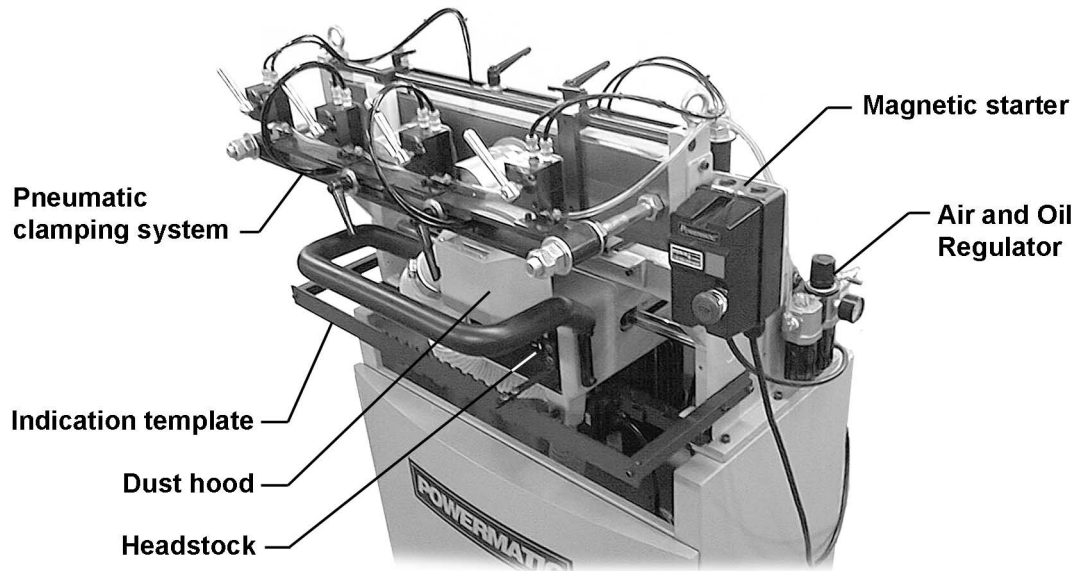
The Model DT65 Dovetailer will make cleanly cut half-blind dovetails for drawer or box construction. A four-sided template allows any of four pitches, from 1" up to 2-1/2". The use of different dovetail pitches will give a unique custom appearance to your work. The cutter is carbide-tipped. The machine has a magnetic starter, and is built to last with cast iron and steel construction. The pneumatic clamping system is quick and easy to use.

Specifications

| | |
|---|----------------------------|
| Model Number | DT65 |
| Stock Number | 1791305 |
| Minimum work piece size (in.) | 7-7/8 x 2-3/8 |
| Maximum work piece size (in.) | 59 x 16-1/2 |
| Minimum dovetail height (in.) | 3/16 |
| Maximum dovetail height (in.) | 3/4 |
| Minimum front thickness (in.) | 9/32 |
| Maximum front thickness (in.) | 2-3/8 |
| Minimum side thickness (in.) | 3/8 |
| Maximum side thickness (in.) | 1-3/16 |
| Number of spindles | 1 |
| Spindle speed (RPM) | 18,500 |
| Center-to-center dovetail spacing (in.) | 1, 1-1/2, 2 and 2-1/2 |
| Table height from floor (in.) | 45 |
| Overall dimensions (L x W x H) (in.) | 37 x 44 x 63 |
| Motor | TEFC, 1HP, 1Ph, 230V, 60Hz |
| Dust collection ports diameter (in.) | front 2-1/2, rear 4 |
| Dust collection minimum CFM required | 500 |
| Approximate Weight, Shipping/Net (lbs.) | 564/461 |

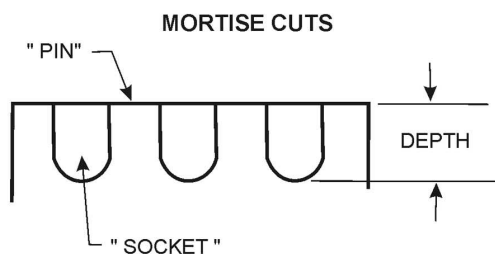
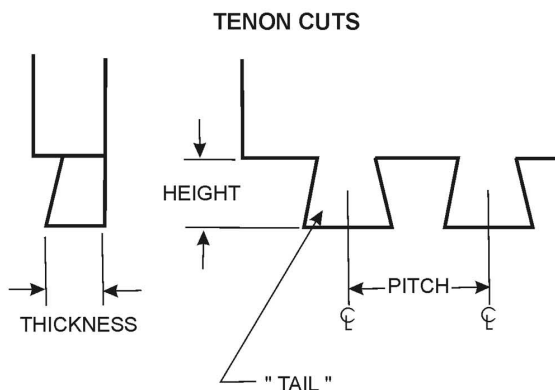
The above specifications were current at the time this manual was published, but because of our policy of continuous improvement, WMH Tool Group reserves the right to change specifications at any time and without prior notice, without incurring obligations.

Features of the DT65 Dovetailer



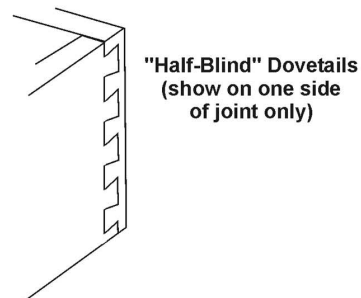
Terminology

Below are the terms used in this manual to identify types of cuts and measurements.



MORTISE CUTS
made on *Front and Back* drawer pieces
(also called "pins" or "sockets")

TENON CUTS
made on *Side* drawer pieces
(also called "tails")



Unpacking

Open shipping container and check for shipping damage. Report any damage immediately to your distributor and shipping agent. Do not discard any shipping material until the Dovetailer is assembled and running properly.

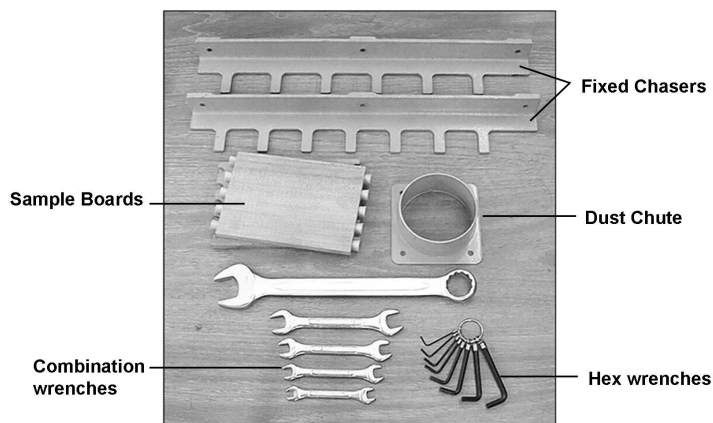
Remove the box from inside the cabinet. Compare the contents of your container with the following parts list to make sure all parts are intact. Missing parts, if any, should be reported to your distributor. Read the instruction manual thoroughly for assembly, maintenance and safety instructions.

Contents of the Shipping Container

- 1 Dovetail Machine
- 2 Fixed Chasers (2-1/2" and 3" pitches)
- 1 Indication Template
- 1 Set of Combination Wrenches (8-10, 11-13, 12-14, and 17-19mm)
- 1 Open-End Wrench, 30mm
- 1 Set of Hex Wrenches (1.5 to 6mm)
- 1 Dust Chute
- 2 Sample Dovetailed Boards
- 1 Owner's Manual
- 1 Warranty Card



Indication Template



⚠ WARNING

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

Installation & Assembly

Tools required for assembly

forklift or hoist with straps/slides

14mm wrench (provided)

[NOTE: A socket set with ratchet wrench may speed assembly]

4mm hex wrench (provided)

knife or wire cutter

flat head screwdriver

1. Remove the four screws and flat washers holding the machine to the pallet with a 14mm wrench, as shown in Figure 1.
2. Place lifting straps through the two eyebolts at the top of the machine (Figure 2). Using a forklift or hoist, lift the machine off the pallet and into its desired location. The Dovetailer should be located in a dry area with sufficient lighting. Leave plenty of space around the machine for operations and routine maintenance work.
3. If desired, the Dovetailer can be further stabilized by securing it to the floor, using lag screws through the four holes at the bottom of the cabinet.
4. A group of cords holds the headstock secure to the machine frame to prevent it from moving during shipping. These cords should now be cut and removed (see Figure 3).
5. Exposed metal areas of the dovetailer (such as the table, template bar, cylinder clamps, rods, etc.) have been factory coated with a protectant. This should be removed with a soft cloth dampened with kerosene or mineral spirits. Do not use an abrasive pad. Do not let solvent contact plastic or rubber parts as it may damage them.

Attaching Dust Hose

1. Slide the upper end of the hose over the chute on the dust hood (Figure 4).
2. Tighten the hose clamp with the attached screw, using a flat head screwdriver.

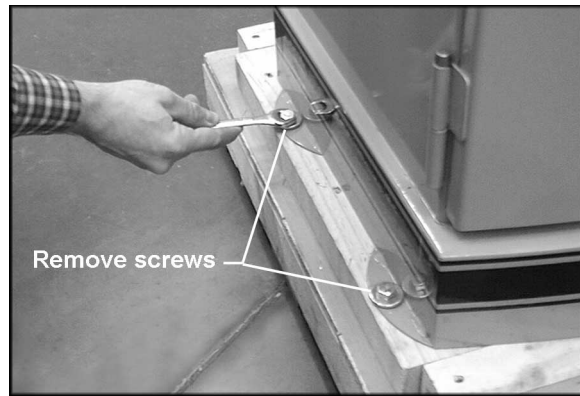


Figure 1

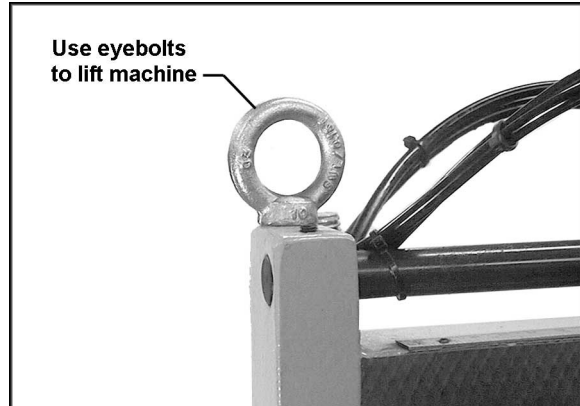


Figure 2

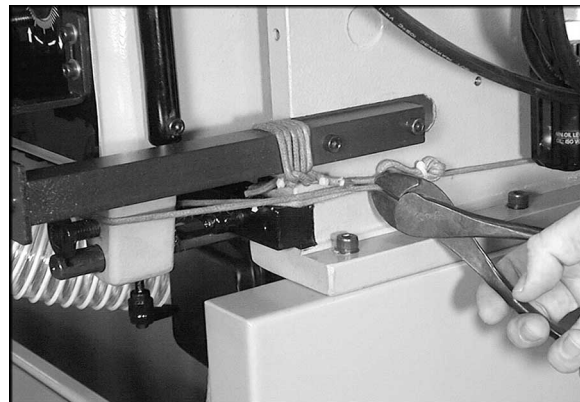


Figure 3

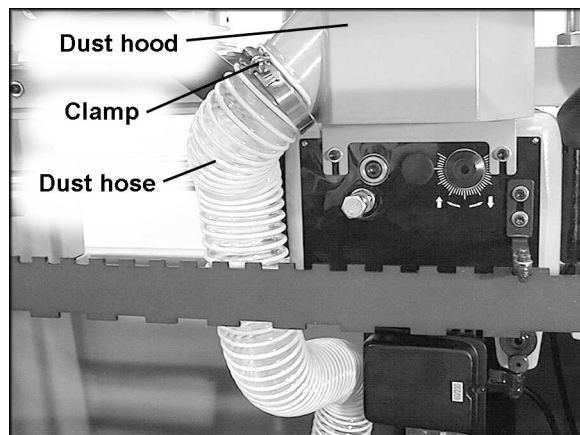


Figure 4

Installing Dust Chute

Remove the four socket head cap screws at the rear of the cabinet, using a 4mm hex wrench. Place the 4" diameter dust chute (Figure 5) over the hole, and re-insert and tighten the four socket head cap screws.

Dust Collection

The use of a dust collection system is strongly recommended for this machine. It will help keep your shop clean as well as minimize any health risks caused by wood dust. Make sure your dust collector has a capacity of at least 500 cubic feet per minute (CFM).

Connect the intake hose of your dust collector to the 4" diameter dust chute at the back of the cabinet (Figure 5).

NOTE: A wide variety of dust collection systems are available from WMH Tool Group. Call customer service at 1-800-274-6848 for more information.

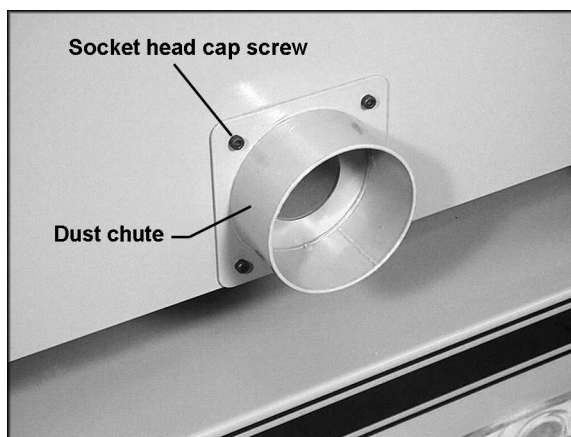


Figure 5

Grounding Instructions

⚠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.

This machine must be grounded. 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.

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

Repair or replace a damaged or worn cord immediately.

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

230 Volt Operation

As received from the factory, the DT65 Dovetailer is designed to run on 230 volt power only. You may either connect a UL/CSA listed 230V plug (similar to the one shown in Figure 6) or “hard-wire” the machine directly to a control panel. If hard-wired to a panel, make sure a disconnect is available for the operator. The dovetailer must comply with all local and national codes after being wired.

1. If it is to be hard-wired, make sure the fuses have been removed or the breakers have been tripped in the circuit to which the dovetailer will be connected. Place a warning placard on the fuse holder or circuit breaker to prevent it being turned on while the machine is being wired.
2. Refer to “Electrical Connections” on page 36 for connecting the motor leads.
3. The Dovetailer with a 230 volt plug should only be connected to an outlet having the same configuration. No adapter is available or should be used with the 230 volt plug.

Extension cords

If an extension cord is 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 the chart in Figure 7 as a general guide in choosing the correct size cord. If in doubt, use the next heavier gauge. The smaller the gauge number, the heavier the cord.

Air Connection

Connect the air supply hose to the coupling on the air unit (Figure 8). The air is turned ON by rotating the valve lever 90 degrees counterclockwise (until it is parallel with the hose), and turned OFF by rotating the valve lever 90 degrees clockwise.

⚠ WARNING Even after the air has been turned off to the machine, there may be residual air inside the lines, and the clamping cylinders can still provide a hazard to fingers. After shutting off the air, always bleed residual air from the system by pushing the relief valve pin at the bottom of the air cup, shown in Figure 8. Keep the relief valve open until all air in the system has been removed.

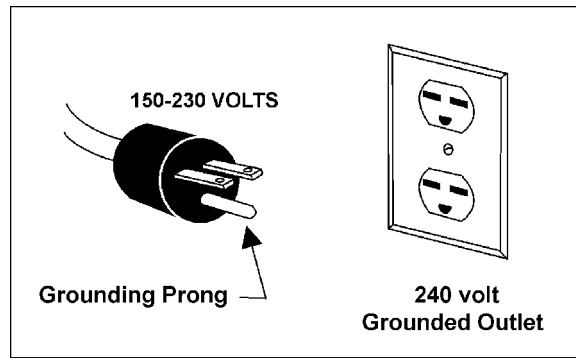


Figure 6

Recommended Gauges (AWG) of Extension Cords

| Amps | Extension Cord Length * | | | | | |
|----------|-------------------------|---------|---------|----------|----------|----------|
| | 25 feet | 50 feet | 75 feet | 100 feet | 150 feet | 200 feet |
| < 5 | 16 | 16 | 16 | 14 | 12 | 12 |
| 5 to 8 | 16 | 16 | 14 | 12 | 10 | NR |
| 8 to 12 | 14 | 14 | 12 | 10 | NR | NR |
| 12 to 15 | 12 | 12 | 10 | 10 | NR | NR |
| 15 to 20 | 10 | 10 | 10 | NR | NR | NR |
| 21 to 30 | 10 | NR | NR | NR | NR | NR |

*based on limiting the line voltage drop to 5V at 150% of the rated amperes.

NR: Not Recommended.

Figure 7

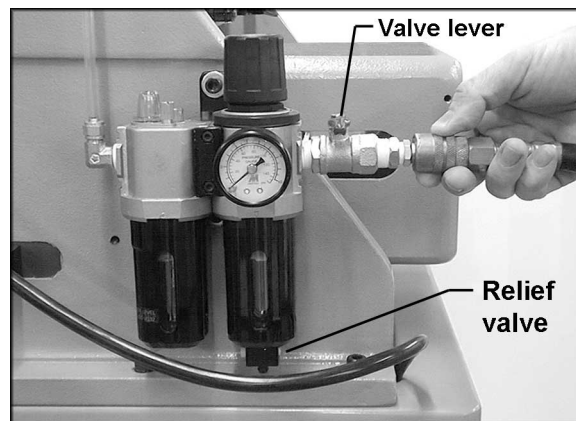


Figure 8

Adjustments

⚠WARNING Disconnect machine from power source, shut off air supply and bleed residual air from system, before making adjustments. Failure to comply may cause serious injury.

Clamping Cylinders

The workpieces are clamped to the table by pneumatically operated aluminum cylinders (A, Figure 9). Each cylinder has its own air on/off lever. Simply turn the lever (B, Figure 9) to “on” position to activate the cylinder; the cylinder will respond immediately by clamping the workpiece against the table.

⚠WARNING Always keep fingers out of the way of clamping cylinders. Failure to comply may cause serious injury.

Both vertical and horizontal clamping cylinders can be adjusted to match the thickness of your workpieces. To change the thickness capacity of the clamping cylinders, proceed as follows:

1. To increase the clamping capacity, loosen the top two hex nuts (A and B, Figure 10) on the stud at the end of the holder bracket, with a 30mm wrench. Do the same for the stud at the opposite end of the holder bracket.
2. Tighten the lower hex nut (C, Figure 10). You can do this without a wrench. This will raise the holder bracket. Do this incrementally on both studs until the desired height is reached. When finished, tighten top hex nuts (A & B, Figure 10) on both studs with the wrench.

NOTE: Make equal adjustment on both studs at each end of the holder bracket to ensure the clamps are parallel to the table. To check this, measure from the bottom edge of the holder bracket down to the table. Measure at each end of the holder bracket – the measurements should be equal. Figure 10 shows the horizontal clamping assembly - the procedure is identical for the vertical clamping assembly.

3. To decrease the clamping capacity, back off the lower hex nut (C, Figure 10) and tighten the top hex nut (B, Figure 10). This will lower the holder bracket.
4. When finished, tighten the lower hex nut (C) against the holder bracket, and bring hex nut (A) down against hex nut (B).

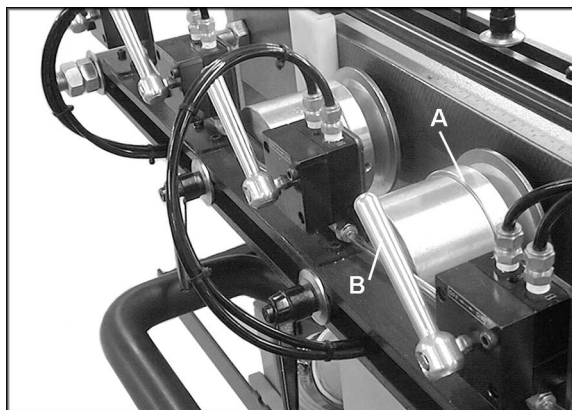


Figure 9

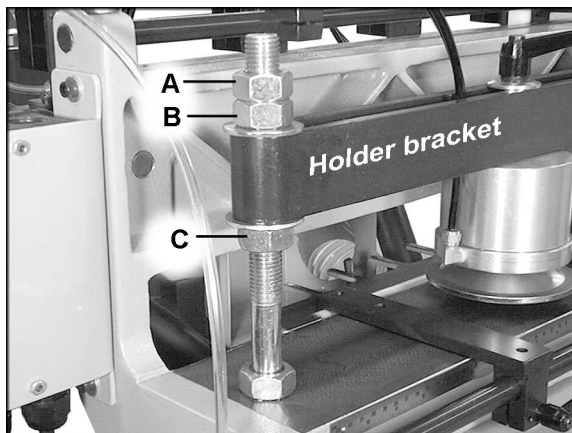


Figure 10



Figure 11

The clamping cylinders can also be adjusted laterally for better support of workpieces with differing widths. Simply loosen the locking handle (Figure 11) and slide the clamping cylinder to position. Re-tighten locking handle.

Clamping Pressure

The pressure exerted by the cylinder clamps against the workpiece can be adjusted at the air regulator, shown in Figure 12. The hardness or softness of the wood will determine the amount of clamping pressure desired. Enough pressure should be used to prevent the workpiece from slipping during operations. Forty (40) psi is suitable for clamping most wood; going above that is not recommended.

To change the clamping pressure, pull up on the knob (A, Figure 12) and rotate it; clockwise to increase pressure, counterclockwise to decrease pressure. The attached needle indicator (B, Figure 12) shows the air pressure. Lock the setting by pushing the knob (A, Figure 12) back down.

Locking Handles

All locking handles, such as those shown in Figure 11, can be rotated out of the way if they interfere with other machine parts. Simply lift straight out on the locking handle and rotate it, then release, making sure it seats properly.

Template Bar

The four-sided template bar, shown in Figure 14, will allow you to create “half-blind” dovetails, where the dovetails are visible on only one side of the joint. It will create dovetails in one of four different “itches” or centerlines. The available pitches are 1”, 1-1/2”, 2” and 2-1/2”. To change the pitch of a dovetail cut, proceed as follows:

1. First notice how the notches on the template bar are grouped toward the right side of the machine. The template bar should always be oriented in this fashion.
2. Release one end of the spring on the left side of the headstock (Figure 13) and pull the headstock forward until the tracer pin (Figure 14) is clear of the template bar.
3. Loosen and remove the locking handles on each end of the template bar (Figure 15).
4. Pull out the template bar, flip it to the desired side, then reinstall it. NOTE: The pitch dimension is inscribed on each side of the template bar. The side of the template bar that you have chosen should face downward when mounted on the machine.
5. Insert and tighten both locking handles.

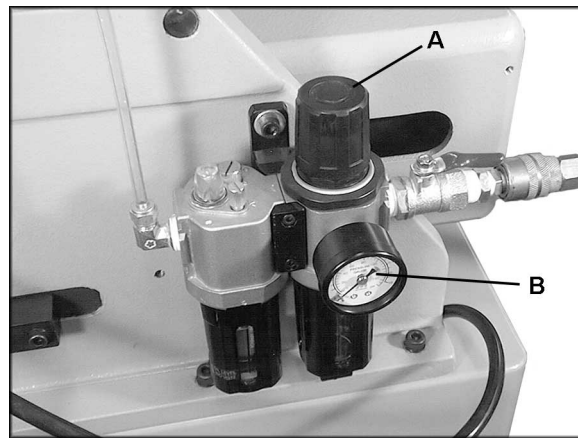


Figure 12



Figure 13

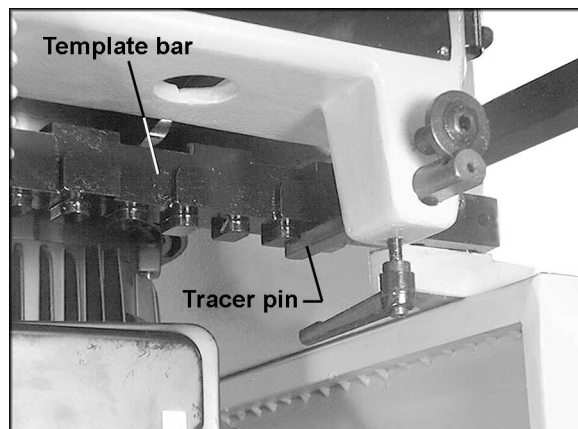


Figure 14

6. Push the headstock back and re-connect the spring (Figure 13).

You must now also shift the indication template (Figure 16). See "Indication Template".

Indication Template

Because the tracer pin is not easily observed while the machine is in operation, the indication template (A, Figure 16) provides the operator with a visual record of the progress of the "hidden" tracer pin. The bracket (B, Figure 16) slides in and out of the notches on the indication template, echoing the tracer pin as it slides in and out of the notches on the template bar below.

The pitch of the indication template must match the pitch of the template bar. Therefore, when turning the template bar for a new pitch, you must also change the indication template.

1. First notice how the notches on the indication template are grouped toward the right side of the machine. The indication template should always be oriented in this fashion.
2. Remove the socket head cap screw (C, Figure 16) at each end of the indication template, with a 5mm hex wrench.
3. The indication template that came installed on your machine contains the 1" and 2" pitch. The other indication template has the 1-1/2" and 2-1/2" pitch. Either flip the indication template, or replace it with the other one as needed, to match the pitch of the template bar.
4. Re-insert and tighten the socket head cap screws (C, Figure 16).

Fixed Chaser

The fixed chaser (Figure 17) provides a support on which the workpieces rest. The spacing between the "fingers" of the fixed chaser allows clearance for the cutter.

The DT65 Dovetailer comes standard with three fixed chasers at 2", 2-1/2" and 3" pitches. (Pitch is the distance between the centers of the "fingers"; see Figure 18).

NOTE: If you wish to use the 1-1/2" or 2-1/2" pitch on the template bar, you must replace the fixed chaser on the machine with one of the others provided. Figure 18 explains how the available fixed chasers correspond to the pitch of the template bar.

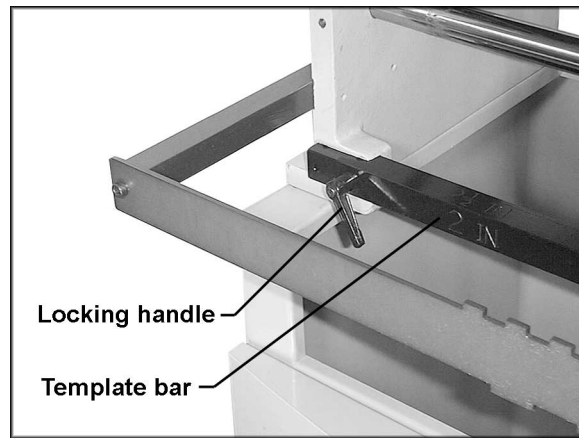


Figure 15

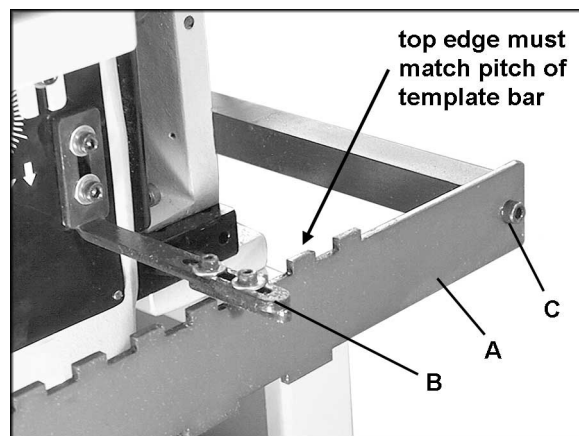


Figure 16

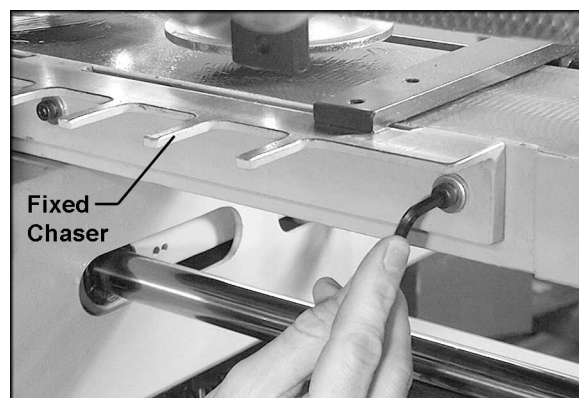
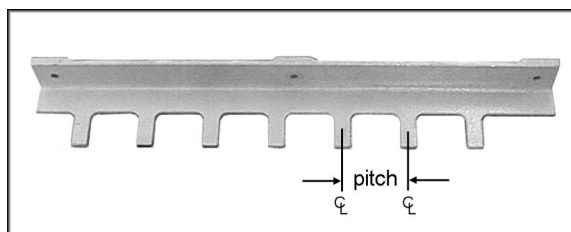


Figure 17

1. To replace the fixed chaser, remove the three M6 socket head cap screws and flat washers, using a 5mm hex wrench as shown in Figure 17. Remove the fixed chaser.
2. Install the new fixed chaser and make sure it is level with the main table.
3. Re-insert and tighten the socket head cap screws against the flat washers.

After mounting the fixed chaser, make sure it will correspond to your chosen pitch on the template bar. With the **machine power off**, slide the headstock across the length of the fixed chaser, allowing the cutter to move in and out of the spaces. If there is any interference between the cutter and one of the “fingers” on the fixed chaser, then try a different fixed chaser, or change the pitch of the template bar.



| Template Bar | Fixed Chaser |
|--------------|-------------------------|
| 1" pitch | used with: 2" pitch |
| 1-1/2" pitch | used with: 3" pitch |
| 2" pitch | used with: 2" pitch |
| 2-1/2" pitch | used with: 2-1/2" pitch |

Figure 18

Horizontal and Vertical Fences

The workpieces will lie flush against the fences during cutting to ensure squareness. Two buffer pads made of polyethylene material are mounted to the fences – these provide a “chipbreaker” effect to prevent chip-out on the left edges of the workpieces. They are designed so the cutter can bite into them without any damage to the cutter.

To adjust these fences, proceed as follows:

1. Place your FRONT/BACK workpiece on the horizontal table and against the fence/buffer pad. Move the headstock to the left edge of the workpiece, then slide it to the right, allowing the tracer pin to slide just a little into the template recesses, while observing through the dust hood window the progress of the cutter. This will give you an idea where the cuts will be made and how they will be spaced across the width of the workpiece.
2. For broad movement of the horizontal fence, loosen both locking handles on the horizontal fence (A and B, Figure 19) and slide the horizontal fence into position. Tighten both locking handles (A & B, Figure 19).
3. There is also a micro adjustment on the horizontal fence; loosen locking handle (A, Figure 19), but leave locking handle (B) tight. Loosen the screw (C, Figure 19) with a 6mm hex wrench and rotate the knurled knob (D, Figure 19) as needed for precise positioning of the horizontal fence.
4. When finished, tighten screw (C, Figure 19) and locking handle (A, Figure 19).

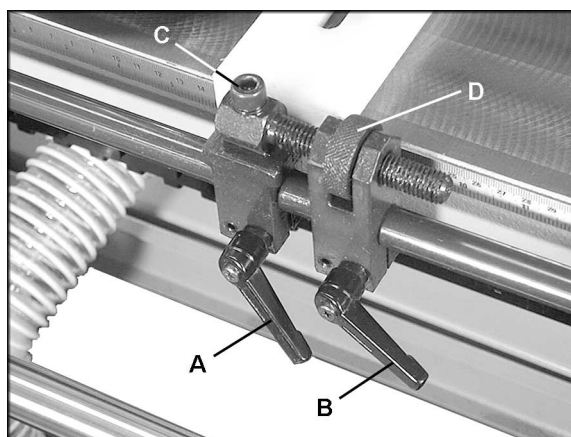


Figure 19

NOTE: Make sure locking handles (A & B, Figure 19) will not interfere with the headstock during operation.

5. Continue to check the spacing by sliding the headstock across, until the dovetail cuts will be distributed evenly across the width of the workpiece. NOTE: This is an approximate method of determining by eye where to place the workpiece. A scale in inches and millimeters is mounted to both horizontal and vertical tables, if you need more precise measurements for the location of the dovetail cuts.
6. Again, make sure the locking handles on the horizontal fence (A & B, Figure 19) are tightened. The position of the horizontal fence will now be used as the basis for locating the vertical fence.
7. Loosen the locking handle on the vertical fence.
8. As noted, the position of the horizontal fence will affect the position of the vertical fence. Therefore, if you are making a drawer that has a bottom groove, the vertical fence should be set so that the bottom groove in the drawer piece to be tenoned will go through the center of a tail. That means the bottom groove of the mortised piece will go through the center of a mortise. This will prevent the groove from being visible on the outside of the assembled drawer. See Figures 20 and 21.

Important: To make proper dovetail cuts, the two fences must always be offset from each other by half the pitch of the template bar. That is, offset 1/2" when using the one-inch template; 3/4" when using the 1-1/2 template; 1" when using the two-inch template, and 1-1/4" when using the 2-1/2 inch template. The measuring scales on the horizontal and vertical tables are marked in 1/16" increments and millimeters.

9. Line up the vertical fence with the horizontal fence, then offset the vertical fence by exactly half the pitch of the template bar. See Figure 22.
10. This adjustment will cause the vertical work piece to be slightly offset to the right of the horizontal piece (as viewed from front of machine), thus ensuring the dovetails will correspond when the two pieces are assembled.
11. Tighten the locking handle on the vertical fence.

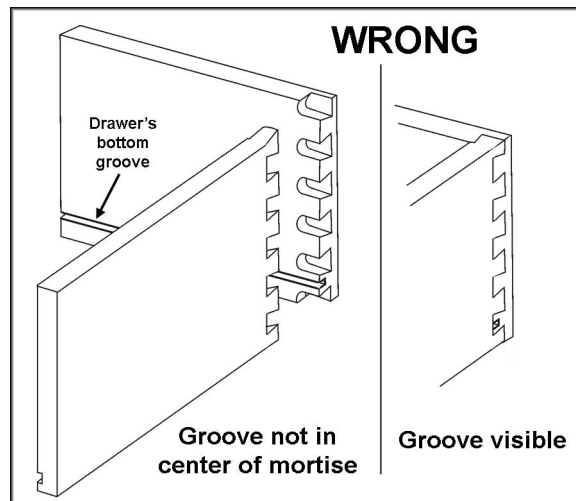


Figure 20

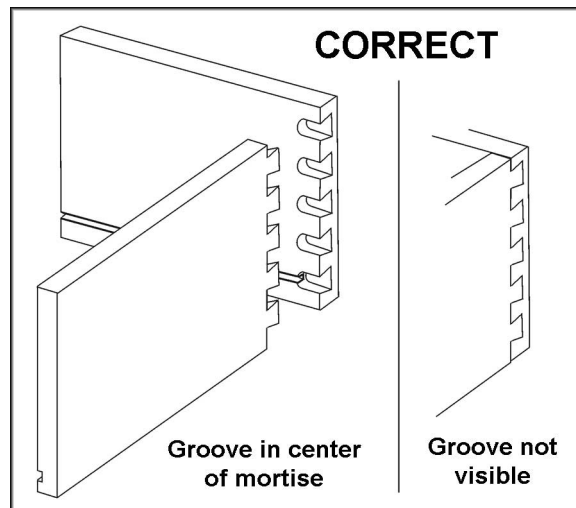


Figure 21

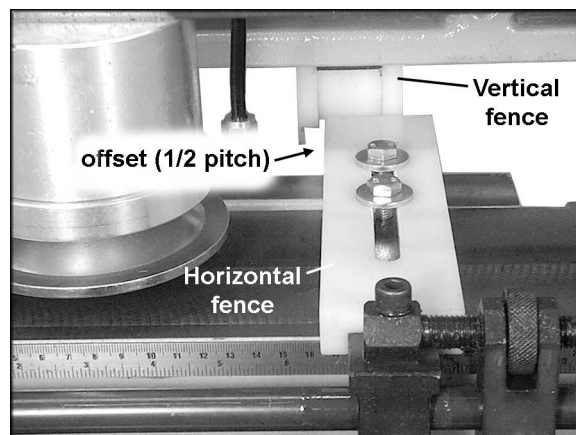


Figure 22
(view from rear of machine)

There are a total of four fences on the DT65 Dovetailer – two vertical and two horizontal. These allow two sets of workpieces to be cut at the same time. If this is desired, position the other two fences in the same manner as the first two fences, remembering again to offset the vertical fence by half the pitch.

Buffer Pads

The polyethylene buffer pads, shown in Figure 22, have slots through which they are secured to the fences by screws. These buffer pads can be re-positioned if needed.

To adjust a buffer pad, loosen the two hex cap screws (shown in Figure 22) with a 13mm wrench. Slide the buffer pad as necessary. Re-tighten both hex cap screws when finished.

Cutter Height

This adjustment will change the height of the tail on the tenon (male) cut, and how deep the mortise (female) cut goes into the thickness of the workpiece.

1. Disconnect machine from power source.
2. Loosen the spindle lock screw (Figure 23) by turning it counterclockwise with a 6mm hex wrench.
3. Turn the spindle height adjustment screw (Figure 23) with a 5.5mm hex wrench, either clockwise to raise the cutter (increase the cutter depth), or counterclockwise to lower the cutter (decrease the cutter depth).
4. Tighten spindle lock screw by turning it clockwise.

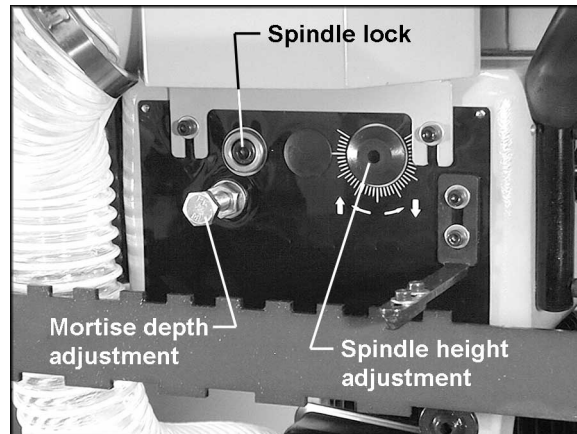


Figure 23

Mortise Depth

This adjustment ensures that the side pieces of your drawer will remain flush with the front and back pieces of the drawer. The correct fit will have the sides flush with the front and back of the drawer, without showing any of the mortise cut on the inside of the drawer.

The mortise depth adjustment bolt, shown in Figure 23, limits how far forward the headstock will go, and thus limits the length of your mortise cut.

1. Disconnect machine from power source.
2. Loosen the hex nut on the mortise depth adjustment bolt (Figure 23) by turning the hex nut counterclockwise with a 17mm wrench.

3. To decrease the depth of the mortise (female) cut, turn the bolt clockwise. To increase the depth of the mortise cut, turn the bolt counterclockwise.
4. Re-tighten the hex nut.

Thickness of Tenon Cut

To adjust the thickness of the tenon (male) cuts, you will change the depth of the tracer pin (A, Figure 24).

1. Disconnect machine from power source.
2. Loosen the locking handle (B, Figure 24).
3. Insert a 5.5mm hex wrench into the end of the adjustment screw (C, Figure 24) and turn the adjustment screw as needed. To decrease the thickness of the tenon cut, turn the adjustment screw counterclockwise. To increase the thickness of the tenon cut, turn the adjustment screw clockwise.
4. Tighten locking handle (B, Figure 24).

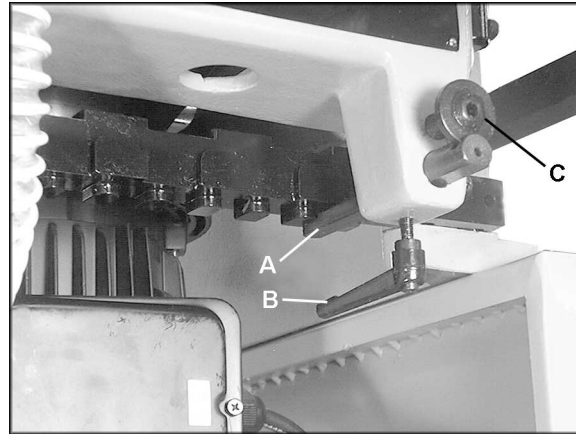


Figure 24

Tightness of Mortise/Tenon Fit

A proper dovetail fit should be snug with no gaps showing, but not overly tight as glue must later fill the joints. If the cuts seem correct, but the joint is simply too tight, or the joint is too loose, proceed as follows.

1. Disconnect machine from power source.
2. Remove the dust hood from the front of the headstock. Release one end of the spring on the headstock (see Figure 13) and pull the headstock away from the machine until the cutter becomes more accessible.
3. You will notice the cutter, shown in Figure 25, is slightly off center of the spindle. The spindle is eccentric and allows the cutter to be turned to a different position on the spindle.

⚠ WARNING The cutter is very sharp! Use caution when working with or around it.

4. Loosen both set screws on the spindle (Figure 25) by turning them counterclockwise with a 4mm hex wrench.
5. A scale is located just above the cutter, with a plus (+) and minus (-) sign. Moving the cutting edge of the cutter toward the plus (+) side of the scale will increase the size of the mortise cut and decrease the size of the tenon cut. Moving the cutting edge of the cutter toward the minus (-) side will decrease the size of the mortise cut and increase the size of the tenon cut.

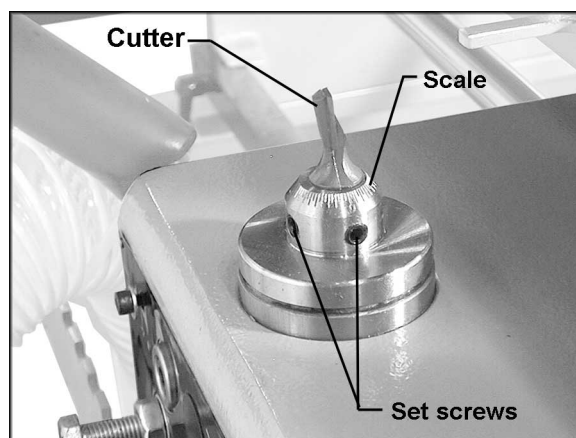


Figure 25

NOTE: One notch of the scale equals 1mm.

6. With your fingers on the shank portion of the cutter, carefully rotate the cutter toward the plus (+) or minus (-) position as needed.
7. When satisfied with the adjustment, tighten both set screws firmly.
8. Re-attach the spring on the headstock, and re-install the dust hood.

Drive Belt Tension

The tightness of the belt that drives the spindle has been adjusted at the factory. Further adjustment may be necessary after the machine receives some use, as the belt may stretch slightly during the “breaking in” process.

Belt tension can be adjusted by a socket head cap screw at the rear of the headstock (Figure 26) which slides the motor toward or away from the spindle. To tighten the belt, rotate this cap screw clockwise with a 6mm hex wrench. To loosen the belt, rotate the cap screw counterclockwise. The belt should be just tight enough to prevent it slipping on the spindle during operation.

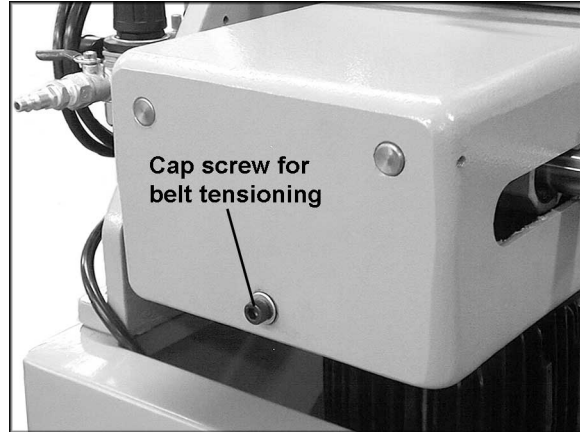


Figure 26

Replacing cutter

⚠WARNING The cutter is very sharp; use caution when working with or around cutter. Disconnect machine from power source! Failure to comply may cause serious injury.

1. To replace the cutter, loosen both set screws (Figure 25) and carefully pull up on the cutter until it is free from the spindle.
2. Slide the new cutter down into the spindle, and align the cutting edge with your previous setting on the spindle scale.
3. Tighten both set screws.

Oil Output

Oil is distributed through the air lines for constant lubrication of the clamping system. The oil output can be adjusted by rotating the oil regulator knob (A, Figure 27). Turn the knob counterclockwise to increase oil output, clockwise to decrease oil output.

The level of oil should be checked occasionally and re-filled as necessary. A minimum level is marked on the window of the oil cup (C, Figure 27). Refill by removing the screw (B, Figure 27) and pouring oil into the fill hole. When finished, re-install screw (B, Figure 27). Use standard air tool oil. This is available from your local distributor, or can be found in most hardware and tool stores.

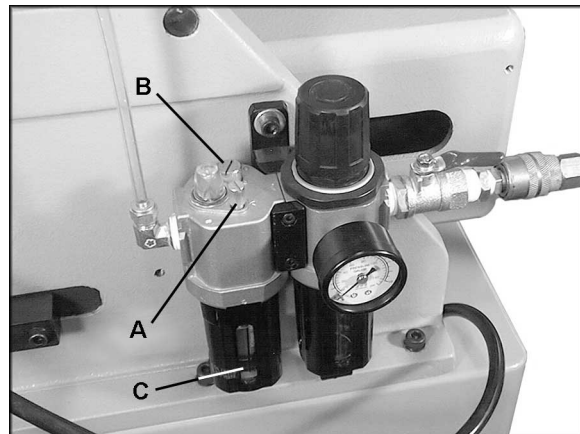


Figure 27

Operation

NOTE: The following are basic dovetailing procedures as they apply to this machine, and are not intended to be a full course of instruction in making dovetails.

Refer back to the terminology on page 7 if needed.

The Dovetailer can be used to make joints in drawers, boxes, cabinets, etc. Instructions in this manual are based upon making a drawer consisting of FRONT and BACK pieces, and two SIDE pieces. FRONT and BACK pieces are placed horizontally on top the machine's table; SIDE pieces are placed vertically.

No matter the project, prevent mistakes by laying out the pieces beforehand according to how they will be assembled. Place them with the inside facing up, and label the mating edges, as shown in Figure 28.

Before cutting on what is to be the finished piece, the operator should make test cuts on scrap wood to make sure all settings and adjustments are correct.

IMPORTANT: Make sure the workpiece has been cut square before making dovetails. An out-of-square workpiece will result in poor dovetail joints.

1. Check that all the following have been set correctly (See "Adjustments" above):
 - proper pitch of Template Bar
 - proper Indication Template
 - Vertical and Horizontal Fence positions (offset from each other by half the pitch of the template bar)
 - height of Clamping Cylinders for workpiece thickness
 - proper Fixed Chaser, with no cutter interference
 - height of Cutter
2. Move the headstock all the way to the right and out of the way.
3. Connect the air supply and the electrical power to the machine.

⚠ WARNING Keep fingers clear of clamping cylinders.

4. Place the drawer RIGHT SIDE against the vertical table and on top the fixed chaser. The RIGHT SIDE should be flush against the fence, with the bottom groove facing outward and opposite the fence (Figure 29).

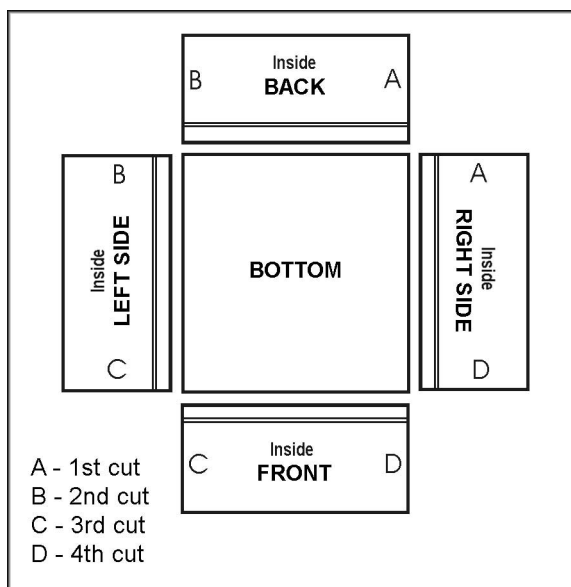


Figure 28

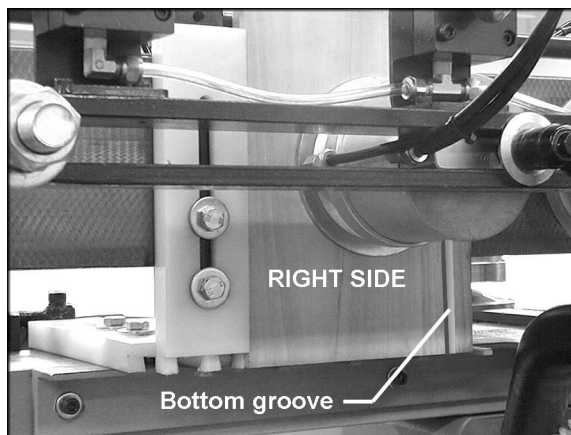


Figure 29

5. Activate the clamping cylinder in front of the **RIGHT SIDE** workpiece.
6. Place the drawer **BACK** on the horizontal table, and against the horizontal fence. Slide it flush against the **RIGHT SIDE** workpiece. The bottom groove on the **BACK** should face downward and opposite the fence. See Figure 30.
7. Activate the clamping cylinder above the **BACK** workpiece.
8. The **BACK** is now butting against the **RIGHT SIDE** so they are flush, with the **RIGHT SIDE** overlapping the edge of the **BACK**. Both workpieces should be firmly and evenly against the fences.
9. Turn on the machine at the switch, and slide the headstock to the left edge of the workpiece. Move the cutter in sequence, left to right, allowing the tracer pin to move in and out of the template slots. See Figure 31. You can watch the progress of the cutter through the window of the dust hood.
NOTE: Do not rush the cut; allow the cutting unit to do the work.
10. When finished, slide the headstock out of the way and unclamp the workpieces by turning the clamping cylinder levers to "off".
11. Fit the **BACK** and **RIGHT SIDE** together and examine the joint. If the joint is not satisfactory, make any needed corrections to your settings as explained under "Adjustments." If the joint is satisfactory, proceed with the next cut as follows.
12. Insert the **LEFT SIDE** piece and clamp it in vertical position and against the fence. (NOTE: The bottom groove on the **LEFT SIDE** will face outward and toward the fence.)
13. Turn the **BACK** 180 degrees and clamp it in the horizontal position against the fence. (NOTE: The bottom groove on the **BACK** workpiece will still be face down, but toward the fence.)
14. Make the cut, then continue the dovetailing procedure with the **FRONT** piece, making cuts "C" and "D" (Figure 28) until all four joints of the drawer have been cut.

TIP: When using drawer side widths that are not "whole inch" sizes, you may wish to gauge off the top of the drawer rather than the bottom when placing workpieces in the machine. Doing this will improve the look of the drawer by providing a full tenon near the top of the drawer and the half-tenon will end up at the bottom. See Figure 32.

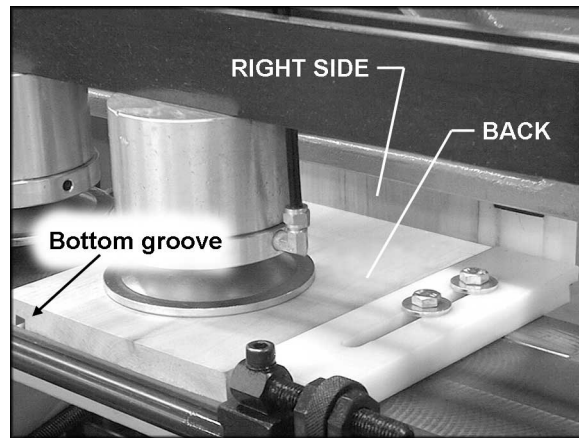


Figure 30



Figure 31

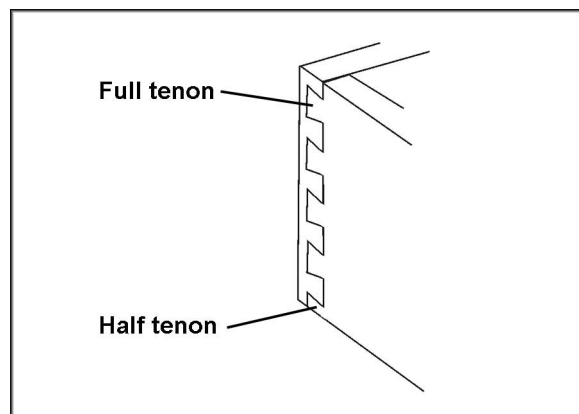


Figure 32

Preventing Chip Out

As noted previously, when the SIDE and FRONT/BACK pieces are inserted into the machine, they are offset a bit so they'll match correctly when assembled. In other words, the SIDE will rest slightly to the right of the FRONT/BACK in the machine. This leaves the right edge of the SIDE exposed without the "chipbreaker" effect that the FRONT/BACK provides for the rest of the SIDE (see Figure 33). This may result in an unsatisfactory cut at the edge of the SIDE.

This problem is resolved simply by taking a two-inch-plus wide "back-up" board, of the same thickness as the workpiece, and clamping it horizontally next to the FRONT/BACK piece, so that it backs up the exposed edge of the SIDE, as shown in Figure 33. You can use this piece over and over again.

Dovetails in Plywood

Because plywood handles a bit differently than solid stock, here are some tips to follow:

1. When using plywood, the layers tend to be more fragile. Therefore, the operator should keep the movement of the cutting unit consistent and proceed relatively slowly.
2. On the rounded arcs of the tenon cuts, you may lose a bit of the top layer. This is to be expected with plywood, and does not affect either the look or the strength of the assembled dovetail joint. Rather, the strength of the dovetailed corner comes from the flat side of the tenons.
3. Plywood has a tendency to chip out on exposed edges. A back-up board may be necessary (see Figure 33).

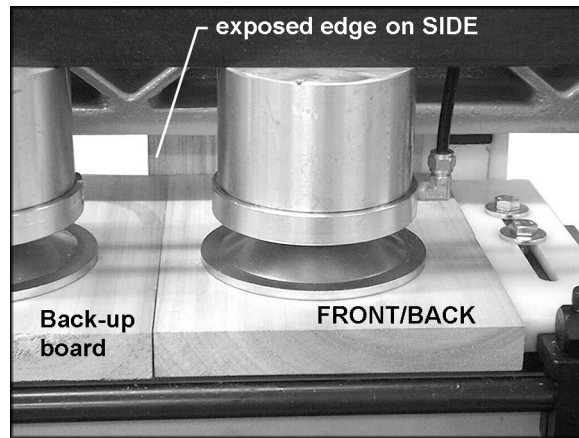


Figure 33
(view from rear of machine)

Maintenance

⚠WARNING Before doing maintenance on the machine, disconnect it from the electrical supply and the air supply, and release any residual air from the lines. Failure to comply may cause serious injury.

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

The horizontal and vertical tables and other exposed metal parts should be kept clean and free of rust. A coat of paste wax will help protect the tables from tarnishing.

After each day's use, brush or blow out dust and debris from the cutter, table, motor, etc.

Keep the clamping cylinders clean to prevent debris adhering to them, which can scar workpieces.

Keep clean the travel rods upon which the headstock slides.

Lubrication

The linear bushings by which the headstock travels on the rods are pre-lubricated and sealed; they do not require additional lubrication.

The spindle unit is also sealed and requires no lubrication.

Occasionally check the oil level in the oil regulator cup (see Figure 27). Add more oil as needed. Use standard air tool oil.

Troubleshooting the DT65 Dovetailer

| Trouble | Probable Cause | Remedy |
|---|---|--|
| Machine will not start/restart or repeatedly trips circuit breakers or blows fuses. | Machine not plugged in. | Verify machine is connected to power |
| | Fuse blown, or circuit breaker tripped. | Replace fuse, or reset circuit breaker. |
| | Cord damaged. | Replace cord. |
| | Overload automatic reset has not reset. | If the Dovetailer overloads on the circuit breaker built in to the motor starter, it takes time for the machine to cool down before restart. Allow unit to adequately cool before attempting restart. If problem persists, check amp setting on the motor starter inside the electrical box. |
| | Dovetailer frequently trips. | 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 then there is probably a loose electrical lead or a failed component. See below. |
| | Building circuit breaker trips or fuse blows. | Verify that dovetailer 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. |
| | Loose electrical connections. | Go through all of the electrical connections on the dovetailer including motor connections, verifying the tightness of each. Look for any signs of electrical arcing which is a sure indicator of loose connection or circuit overload. |
| | Motor starter failure. | If you have access to a voltmeter, you can separate a starter failure from a motor failure by first, verifying incoming voltage at 220+/-20 and second, checking the voltage between starter and motor at 220+/-20. 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 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 a qualified electric motor repair shop and have it tested. |
| | Miswiring of the unit. | Check to make certain all electrical connections are correct and properly tight. The electrical connections other than the motor are preassembled and tested at the factory. Therefore, the motor connections should be checked as the highest probability for error. If problems persist, double check the factory wiring. |
| | On/off switch failure. | If the on/off switch is suspect, you have two options: Have a qualified electrician test the switch for function, or purchase a new on/off switch and establish if that was the problem on changeout. |

| Trouble | Probable Cause | Remedy |
|--|--|--|
| Cutter not cutting properly. | Cutter in wrong position. | Turn cutter towards the (+) or (-) mark [page 18]. |
| | Cutter dull or damaged. | Sharpen or replace cutter [page 19]. |
| Dovetailed parts fit too tightly. | Cutter not adjusted properly. | Loosen set screws and turn cutter toward the (+) mark. Retighten set screws [page 18]. |
| Dovetailed parts fit too loosely. | Cutter not adjusted properly. | Loosen set screws and turn cutter toward the (-) mark. Retighten set screws [page 18]. |
| Cutter sometimes slips and misses revolutions. | Drive belt tension incorrect. | Adjust drive belt tension [page 19]. |
| Dovetailed parts fit side to side, but have depth gaps between the mortise and tenon cuts. | The mortise depth or tenon thickness is set incorrectly. | Change depth of mortise cut or thickness of tenon cut by using the adjustment screw [page 17 & 18]. |
| A gap between mortise and tenon cuts increases along the dovetailed corner. | Boards not square when clamped. | Make sure the initial cuts on the board (ripping and/or crosscutting) have been done squarely, and that the board is flush against the stop before clamping. |
| Side piece edge is not aligned with front/back piece edge. | Fences not set correctly. | Offset the vertical fence from the horizontal fence by half the pitch of the cut [page 16]. |
| Workpiece slips during the cut. | Clamping cylinder not positioned over center of workpiece. | Position clamping cylinder to take advantage of its full surface area [page 13]. |
| | Clamping cylinder too high to properly contact workpiece. | Lower clamping cylinder in relation to thickness of workpiece [page 12]. |
| | Clamping pressure too low. | Adjust pressure at air regulator [page 13]. |
| | Surface area of workpiece too small to achieve adequate coverage from clamping cylinder. | Use larger workpiece. |

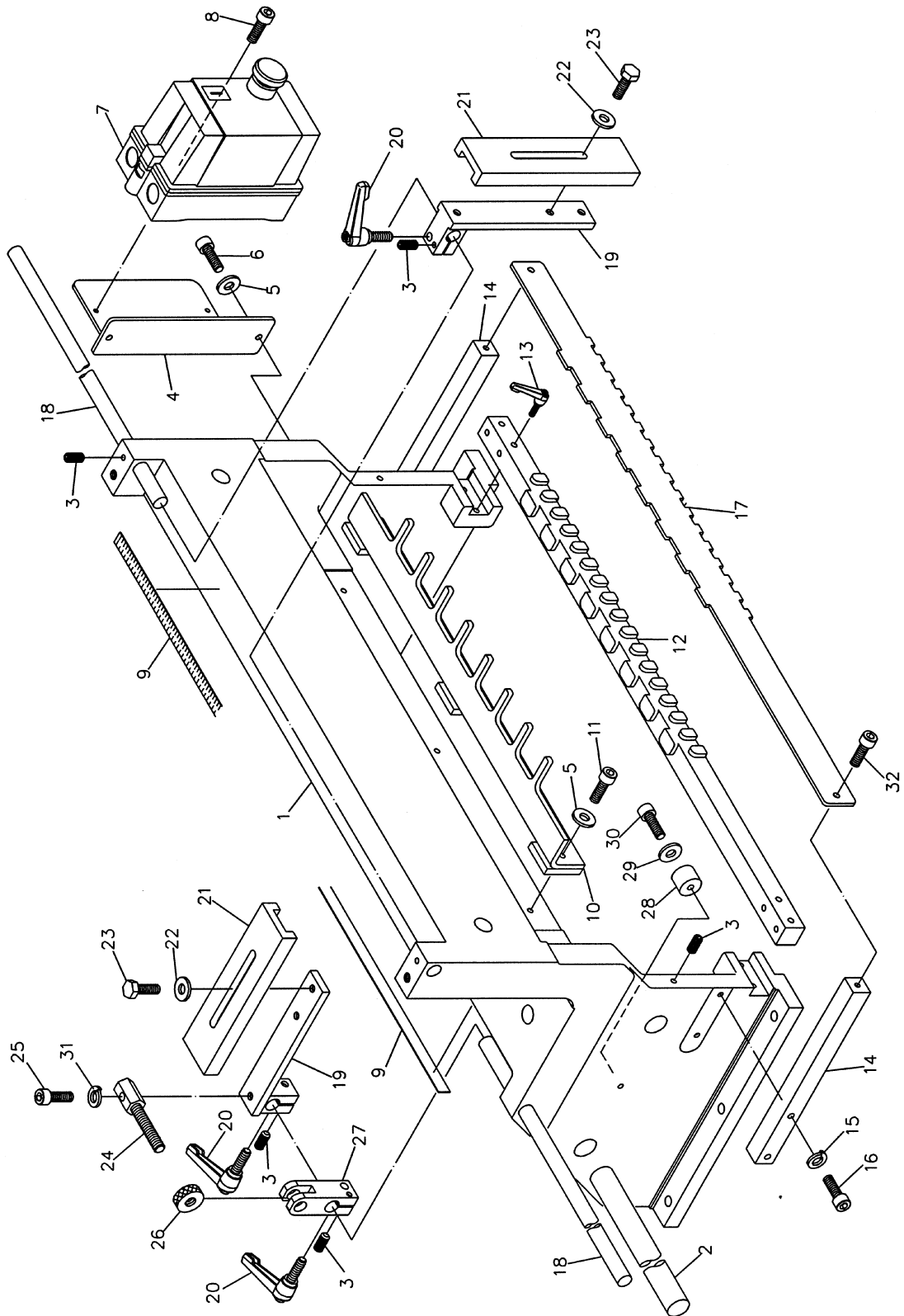
Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 1-800-274-6848 between 7:00 a.m. and 6:00 p.m. (CST), Monday through Friday. Having the Model Number and Serial Number of your machine available when you call will allow us to serve you quickly and accurately.

Parts List: Base Assembly

| Index No. | Part No. | Description | Size | Qty |
|-----------|------------|-----------------------|-------|-----|
| 1 | DT65-101 | Worktable | | 1 |
| 2 | DT65-102 | Base Guide Rod | | 1 |
| 3 | TS-1523041 | Socket Set Screw | M6x12 | 13 |
| 4 | DT65-104 | Switch Bracket | | 1 |
| 5 | TS-1550041 | Flat Washer | M6 | 5 |
| 6 | TS-1503041 | Socket Head Cap Screw | M6x16 | 2 |
| 7 | DT65-107 | Magnetic Switch | | 1 |
| 8 | TS-1501041 | Socket Head Cap Screw | M4x12 | 2 |
| 9 | DT65-109 | Scale | | 2 |
| 10 | DT65-110 | Fixed Chaser | | 1 |
| 11 | TS-1503061 | Socket Head Cap Screw | M6x25 | 3 |
| 12 | DT65-112 | Template | | 1 |
| 13 | DT45-105 | Locking Handle | M6x35 | 2 |
| 14 | DT65-114 | Fixing Bar | | 2 |
| 15 | TS-2361061 | Lock Washer | M6 | 4 |
| 16 | TS-1503081 | Socket Head Cap Screw | M6x35 | 4 |
| 17 | DT65-117 | Indication Template | | 1 |
| 18 | DT65-118 | Sliding Rod | | 2 |
| 19 | DT65-119 | Fence | | 4 |
| 20 | DT45-120 | Locking Handle | M8x25 | 5 |
| 21 | DT65-121 | Buffer Pad | | 4 |
| 22 | TS-1550061 | Flat Washer | M8 | 8 |
| 23 | TS-1490031 | Hex Cap Screw | M8x20 | 8 |
| 24 | DT45-126 | Adjustment Screw | | 1 |
| 25 | TS-1504061 | Socket Head Cap Screw | M8x30 | 1 |
| 26 | DT45-128 | Knurled Knob | | 1 |
| 27 | DT45-129 | Adjustment Seat | | 1 |
| 28 | DT45-142 | Buffer Pad | | 2 |
| 29 | TS-1550041 | Flat Washer | M6 | 2 |
| 30 | TS-1503051 | Socket Head Cap Screw | M6x20 | 2 |
| 31 | TS-2361081 | Lock Washer | M8 | 1 |
| 32 | TS-1503031 | Socket Head Cap Screw | M6x12 | 2 |

Base Assembly

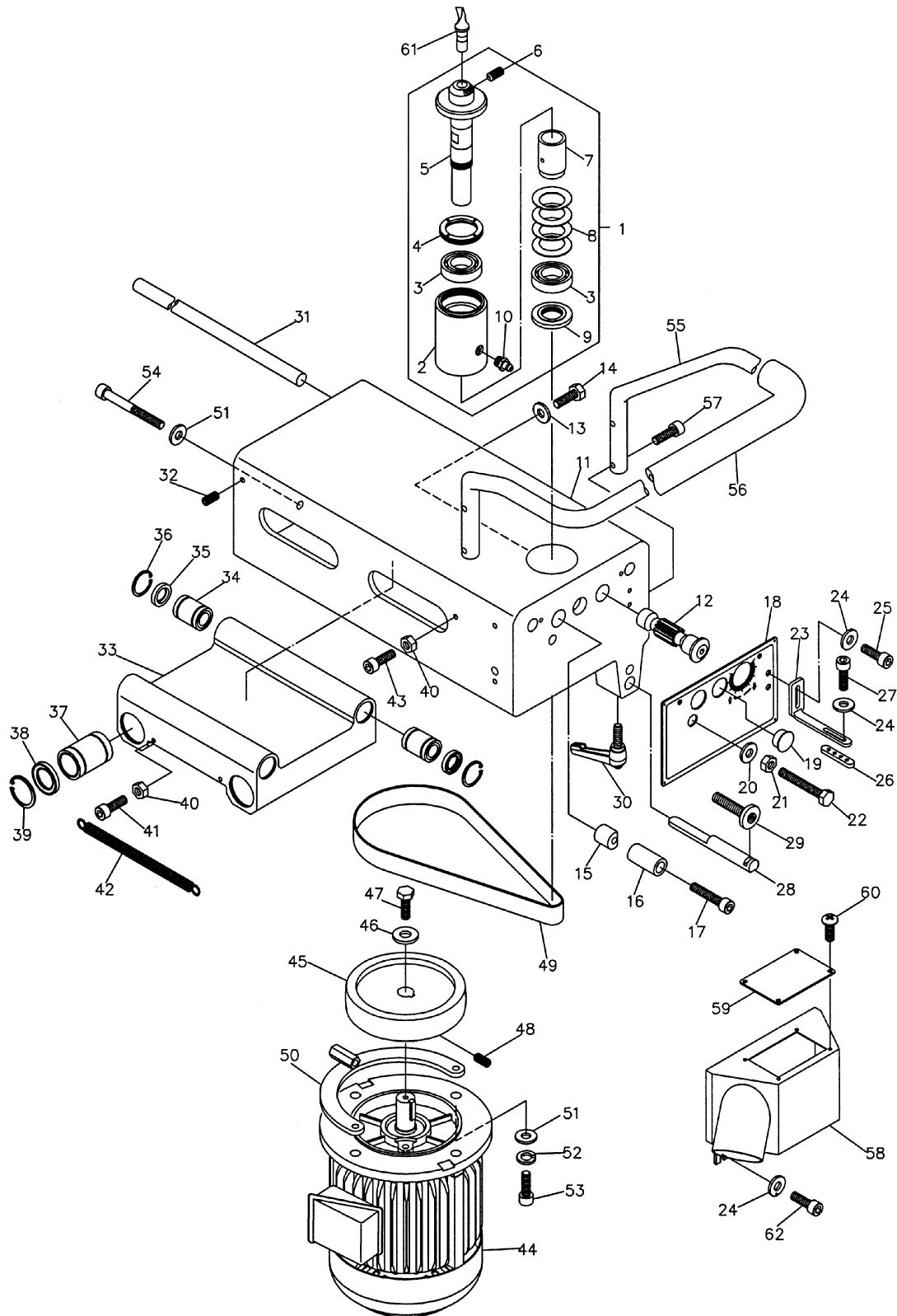


Parts List: Headstock Assembly

| Index No. | Part No. | Description | Size | Qty |
|-----------|------------|--------------------------------------|-------------|-----|
| 1 | DT45-201 | Spindle Assembly (Index #2 thru #10) | | 1 |
| 2 | DT45-202 | Spindle Bearing Housing | | 1 |
| 3 | DT45-203 | Ball Bearing (special) | 6005 TB.P63 | 2 |
| 4 | DT45-204 | Fixing Nut | | 1 |
| 5 | DT45-205 | Eccentric Spindle | | 1 |
| 6 | TS-1524021 | Socket Set Screw | M8x10 | 2 |
| 7 | DT45-207 | Spacer | | 1 |
| 8 | DT45-208 | Disc Spring | | 4 |
| 9 | DT45-209 | Fixing Nut | | 1 |
| 10 | DT45-210 | Grease Nipple | | 1 |
| 11 | DT65-211 | Spindle Slide Seat | | 1 |
| 12 | DT45-212 | Gear Shaft | | 1 |
| 13 | TS-1550061 | Flat Washer | M8 | 1 |
| 14 | TS-1490031 | Hex Cap Screw | M8x20 | 1 |
| 15 | DT45-215 | Clamping Piece | | 1 |
| 16 | DT45-216 | Bushing | | 1 |
| 17 | TS-1504121 | Socket Head Cap Screw | M8x60 | 1 |
| 18 | DT65-218 | Panel | | 1 |
| 19 | DT45-219 | Plug | | 1 |
| 20 | TS-1550071 | Flat Washer | M10 | 1 |
| 21 | TS-1540071 | Hex Nut | M10 | 1 |
| 22 | DT65-222 | Hex Head Bolt | M10x150 | 1 |
| 23 | DT65-223 | Indication Bracket | | 1 |
| 24 | TS-1550031 | Flat Washer | M5 | 6 |
| 25 | TS-1502041 | Socket Head Cap Screw | M5x16 | 2 |
| 26 | DT65-226 | Adjustment Piece | | 1 |
| 27 | TS-1501031 | Socket Head Cap Screw | M4x10 | 2 |
| 28 | DT45-247 | Tracer Pin | | 1 |
| 29 | DT45-248 | Adjustment Screw | | 1 |
| 30 | DT45-246 | Locking Handle | M6x20 | 1 |
| 31 | DT45-223 | Guide Rod | | 2 |
| 32 | TS-1523041 | Socket Set Screw | M6x12 | 4 |
| 33 | DT45-225 | Carriage | | 1 |
| 34 | DT45-226 | Linear Bushing | LM16UU | 4 |
| 35 | DT45-227 | Seal | 16x28x7 | 4 |
| 36 | DT45-228 | Retaining Ring | R28 | 4 |
| 37 | DT45-229 | Linear Bushing | LM25UU | 4 |
| 38 | DT45-230 | Seal | 25x40x7 | 4 |
| 39 | DT45-231 | Retaining Ring | R40 | 4 |
| 40 | TS-1540031 | Hex Nut | M5 | 2 |
| 41 | TS-1502081 | Socket Head Cap Screw | M5x35 | 1 |
| 42 | DT45-234 | Spring | | 1 |
| 43 | TS-1502051 | Socket Head Cap Screw | M5x20 | 1 |
| 44 | DT65-244 | Motor | | 1 |
| 45 | DT45-236 | Motor Pulley | | 1 |
| 46 | DT45-237 | Fixing Washer | | 1 |
| 47 | TS-1482041 | Hex Cap Screw | M6x20 | 1 |
| 48 | TS-1522031 | Socket Set Screw | M5x10 | 1 |
| 49 | DT45-240 | Flat Belt | 670-25 | 1 |
| 50 | DT45-241 | Belt Tension Adjustment Holder | | 1 |
| 51 | TS-1550061 | Flat Washer | M8 | 3 |
| 52 | TS-2361081 | Lock Washer | M8 | 2 |
| 53 | TS-1504071 | Socket Head Cap Screw | M8x35 | 2 |
| 54 | TS-2238911 | Socket Head Cap Screw | M8x100 | 1 |
| 55 | DT45-249 | Handle | | 1 |

| | | | |
|----------|------------------|-----------------------------|---------------|
| 56 | DT45-250 | Sponge Coating | 1 |
| 57 | TS-1503071 | Socket Head Cap Screw | M6x30 4 |
| 58 | DT65-258 | Dust Hood | 1 |
| 59 | DT45-255 | Window | 1 |
| 60 | TS-2171012 | Machine Screw | M4x6 4 |
| 61 | DT45-257 | Cutter | 1 |
| 62 | TS-1502031 | Socket Head Cap Screw | M5x12 2 |

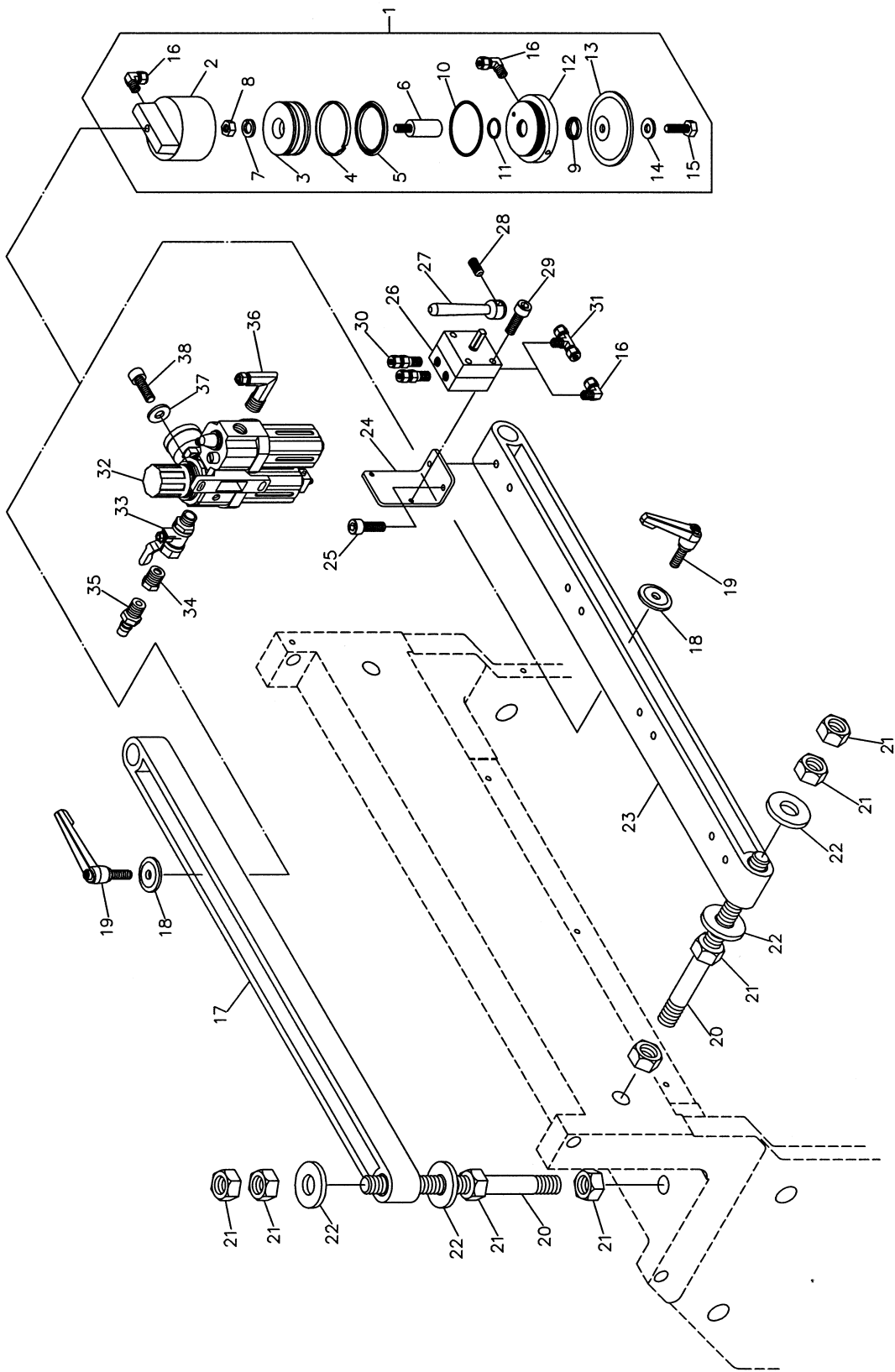
Headstock Assembly



Parts List: Hold-Down Assembly

| Index No. | Part No. | Description | Size | Qty |
|-----------|------------|---------------------------------------|------------|-----|
| 1 | DT65-301 | Cylinder Assembly (Index #2 thru #16) | | 4 |
| 2 | DT65-302 | Cylinder Body | | 4 |
| 3 | DT65-303 | Piston | | 4 |
| 4 | DT65-304 | Wearing | | 4 |
| 5 | DT65-305 | Piston Backing | | 4 |
| 6 | DT65-306 | Piston Rod | | 4 |
| 7 | TS-2361121 | Lock Washer | M12 | 4 |
| 8 | TS-1540081 | Hex Nut | M12 | 4 |
| 9 | DT65-309 | Locking Piece | | 4 |
| 10 | DT65-310 | O-Ring | | 4 |
| 11 | DT65-311 | O-Ring | | 4 |
| 12 | DT65-312 | End Cover | | 4 |
| 13 | DT65-313 | Clamping Disc | | 4 |
| 14 | TS-1550061 | Flat Washer | M8 | 4 |
| 15 | TS-1490021 | Hex Cap Screw | M8x16 | 4 |
| 16 | DT65-316 | Male Elbow Connector | | 9 |
| 17 | DT65-317 | Holder Bracket | | 1 |
| 18 | DT65-318 | Special Washer | | 4 |
| 19 | DT65-319 | Locking Handle | M10x35 | 4 |
| 20 | DT65-320 | Stud | | 4 |
| 21 | TS-2310201 | Hex Nut | M20 | 16 |
| 22 | TS-1550111 | Flat Washer | M20 | 8 |
| 23 | DT65-323 | Holder Bracket | | 1 |
| 24 | DT65-324 | Fixing Bracket | | 4 |
| 25 | TS-1502031 | Socket Head Cap Screw | M5x12 | 8 |
| 26 | DT65-326 | Control Valve | | 4 |
| 27 | DT65-327 | Handle | | 4 |
| 28 | TS-1522011 | Socket Set Screw | M5x6 | 4 |
| 29 | TS-1502101 | Socket Head Cap Screw | M5x45 | 8 |
| 30 | DT65-330 | Male Connector | PT-1/8"-Ø6 | 8 |
| 31 | DT65-331 | T- Connector | PT-1/8"-Ø6 | 3 |
| 32 | DT65-332 | Air Supply Unit | | 1 |
| 33 | DT65-333 | Air Control Valve | PT-1/8" | 1 |
| 34 | DT65-334 | Adapter | 3/8"X1/4" | 1 |
| 35 | DT65-335 | Male Coupling | PT-1/4" | 1 |
| 36 | DT65-336 | Male Elbow Connector | PT-3/8"-Ø6 | 1 |
| 37 | TS-1550041 | Flat Washer | M6 | 2 |
| 38 | TS-1503041 | Socket Head Cap Screw | M6x16 | 2 |

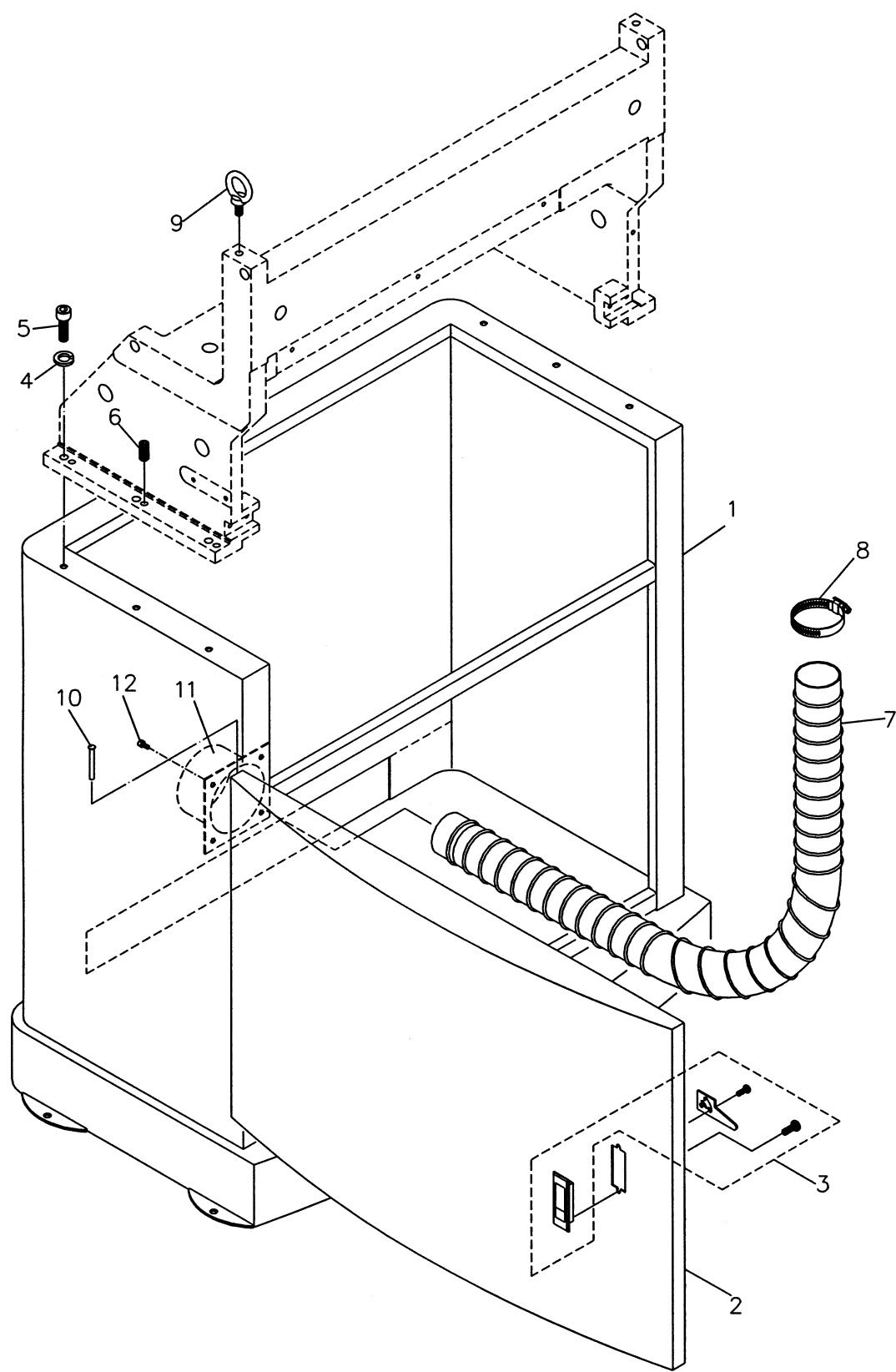
Hold-Down Assembly



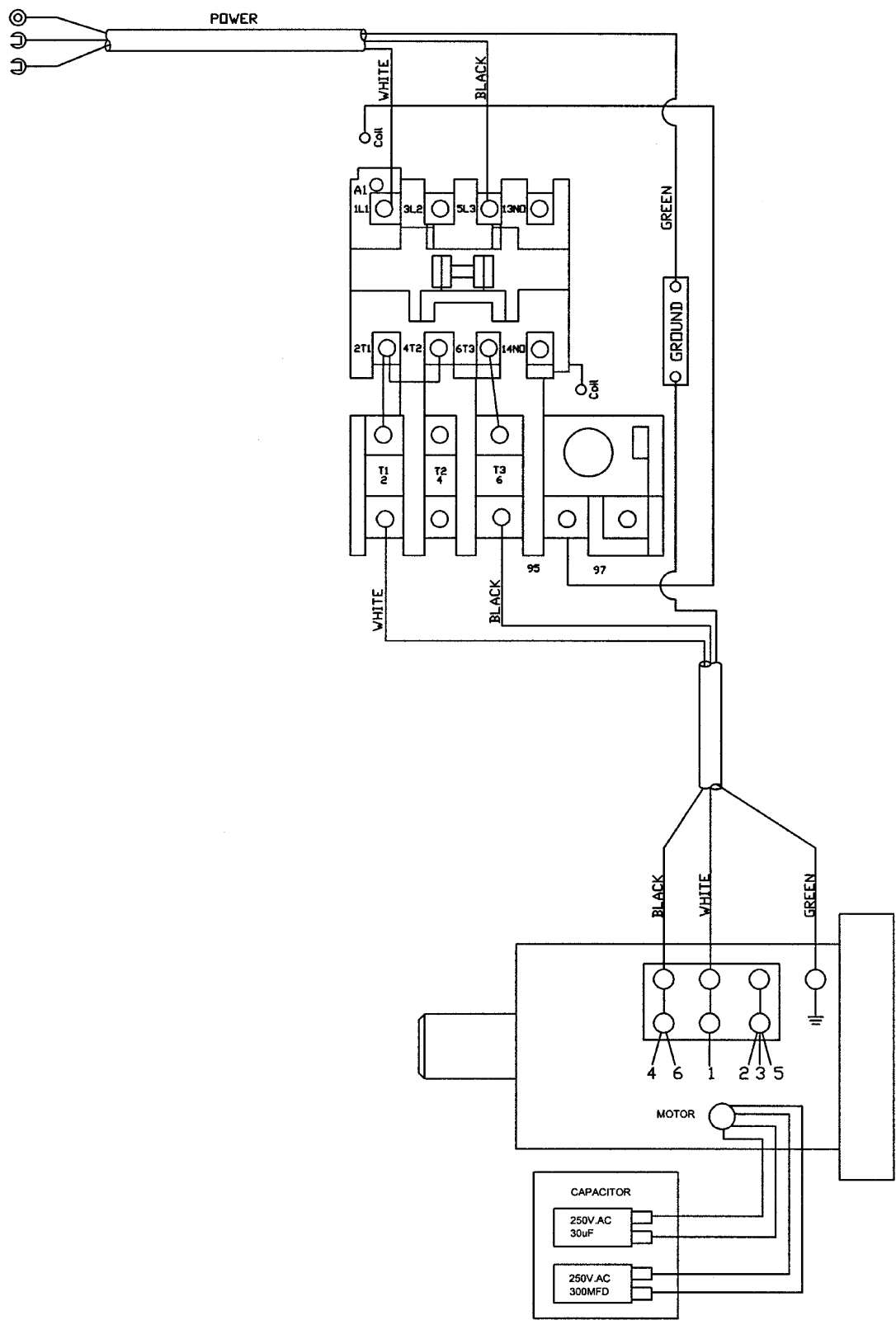
Parts List: Cabinet Assembly

| Index No. | Part No. | Description | Size | Qty |
|-----------|------------|-----------------------|--------|-----|
| 1 | DT65-401 | Cabinet | | 1 |
| 2 | DT65-402 | Door | | 1 |
| 3 | DT45-303 | Door Latch | | 1 |
| 4 | TS-2361081 | Lock Washer | M8 | 6 |
| 5 | TS-1504061 | Socket Head Cap Screw | M8x30 | 6 |
| 6 | TS-1524021 | Socket Set Screw | M8x10 | 6 |
| 7 | DT65-407 | Flexible Hose | 2-1/2" | 1 |
| 8 | DT45-308 | Hose Clamp | 2-1/2" | 2 |
| 9 | DT45-309 | Eye Bolt | M10 | 2 |
| 10 | DT45-310 | Pin | | 2 |
| 11 | DT45-311 | Dust Chute | | 1 |
| 12 | TS-1502031 | Socket Head Cap Screw | M5x12 | 4 |

Cabinet Assembly



Electrical Connections



NOTES

NOTES

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