

Operating Instructions $\frac{3}{4}$ Parts Manual

27-Inch and 40-Inch Vertical Band Saws

Models 8027, 8127, 8040 and 8140

Part Number 5510985

Revision A

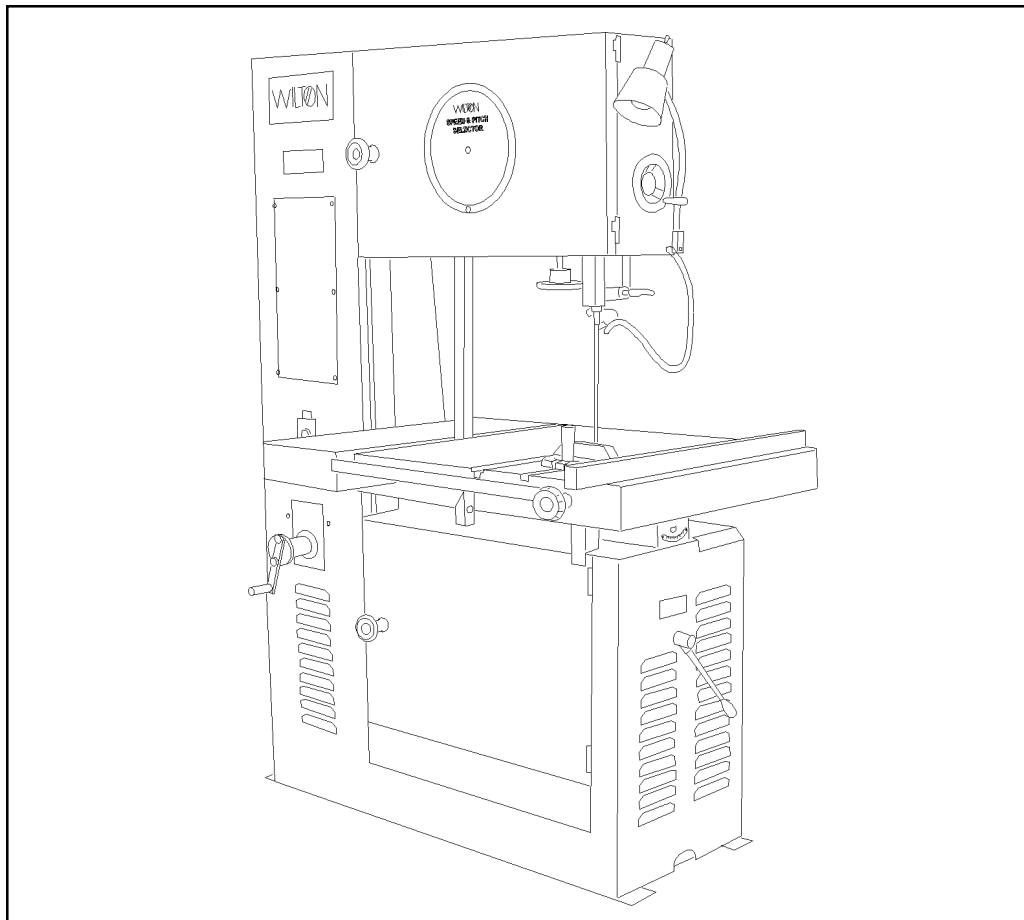


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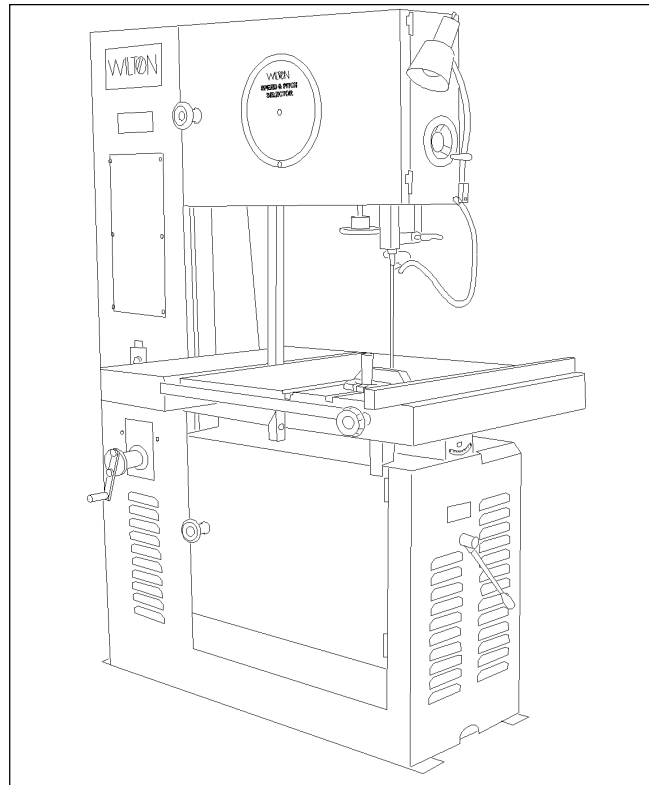
General Specifications

The Wilton Model 8027, 8127, 8040 and 8140 Vertical Band Saws are multi-purpose, metal cutting band saws that will suit almost any metal working application. Typical applications include contour sawing, beveling, slicing, ripping, and stack cutting. The saws have a tilting table and a useful speed and pitch selector.

Standard Models 8027 and 8040 are equipped with a two-speed gearbox. Higher speed Models 8127 and 8140 are equipped with a three-speed gearbox.

An optional blade welder, mounted on the saw, provides a means to quickly weld and anneal new or broken saw blades. The welder includes a blade shear and weld grinder. (The welder is available in 220VAC or 440VAC power.)

Standard Models 8027 and 8040 are connected for 220VAC power unless otherwise specified. All models are equipped with 3-phase, 220/440V, 115 V at switch and magnetic starter.



Specifications

Vertical Band Saw	8027	8127	8040	8141
Cutting Capacity	13-3/8 inches (1-340 mm)	13-3/8 inches (1-340 mm)	13-3/8 inches (1-340 mm)	13-3/8 inches (1-340 mm)
Throat Depth	27-1/2 inches (700 mm)	27-1/2 inches (700 mm)	39-3/8 inches (1000 mm)	39-3/8 inches (1000 mm)
Table Size				
Tilting Table	29-1/2 by 29-1/2 inches	29-1/2 by 29-1/2 inches	29-1/2 by 29-1/2 inches	29-1/2 by 29-1/2 inches
Fixed Table	10-1/8 by 29-1/2 inches	10-1/8 by 29-1/2 inches	17-3/4 by 29-1/2 inches	17-3/4 by 29-1/2 inches
Blade Width	1/8 to 3/4-inch (2-19 mm)	1/8 to 3/4-inch (2-19 mm)	1/8 to 3/4-inch (2-19 mm)	1/8 to 3/4-inch (2-19 mm)
Saw Blade Length	157 to 160-1/2 inches	157 to 160-1/2 inches	183-1/2 to 185 inches	183-1/2 to 185 inches
Belt Stepless	82 to 1312 feet/minute	79 to 5088 feet/minute	82 to 1312 feet/minute	79 to 5088 feet/minute
Variable Speed	(25-400 m/min)	(25-1550 m/min)	(25-400 m/min)	(25-1550 m/min)
Main Motor	2 hp	3 hp	2 hp	3 hp
Table Tilt				
Right	45 degrees	45 degrees	45 degrees	45 degrees
Left	15 degrees	15 degrees	15 degrees	15 degrees
Front/Back	10 degrees	10 degrees	10 degrees	10 degrees
Height of Table	40 inches (1015 mm)	40 inches (1015 mm)	40 inches (1015 mm)	40 inches (1015 mm)
Dimensions				
Height	77-1/8 inches (1960 mm)	77-1/8 inches (1960 mm)	77-1/8 inches (1960 mm)	77-1/8 inches (1960 mm)
Depth	55-7/8 inches (1420 mm)	47-1/4 inches (1200 mm)	67-3/4 inches (1420 mm)	67-3/4 inches (1200 mm)
Width	27-3/8 inches (695 mm)	27-3/8 inches (695 mm)	29-5/16 inches (745 mm)	29-5/16 inches (745 mm)
Net Weight	1213 pounds	1213 pounds	1323 pounds	1323 pounds
Optional Welder				
Model	8002	8002	8002	8002
Electrical Rating	5 kva	5 kva	5 kva	5 kva
Grinding Motor	1/8 hp	1/8 hp	1/8 hp	1/8 hp



WARNING

- Misuse of this machine can cause serious injury.
- For safety, machine must be set up, used and serviced properly.
- Read, understand and follow instructions in the Operating Instructions and Parts Manual which was shipped with your machine.

When Setting up Machine:

- Always avoid using machine in damp or poorly lighted work areas.
- Always be sure the machine support is securely anchored to the floor or the work bench.

When Using Machine:

- Always wear safety glasses with side shields (See ANSI Z87.1)
- Never wear loose clothing or jewelry.
- Never overreach - you may slip and fall.

When Servicing Machine:

- Always disconnect the machine from its electrical supply while servicing.
- Always follow instructions in Operating Instructions and Parts Manual when changing accessory tools or parts.
- Never modify the machine without consulting Wilton Corporation.

You - the Stationary Power Tool User - Hold the Key to Safety.

Read and follow these simple rules for best results and full benefits from your machine. Used properly, Wilton's machinery is among the best in design and safety. However, any machine used improperly can be rendered inefficient and unsafe. It is absolutely mandatory that those who use our products be properly trained in how to use them correctly. They should read and understand the Operating Instructions and Parts Manual as well as all labels affixed to the machine. Failure in following all of these warnings can cause serious injuries.

Machinery General Safety Warnings

1. Always wear protective eye wear when operating machinery. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1 specifications. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from breakage of eye protection.
2. Wear proper apparel. No loose clothing or jewelry which can get caught in moving parts. Rubber soled footwear is recommended for best footing.
3. Do not overreach. Failure to maintain proper working position can cause you to fall into the machine or cause your clothing to get caught pulling you into the machine.
4. Keep guards in place and in proper working order. Do not operate the machine with guards removed.
5. Avoid dangerous working environments. Do not use stationary machine tools in wet or damp locations. Keep work areas clean and well lit.
6. Avoid accidental starts by being sure the start switch is OFF before plugging in the machine.
7. Never leave the machine running while unattended. Machine shall be shut off whenever it is not in operation.
8. Disconnect electrical power before servicing. Whenever changing accessories or general maintenance is done on the machine, electrical power to the machine must be disconnected before work is done.
9. Maintain all machine tools with care. Follow all maintenance instructions for lubricating and the changing of accessories. No attempt shall be made to modify or have makeshift repairs done to the machine. This not only voids the warranty but also renders the machine unsafe.
10. Machinery must be anchored to the floor.
11. Secure work. Use clamps or a vise to hold work, when practical. It is safer than using your hands and it frees both hands to operate the machine.
12. Never brush away chips while the machine is in operation.
13. Keep work area clean. Cluttered areas invite accidents.
14. Remove adjusting keys and wrenches before turning machine on.
15. Use the right tool. Don't force a tool or attachment to do a job it was not designed for.
16. Use only recommended accessories and follow manufacturers instructions pertaining to them.
17. Keep hands in sight and clear of all moving parts

and cutting surfaces.

- All visitors should be kept at a safe distance from the work area. Make workshop completely safe

General Electrical Cautions

This saw should be grounded in accordance with the National Electrical Code and local codes and ordinances. This work should be done by a qualified electrician. The saw should be grounded to protect the user from electrical shock.

- by using padlocks, master switches, or by removing starter keys.
- Know the tool you are using, its application, limitations, and potential hazards.

Wire Sizes

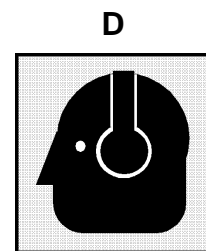
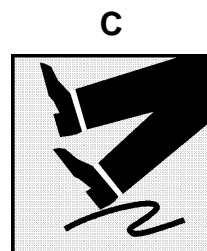
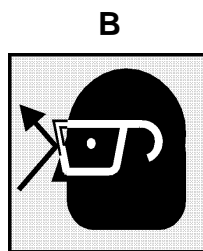
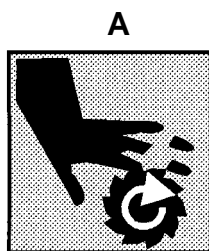
Caution: For circuits which are far away from the electrical service box, the wire size must be increased in order to deliver ample voltage to the motor. To minimize power losses and to prevent motor overheating and burnout, the use of wire sizes for branch circuits or electrical extension cords according to the following table is recommended.

Conductor Length	AWG (American wire gauge) Number	
	240 Volt Lines	120 Volt Lines
0 - 50 Feet	No. 14	No. 14
50 - 100 Feet	No. 14	No. 12
Over 100 Feet	No. 14	No. 8

Safety Instructions On Sawing Systems

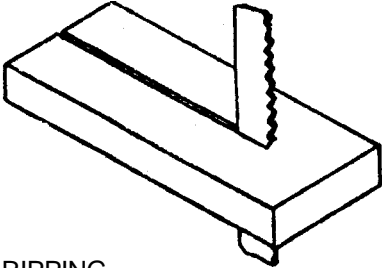
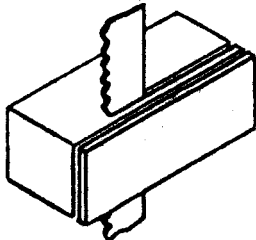
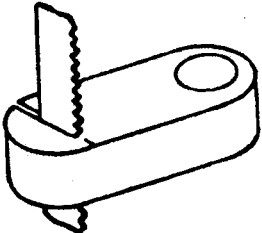
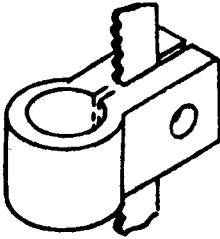
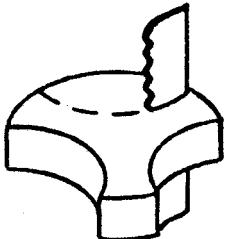
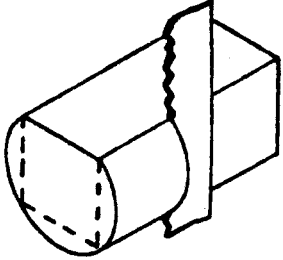
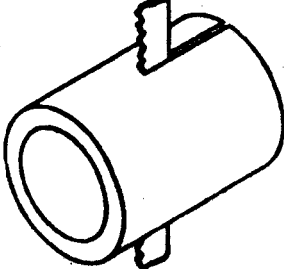
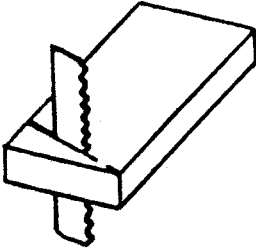
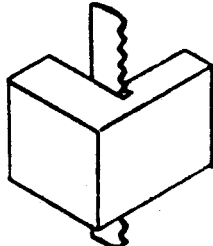
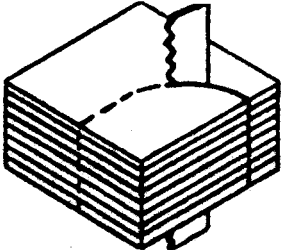
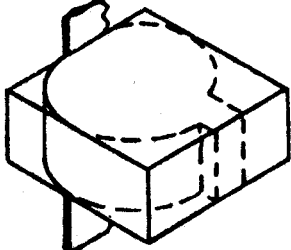
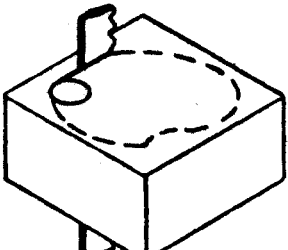
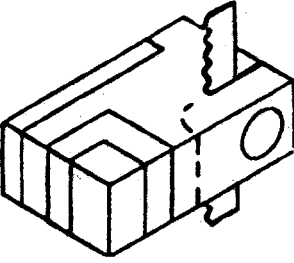
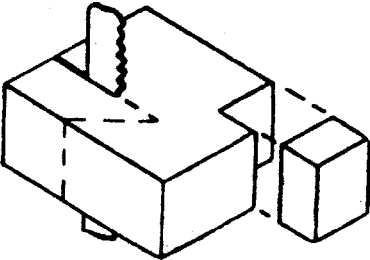
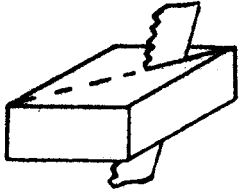
- Always wear leather gloves when handling saw blade. The operator shall not wear gloves when operating the machine.
- All doors shall be closed, all panels replaced, and other safety guards in place prior to the machine being started or operated.
- Be sure that the blade is not in contact with the workpiece when the motor is started. The motor shall be started and you should allow the saw to come up to full speed before bringing the saw blade into contact with the workpiece.
- Keep hands away from the blade area. **See Figure A.**
- Remove any cut off piece carefully while keeping your hands free of the blade area.
- Saw must be stopped and electrical supply must be shut off before any blade replacement or adjustment of blade support mechanism is done, or before any attempt is made to change the drive belts or before any periodic serve or maintenance is performed on the saw.
- Remove all loose items and any unnecessary workpieces from the area before starting machine.
- Bring adjustable saw guides and guards as close as possible to the workpiece.
- Always wear protective eye wear when operating, servicing, or adjusting machinery. Eyewear shall be impact resistant, protective safety glasses with side shields complying with ANSI Z87.1 specifications. Use of eye wear which does not comply with ANSI Z87.1 specifications could result in severe injury from breakage of eye protection. **See Figure B.**
- Nonslip footwear and safety shoes are recommended. **See Figure C.**
- Wear ear protectors (plugs or muffs) during extended periods of operation. **See Figure D.**
- The workpiece, or part being sawed, must be securely clamped before the saw blade enters the workpiece.
- Remove cut off pieces carefully, keeping hands away from saw blade.
- Saw must be stopped and electrical supply shut off or machine unplugged before reaching into cutting area.
- Avoid contact with coolant, especially guarding your eyes.

6



Introduction

This manual includes the operating and maintenance instructions for the Wilton 27-inch and 40-inch Vertical Band Saws, Models 8027, 8127, 8040 and 8140. This manual also includes parts listings and illustrations of replaceable parts. Typical operations performed using the band saw are shown below.

 <p>RIPPING</p>	 <p>SLICING</p>	 <p>BEVELING</p>
 <p>SLOTTING</p>	 <p>SEGMENTING</p>	 <p>SHAPING CUT</p>
 <p>SPLITTING</p>	 <p>ANGULAR CUT</p>	 <p>GRINDING RELIEF</p>
 <p>STACK CUTTING</p>	 <p>EXTERNAL CONTOUR</p>	 <p>INTERNAL CONTOUR</p>
 <p>THREE-DIM. CUTTING</p>	 <p>SHAPING</p>	 <p>COMPOUND ANGLE CUT</p>

Saw Features

Refer to Figure 1 for key features of the 14-Inch Vari-Speed Vertical Band Saw.

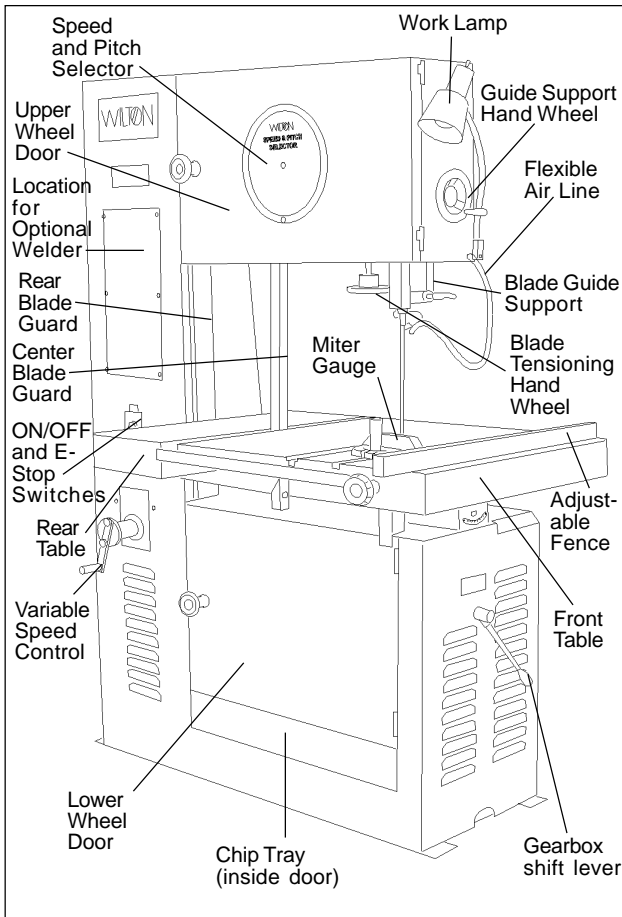


Figure 1: Saw Features (Left Side View)

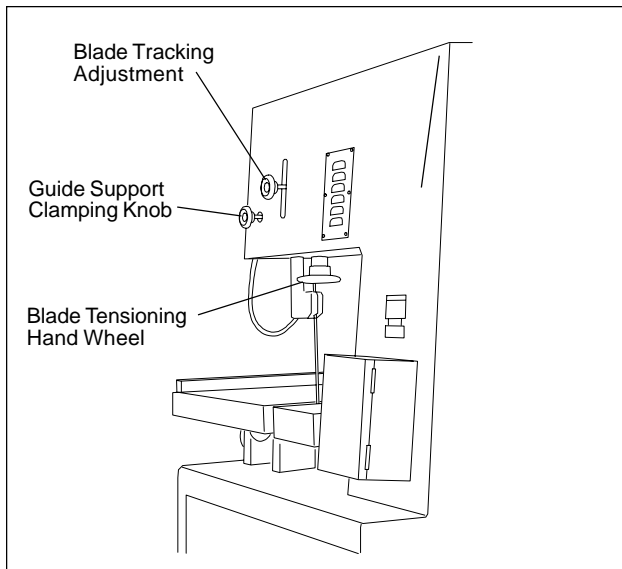


Figure 2: Saw Features (Right Side View)

Setup

Installation

The frame of the vertical band saw has four mounting holes in the base of the saw frame. The band saw may be secured to the floor using the four mounting holes.

Electrical Connection

Refer to the Wiring Diagram section for wiring information. Connection to facility electrical power should be made by a qualified electrician.

Operating Instructions

Operating Controls

The operating controls (refer to Figure 3) for the saw are located on the left side of the machine. The controls include the following:

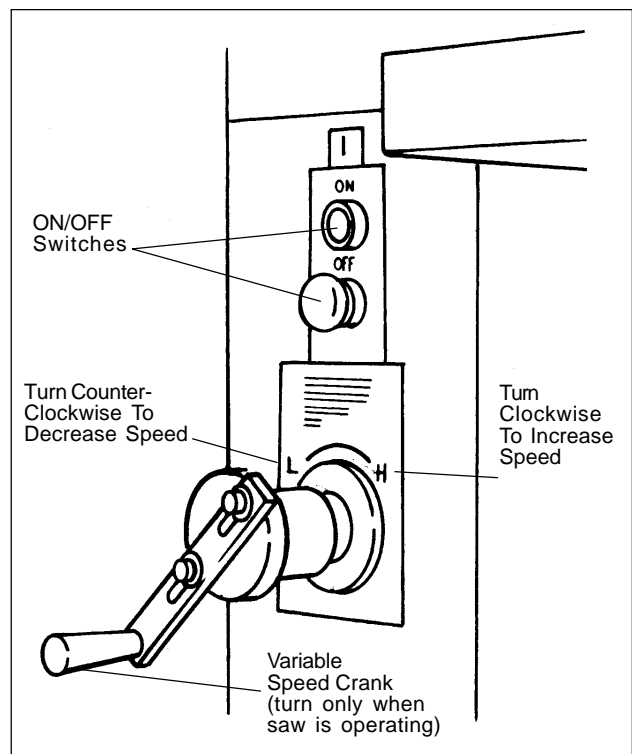


Figure 3: Operating Controls

1. A set of start/stop push buttons, located below the optional welder, provide a means to start and stop the saw drive motor.
2. A variable speed control (crank), which can only be adjusted while the saw is running, is located below the start/stop buttons.
3. A blade tensioning hand wheel is mounted on the top of the saw enclosure.

4. Refer to Optional Welder for a description of the welder controls.

The Model 8027 and 8040 band saws are equipped with a two-speed gearbox. The shift lever is located on the front of the band saw. The shift positions are L (low) and H (high).

The Model 8127 and 8140 band saws are equipped with a three-speed gearbox. The shift lever is located on the front of the band saw. The shift positions are L (low), M (medium), and H (high).

Optional Blade Welder

An optional blade welder is available on the vertical band saw. The welder has all the features required to cut, weld, and anneal the saw blade.

Welder Features

(refer to Figure 4)

The welder is installed on the left side of the saw enclosure. A blade cutter, provided with the welder, is mounted on the saw enclosure near the welder panel.

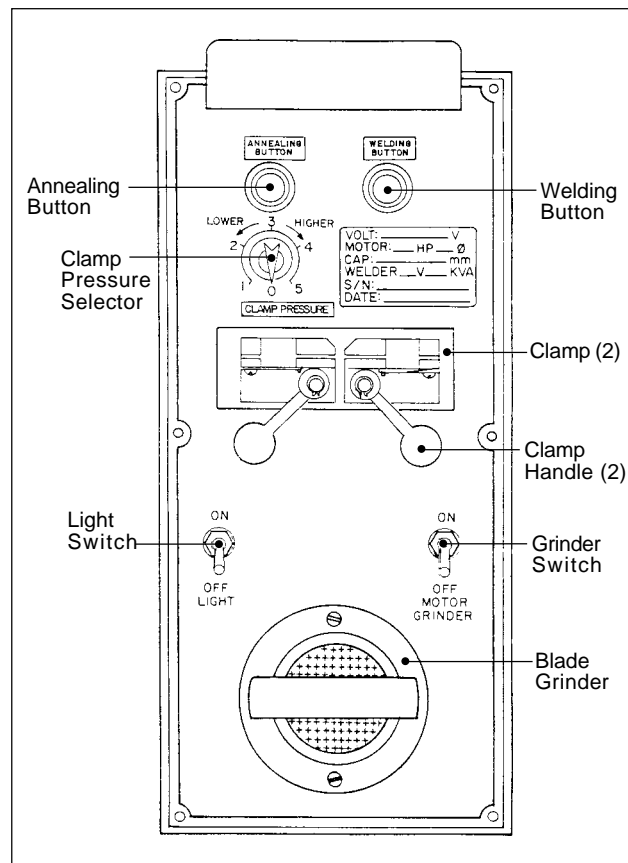


Figure 4: Welder Features

The welder has two clamps that hold the ends of the saw blade during welding. The welder controls include a clamp pressure selector, welding, and annealing pushbutton switches, and switches for the blade grinder and welder light.

Operating the Welder

(refer to Figure 5)

WARNING: BE SURE TO WEAR EYE PROTECTION WHILE OPERATING THE WELDER TO AVOID EYE INJURIES. USE CARE WHEN HANDLING THE BLADE AFTER WELDING TO AVOID BURNS.

1. Using the blade cutter, cut the blade to the required length (View A).
2. Using the blade grinder, square-off the blade ends (View B). The blade ends need to be perpendicular to the side of the blade. The blade ends must be square so there is minimal gap between the ends when clamped for welding.
3. Insert one end of the blade in the left clamp (View C). Position the back edge of the blade against the back of the left clamp. Then position the end of the blade midway between the left and right clamps. Tighten the left clamp.
4. Insert the other end of the blade in the right clamp. Position the back edge of the blade against the back of the right clamp. Then butt the end of the blade against the other end of blade (the blade ends need to be in contact with each other). Tighten the right clamp.
5. Set the clamp pressure selector switch (clockwise rotation) to the setting required for the width of the blade being welded (see the table below).

NOTE: There will be some resistance when turning the switch.

Blade Width (Inch)	Clamp Pressure Selector Setting
1/8" to 1/4"	1
5/16" to 3/8"	2
1/2"	3
5/8"	4
3/4"	5

6. Press and hold the weld pushbutton. When the pushbutton is pushed, the right clamp moves to the left to apply pressure to the blade ends. At the same time, sparks will come from the blade ends as they are being welded.

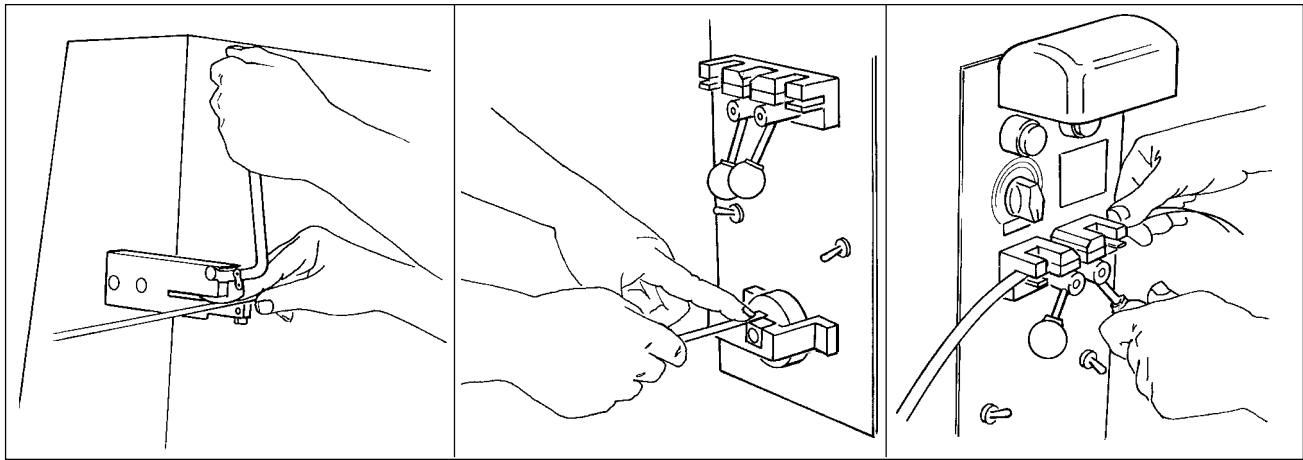


Figure 5: Operating the Welder

7. Release the weld push button and unclamp the left and right clamps.
8. Rotate the clamp pressure switch (clockwise) to the zero position.
9. Center the weld between the two clamps. Tighten the clamps.
10. The weld is hard and brittle and must be annealed before use. To anneal the weld, quickly depress and release (jog) the anneal pushbutton. Repeat the depress-and-release process until you see a red glow (slightly red) from the weld area.

CAUTION: DO NOT PRESS AND HOLD THE ANNEAL PUSHBUTTON. THE WELD WILL BE OVERHEATED AND THE WELD WILL FAIL DUE TO THE EXCESSIVE HEAT.

11. Release both blade clamps and remove the blade.
12. Check the integrity of the weld. Bend the blade to form a radius in the blade at the point of the weld. The size of the radius should be approximately the same as the radius of the saw drive wheel. The weld must hold and not break or crack after forming the radius. If the weld breaks, cut away the welded area and repeat the welding/annealing process.

CAUTION: CHECK THE BLADE TO MAKE SURE THE WELDED SECTION IS THE SAME THICKNESS AS THE REST OF THE BLADE. IF THE BLADE IS THICKER AT THE WELD, THE BLADE GUIDES MAY BE DAMAGED.

13. Check to make sure the welded section is the same thickness as the rest of the blade. If not, grind off excess weld material using the grinder on the welder.

Setting Blade Speed

WARNING: NEVER OPERATE THE SAW WITHOUT BLADE COVERS IN PLACE AND SECURED.

CAUTION: DO NOT TURN SPEED SETTING CRANK UNLESS THE SAW MOTOR IS OPERATING. THE SPEED SETTING MECHANISM CAN BE DAMAGED.

1. Refer to the Speed and Pitch selector on the left side of the saw enclosure. Select the speed setting for the material to be cut.
2. Shift the gearbox to the required speed setting (Model 8020: high or low) (Model 8120: high, medium, or low).
3. Start the saw using the start pushbutton.
4. Turn the speed setting crank to the required speed. Turning the crank to the right (clockwise) increases speed. Turning the crank to the left (counterclockwise) decreases speed.

Blade Selection

The vertical band saw is equipped with a saw blade that is adequate for a variety of common materials. The blade is a 10-tooth, 1/2-inch multi-purpose.

(Refer to the speed and pitch indicator on the left side of the vertical saw to select the blade and speed required for various materials.)

A coarse blade is generally used for a solid steel bar but a finer tooth blade used on a thin-wall tube. In general, the blade choice is determined by the thickness of the material; the thinner the material, the finer the tooth pitch.

For very high production on cutting of special materials, or to cut hard-to-cut materials such as stainless steel, tool steel, or titanium, contact your industrial distributor for more specific blade recommendations. Also, the supplier who provides the work piece material should be prepared to provide you with very specific instructions regarding the best blade for the material and shape supplied.

Setting Blade Guide Support

(refer to Figure 6)

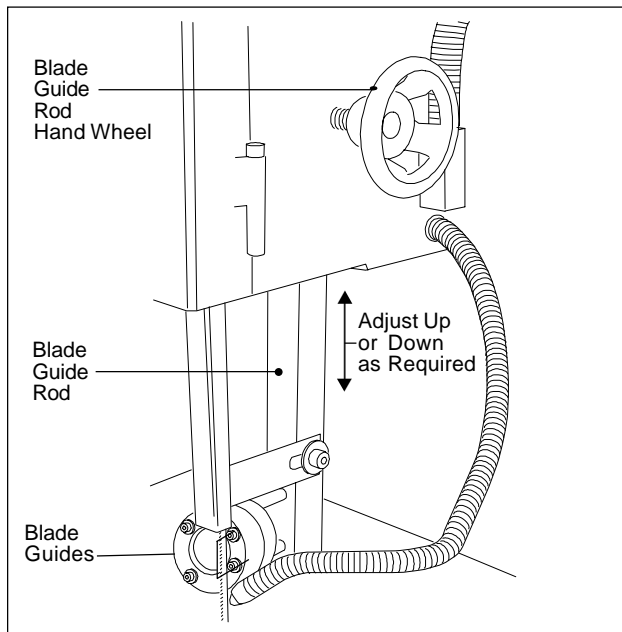


Figure 6: Setting Blade Guide Support

The blade guide support must be adjusted for the thickness of the material to be cut. Adjust the position of the support as follows:

1. Loosen the blade guide support by turning the hand wheel on the left side of the saw enclosure.
2. Place the material to be cut adjacent to the blade guide. Adjust the blade guide support up or down using the hand wheel on the front of the enclosure. Adjust until there is clearance between the material to be cut and the blade guide.
3. Tighten the hand wheel.

Maintenance

Cleaning

WARNING: DISCONNECT ELECTRICAL POWER TO AVOID POTENTIAL FOR UNINTENDED START-UP DURING MAINTENANCE.

1. Periodically empty the chip pan (inside the lower door on the left side of the machine).
2. Use a brush to loosen accumulated chips and debris. Use a vacuum cleaning to remove accumulated debris.

Lubrication

Bearings: The bearings used in vertical band saw are pre-lubricated, sealed bearings and require no additional lubrication.

Air Pump: Lubricate the air pump every six months. Add oil through the oil fitting on the front of the band saw.

Changing Saw Blades

(Refer to Figure 7)

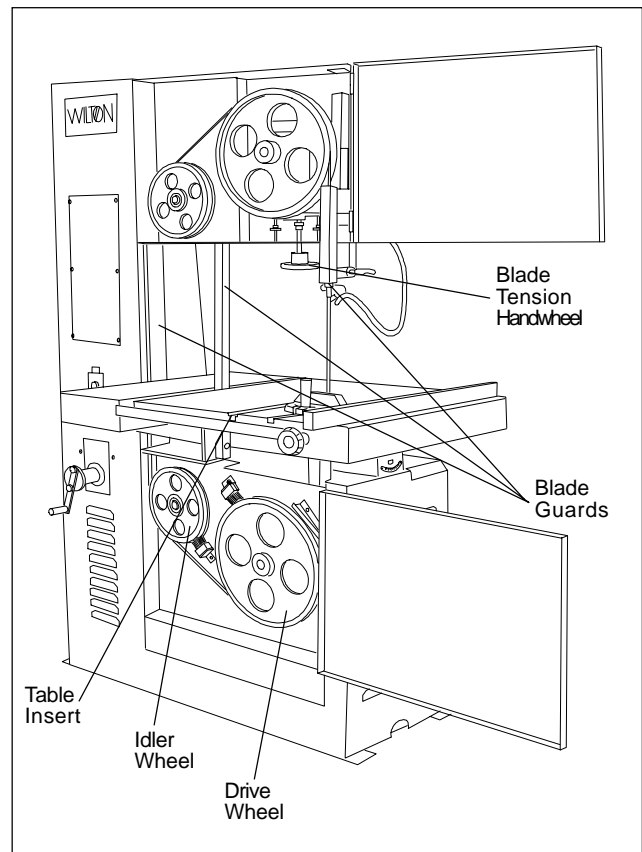


Figure 7: Changing Saw Blades

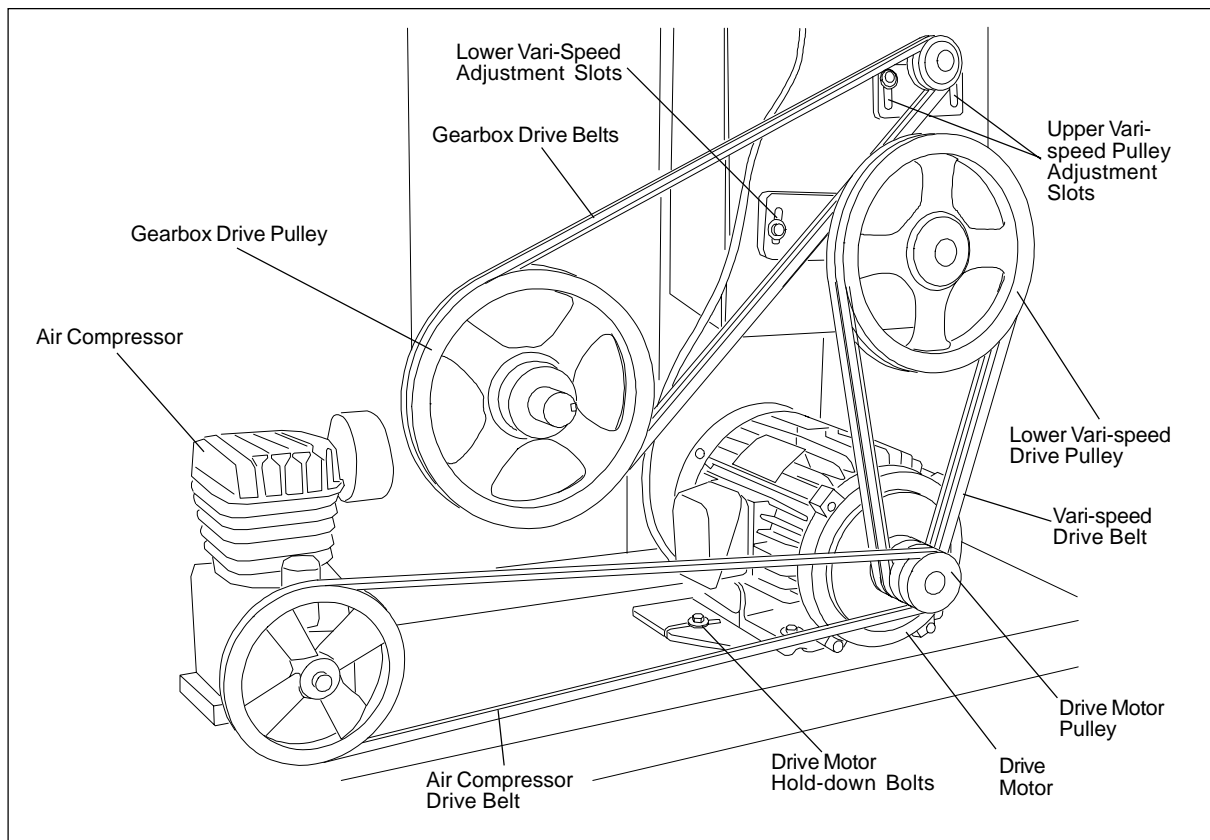


Figure 8: Changing Drive Belts

WARNING: DISCONNECT ELECTRICAL POWER TO AVOID POTENTIAL FOR UNINTENDED START-UP DURING MAINTENANCE.

Follow the procedures below to change the saw blade:

1. Open upper and lower doors on the left side of the band saw.
2. Remove the front and rear blade guards.

WARNING: ALWAYS WEAR LEATHER GLOVES WHEN HANDLING SAW BLADE TO AVOID INJURY FROM THE SAW TEETH.

2. Remove the worn blade and install the new blade. Install the blade so the teeth facing downward where the blade passes through the work table.
3. Using the hand wheel on the underside of the upper enclosure, tighten the blade.
4. Install the front and rear blade guards.
5. Close the access doors and start the saw.
6. Observe the tracking of the blade. Refer to **Adjusting Blade Tracking** if the blade does not track properly.

Changing Gearbox Drive Belts

(refer to Figure 8)

WARNING: DISCONNECT ELECTRICAL POWER TO AVOID POTENTIAL FOR UNINTENDED START-UP DURING MAINTENANCE.

Follow the procedures below to change the saw blade:

1. Remove cover on right side of the band saw.
2. Loosen bolts on the upper vari-drive support.
3. Remove worn belts and install new belts.
4. Slide upper vari-drive pulley support to apply tension on belts. Tighten bolts on upper vari-drive pulley support.
5. Install cover on right side of the band saw.
6. Check operation of the band saw.

Changing the Drive Motor/Air Compressor Belts

(refer to Figure 8)

WARNING: DISCONNECT ELECTRICAL POWER TO AVOID POTENTIAL FOR UNINTENDED START-UP DURING MAINTENANCE.

Follow the procedures below to change the drive motor and/or air compressor belts:

1. Remove cover on right side of the band saw.
2. Loosen bolts on the upper vari-drive pulley support. Slide upper vari-drive pulley support to release tension on belts. Do not remove the saw wheel drive belts.
3. Loosen bolts on the lower vari-drive pulley support. Slide upper vari-drive pulley support to release tension on belts. Do not remove the gearbox drive belts.
4. Remove worn belts. Install new belts.

NOTE: It may be necessary to loosen the drive motor attaching screws to have enough slack to remove the air compressor drive belt.

5. Slide upper vari-drive pulley support to apply tension on belts. Tighten bolts on upper vari-drive pulley support.
6. Install cover on right side of the band saw.
7. Check operation of the band saw.

Changing the Vari-Speed Drive Belts

(refer to Figure 8)

WARNING: DISCONNECT ELECTRICAL POWER TO AVOID POTENTIAL FOR UNINTENDED START-UP DURING MAINTENANCE.

Follow the procedures below to change vari-speed drive belts:

1. Remove gearbox and drive motor belts (*refer to Changing Gearbox Drive Belts and Changing the Drive Motor/Air Compressor Belts*).
2. Remove lower drive pulley (ref. #45) from lower shaft (ref. #40).
3. Remove upper drive pulley (ref. #46) from upper shaft (ref. #27) to remove and lower vari-speed mechanisms.
4. Remove worn vari-speed drive belt.
5. Install the vari-speed mechanism and upper and lower drive wheel supports (ref. #38 and #23).
6. Install upper drive pulley (ref. #46) and lower drive pulley (ref. #45).
7. Install drive motor and gearbox belts (*refer to Changing Gearbox Drive Belts and Changing the Drive Motor/Air Compressor Belts*).
8. Check operation of the band saw.

Replacement of Blade Guides

(refer to Figure 9)

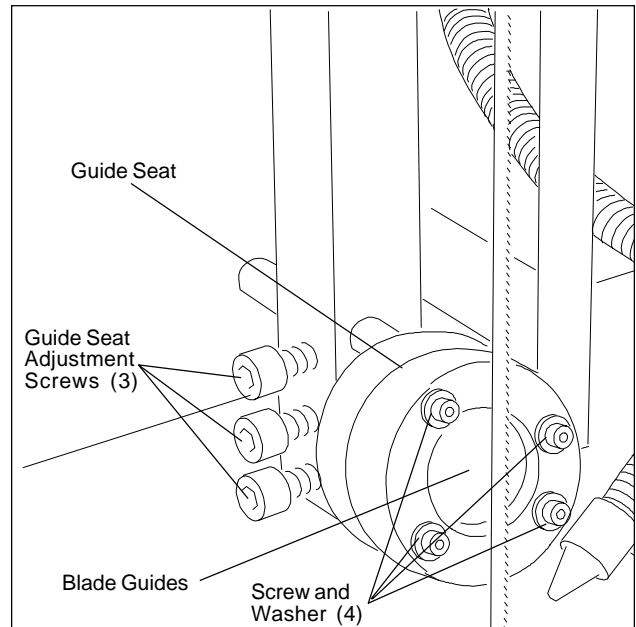


Figure 9: Replacement of Blade Guides

When removing upper blade guides, remove blade guard from guide support (ref. #1):

1. When removing the lower blade guides, open lower left door to access blade support (ref. #46) (lower blade guard is attached to the lower door).
2. Remove four cap screws (ref. #56) and four washers (ref. #55) from both blade guides (ref. #53 and #54). Remove the blade guides.
3. Loosen three screws (ref. #40). Remove guide support (ref. #52) from guide rod (ref. #1) (or lower guide rod [ref. #46]).
4. Remove retaining ring (ref. #49) from guide support (ref. #52). Remove bearing (ref. #50) and guide (ref. #51). Remove shaft (ref. #48) from bearing (ref. #50).
5. Install new bearing (ref. #50) on shaft (ref. #48). Install new blade guide (ref. #51) and bearing (ref. #50) in guide support (ref. #52). Secure with retaining ring (ref. #49).
6. Install guide support (ref. #52) in guide rod (ref. #1) (or lower guide rod [ref. #46]). Adjust position of blade guide (ref. #51) so it just touches the back edge of the blade. Tighten three screws (ref. #40).
7. Install blade guides (ref. #53 and #54) and secure with four cap screws (ref. #56) and four washers (ref. #55).
8. Check operation of the band saw.

Replacement of Chip Brush

(refer to Figure 10)

WARNING: DISCONNECT ELECTRICAL POWER TO AVOID POTENTIAL FOR UNINTENDED START-UP DURING MAINTENANCE.

Follow the procedure below to change chip brush:

1. Open door on lower left of the band saw.
2. Remove attaching screw and washer.
3. Remove brush.
4. Install replacement brush and secure with screw and washer.

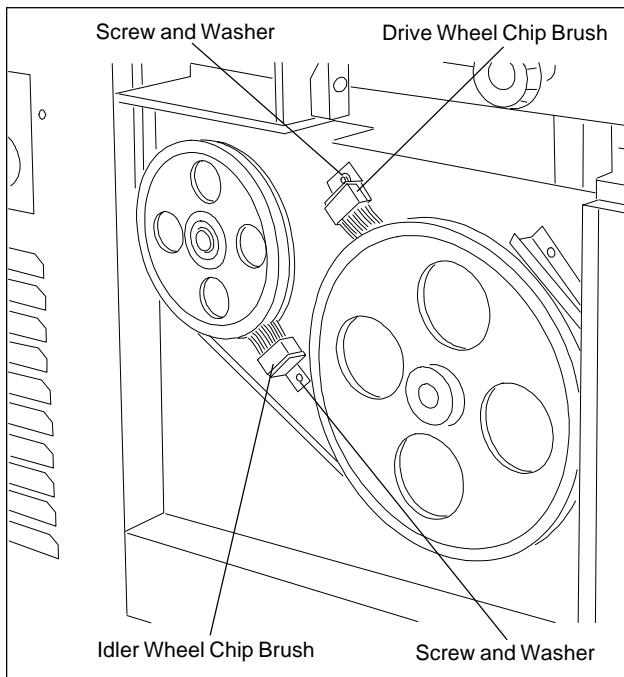


Figure 10: Replacement of Chip Brush

Adjustments

Blade Tracking

Blade tracking can be corrected using the following procedure:

1. Operate the saw to determine if the blade is tracking off center. Determine if the blade is tracking to the right or to the left.
2. To adjust tracking, turn the tracking adjustment knob on the right side of the machine (refer to Figure 2 for location of blade tracking adjustment knob).
3. If the blade tracks to the right, the bottom of the blade drive pulley needs to be moved outward.
4. If the blade tracks to the left, the bottom of the blade drive pulley needs to be moved inward.

Work Table

The position of the work table can be adjusted to tilt either left or right (approximately 10 degrees in either direction). The work table can also be adjusted to tilt approximately 45 degrees to the front or to the rear.

Front/Back (refer to Figure 11)

1. Loosen hex nut.
2. Tilt table to the desired position.
3. Tighten hex nut.

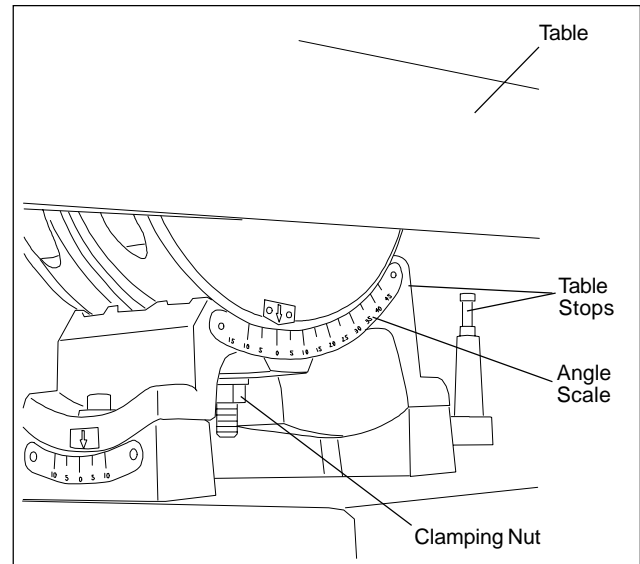


Figure 11: Table Adjustment (Front/Back)

Right/Left (refer to Figure 12)

1. Loosen two screws.
2. Using the adjustment screw, tilt the table to the desired position.
3. Tighten two screws.

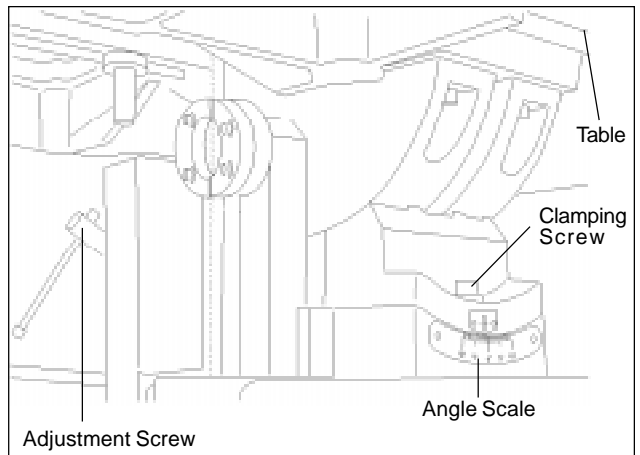
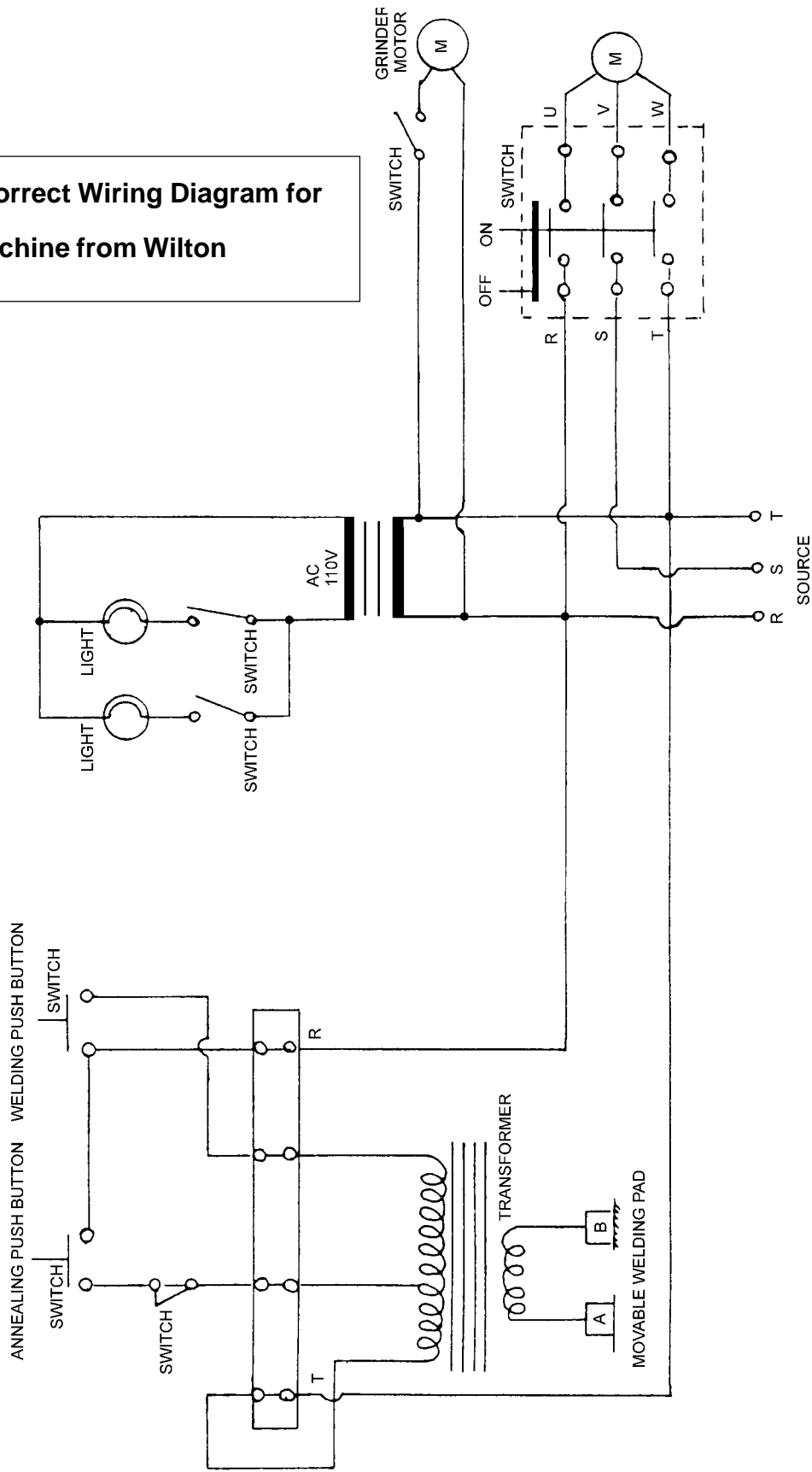


Figure 12: Table Adjustment (Right/Left)

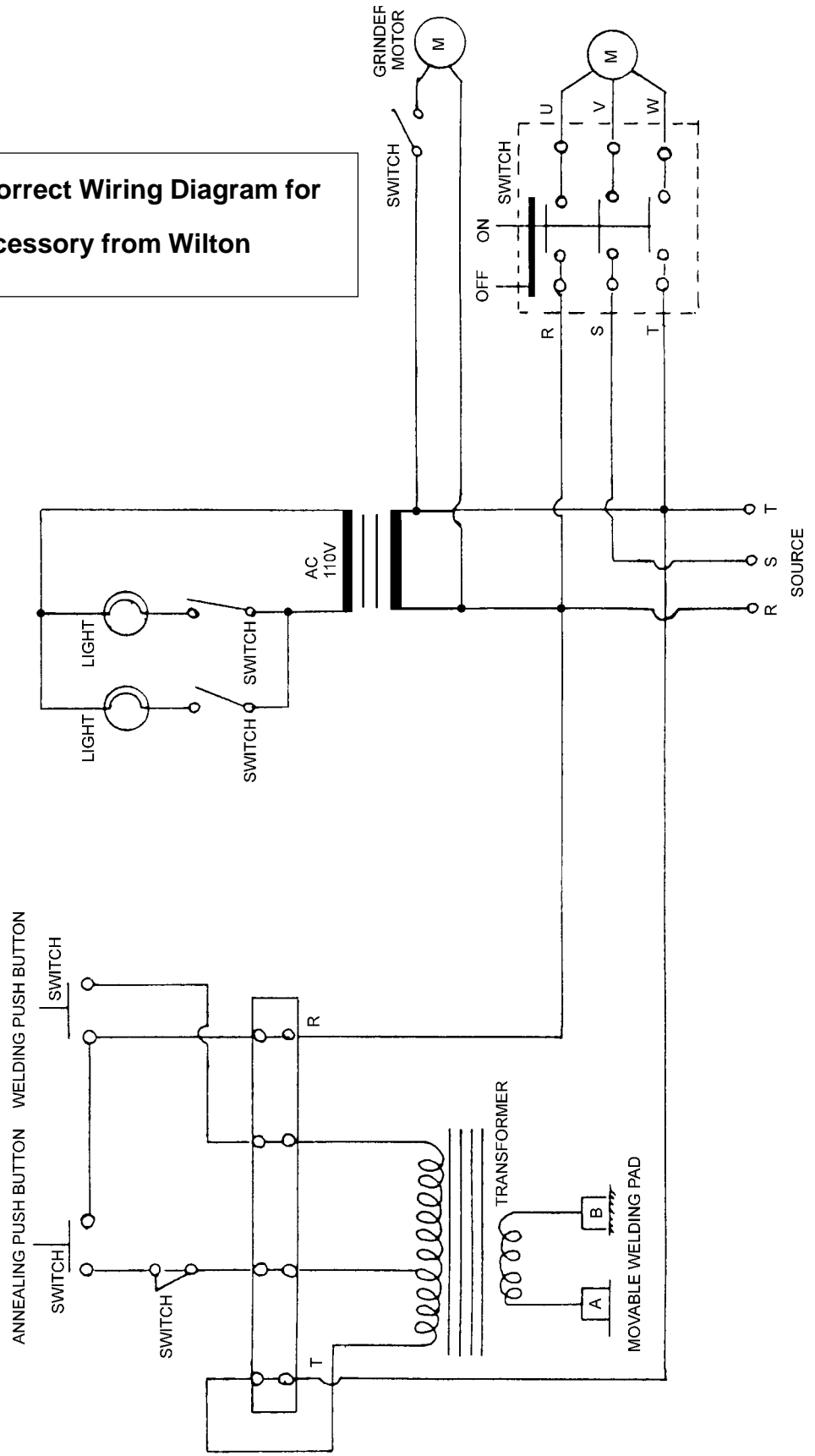
Wiring Diagram – Band Saw

Need correct Wiring Diagram for this machine from Wilton



Wiring Diagram – Welder

Need correct Wiring Diagram for this accessory from Wilton



Troubleshooting

Fault	Probable Cause	Suggested Remedy
Excessive blade breakage	<ol style="list-style-type: none"> 1. Incorrect speed or feed. 2. Teeth too coarse for material. 3. Incorrect blade tension. 	<ol style="list-style-type: none"> 1. Check Machinist's Handbook for speed/feed appropriate for the material to be cut. 2. Check Machinist's handbook for recommended blade type. 3. Adjust blade tension to the point where the blade just does not slip on the wheel.
Premature blade dulling Bad cuts (crooked)	<ol style="list-style-type: none"> 1. Blade teeth too coarse. 2. Blade speed too high. 3. Insufficient blade tension. 1. Feed pressure too fast. 2. Guide bearings not adjusted properly. 3. Inadequate blade tension. 4. Span between the two blade guides too wide. 5. Dull blade. 6. Incorrect blade speed. 7. Blade guide assembly loose. 8. Blade guide bearing assembly loose. 9. Guide bearing worn. 	<ol style="list-style-type: none"> 1. Use a finer tooth blade. 2. Try a lower blade speed. 3. Increase tension to proper level. 1. Decrease pressure. 2. Adjust guide bearing clearance to 0.001 inch (0.002 inch maximum). 3. Gradually increase blade tension. 4. Move blade guide bar closer to work. 5. Replace blade. 6. Check blade speed (<i>see Figure 3</i>). 7. Tighten blade guide assembly. 8. Tighten blade guide bearing assembly. 9. Replace worn bearing.
Unusual wear on side/back of blade	<ol style="list-style-type: none"> 1. Blade guides worn. 2. Blade guide bearings not adjusted. 	<ol style="list-style-type: none"> 1. Replace blade guides. 2. Adjust blade guide bearings.
Teeth missing/ripped from blade	<ol style="list-style-type: none"> 1. Blade tooth pitch too coarse for work piece. 2. Gullets loading up with chips. 	<ol style="list-style-type: none"> 1. Use blade with finer tooth pitch. 2a. Use blade with a coarse tooth pitch—reduce feed pressure. 2b. Brush blade to remove chips.
Excessive speed reducer noise/vibration	<ol style="list-style-type: none"> 1. V-belt is too tight. 	<ol style="list-style-type: none"> 1. Reset V-belt tension.

Replacement Parts

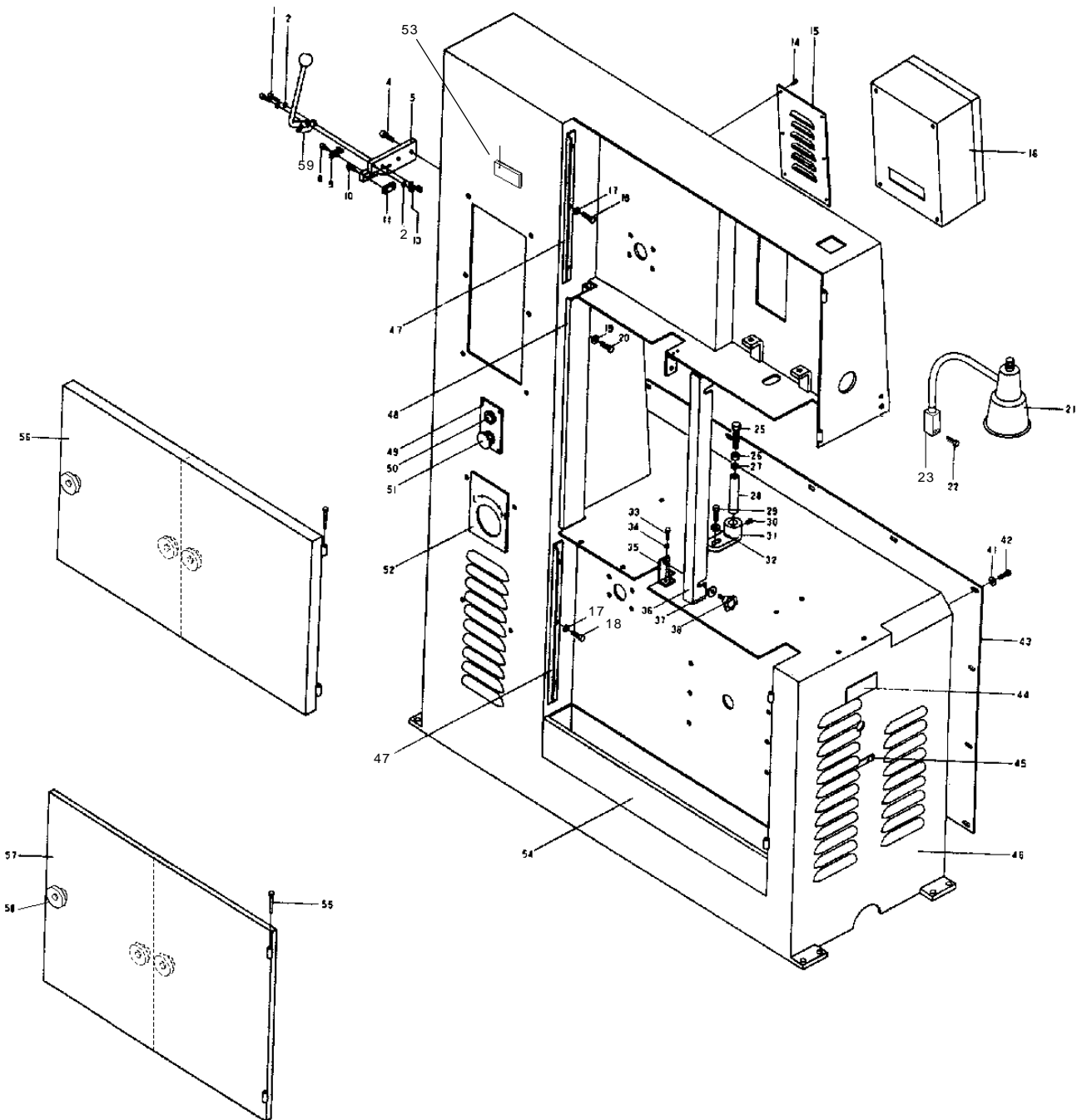
This section provides exploded view illustrations that show the replacement parts for the Model 8027, 8127, 8040 and 8140 Vertical Band Saw. Also provided are parts listings that provide part number and description. The item numbers shown on the illustration relate the item number in the facing parts listing.

Order replacement parts from:

Wilton Corporation
300 South Hicks Road
Palatine, IL 60067
TEL: 1-888-594-5866
FAX: 1-800-626-9676

Identify the replacement part by the part number shown in the parts listing. Be sure to include the model number and serial number of your machine when ordering replacement parts to assure that you will receive the correct part.

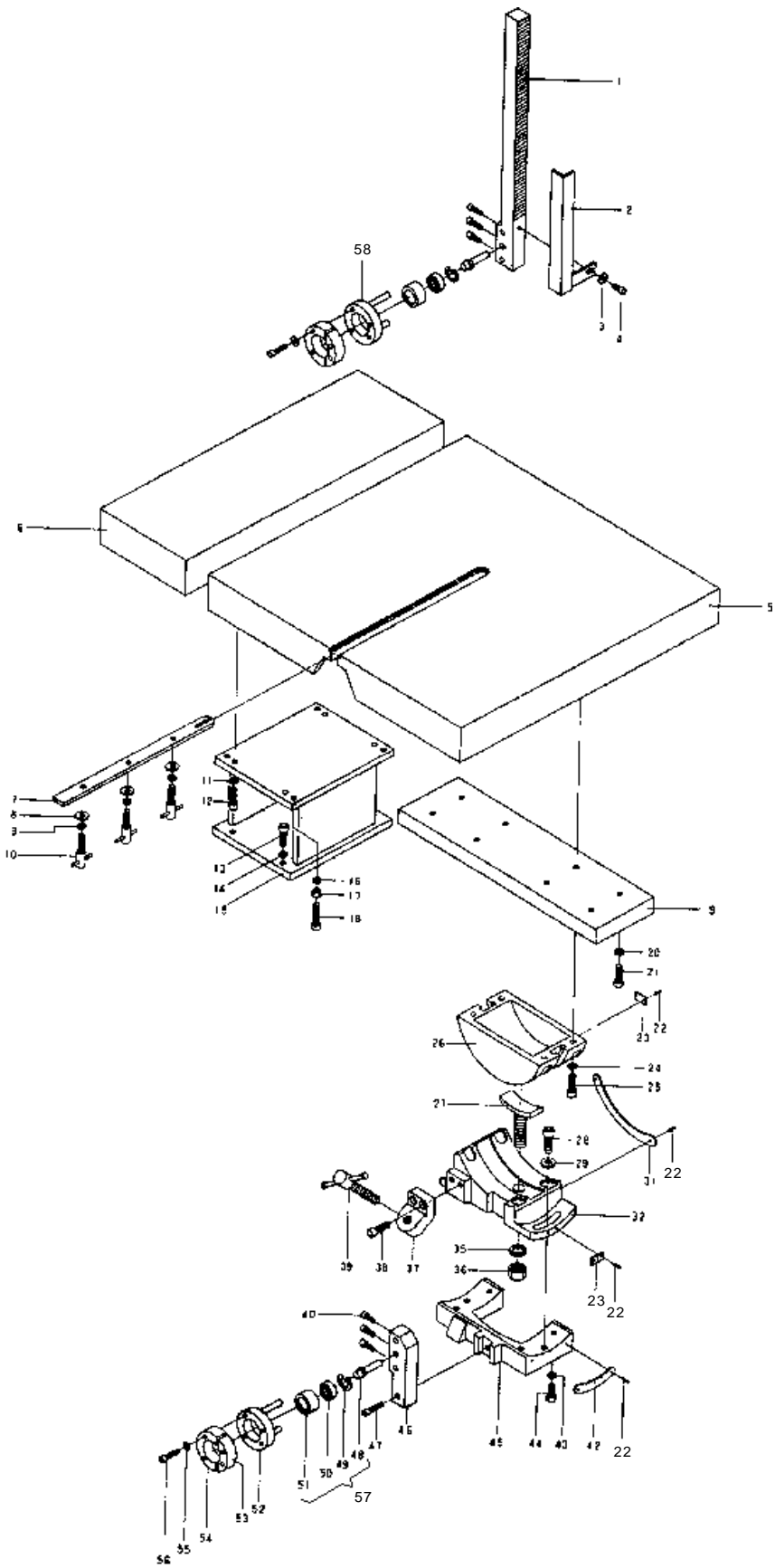
Exploded View - Enclosure



Parts List - Enclosure

Ref. No.	Part Number	Description	Qty	Ref. No.	Part Number	Description	Qty
1	5516285	Screw, Cap	2	54	5516437	Pan, Chip	1
2	5516286	Washer, Flat	4	55	5516297	Pin, Hinge	
4	5516287	Screw, Cap	2	56		Door, Upper	
5	5681411	Plate, Mtg.	1		5516439	Models #8027, #8127	1
8	5516288	Screw, Cap	1		5516440	Models #8040, #8140	2
9	5516289	Guide/Rest	1	57		Door, Lower	
10	5516290	Screw, Cap	2		5516442	Models #8027, #8127	1
11	5681401	Blade, Lower	1		5516443	Models #8040, #8140	2
13	5516291	Nut, Hex	2	58	5516298	Knob, Door	2/4
14	5516423	Screw, Cap	6	59	5681392	Assy., Cutter Edge	1
15	5516424	Cover, Access	1				
16		Box, Electrical					
	5683741	220 V	1				
	5516262	440 V	1				
17	5516274	Washer, Flat	6				
18	5516275	Bolt, Hex	6				
19	5516276	Washer Flat	3				
20	5516277	Bolt, Hex	3				
21	5680091	Work Lamp	1				
22	5516269	Screw, Cap	2				
23	5680081	Block, Lamp Mtg.	1				
25	5516278	Bolt, Stop	1				
26	5516279	Nut, Jam	1				
27	5516280	Washer, Flat	1				
28	5516283	Support, Threaded	1				
29	5516281	Bolt, Hex	1				
30	5516426	Screw, Set	1				
31	5516284	Support, Stop	1				
32	5516282	Washer, Flat	1				
33	5516427	Bolt, Hex	4				
34	5516428	Washer, Flat	4				
35	5516429	Bracket, Blade Guard	2				
36	5516430	Guard, Blade	1				
37	5516431	Washer, Fender	2				
38	5516432	Knob	2				
41	5516272	Washer, Flat	14				
42	5516271	Bolt, Hex	14				
43	5516433	Cover, Rear	1				
44	5516434	Nameplate	1				
45	5516273	Label, Gearbox Speed	1				
46		Enclosure, Bandsaw					
	5516435	Models #8027, #8127	1				
	5516436	Models #8040, #8140	1				
47	5680031	Bracket, Door	2				
48	5680111	Guard, Blade	1				
49	5516292	Box, Switch	1				
50	5516293	Switch, ON/OFF	1				
51	5516294	Switch, E-Stop	1				
52	5516295	Label, Variable Speed	1				
53	5515283	LED Readout, RPM	1				

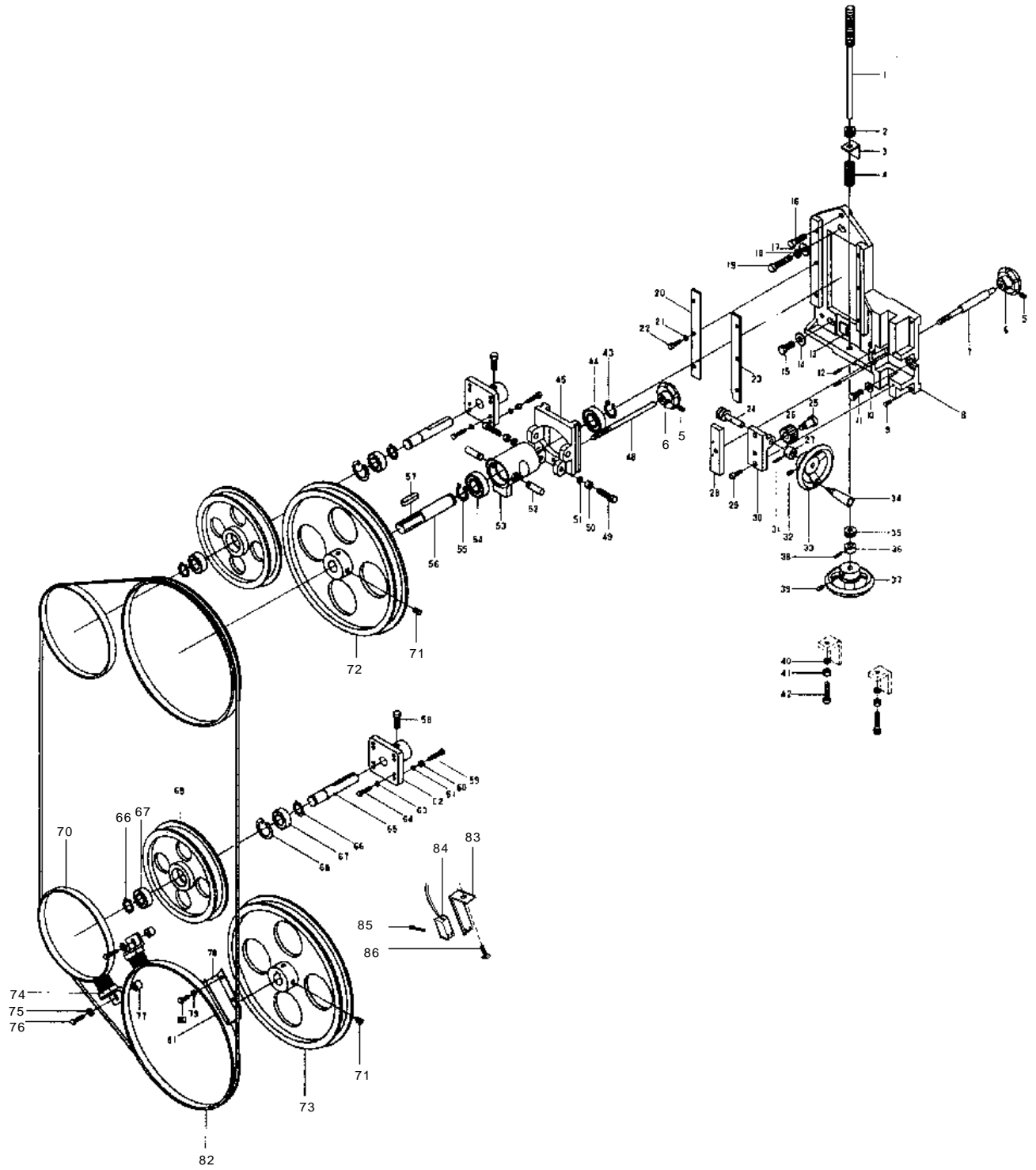
Exploded View - Saw Table



Parts List - Saw Table

Ref. No.	Part Number	Description	Qty	Ref. No.	Part Number	Description	Qty
1	5516445	Support, Upper Guide	1	51	5516466	Housing, Bearing	2
2	5681271	Guard, Blade Upper	1	52	5681291A	Support, Guide (Lower)	1
3	5516310	Washer, Flat	1	53	5681121A	Guide, Blade	2
4	5516301	Screw, Cap	1	54	5681121A	Guide, Blade	2
5	5516446	Table, Tilt	1	55	5516467	Washer, Flat	8
6	5516447	Table, Fixed	1	56	5516468	Screw, Cap	8
7	5516448	Plate, Table	1	57	5681311A	Assy., Guide Bearing	2
8	5681071	Washer, Flat	3	58	5681161A	Support Guide (Upper)	1
9	5516315	Washer, Lock	3				
10	5681081	Screw, Plate	3				
11	5516449	Washer, Flat	4				
12	5516450	Screw, Cap	4				
13	5516451	Screw, Cap	4				
14	5516452	Washer, Flat	4				
15	5516453	Support, Table	1				
16	5516454	Washer, Flat	4				
17	5516455	Spacer	4				
18	5516456	Screw, Cap	4				
19	5516457	Plate, Support	1				
20	5516458	Washer, Flat	4				
21	5516459	Screw, Cap	4				
22	5516309	Screw, Drive	8				
23	5681191	Pointer, Angle	2				
24	5516460	Washer, Flat	4				
25	5516461	Screw, Cap	4				
26	5681101	Seat, Table	1				
27	5681171	Screw, Tilt Adj.	1				
28	5516304	Screw, Cap	2				
29	5516312	Washer, Flat	2				
31	5681181	Dial Indicator (L/R)	1				
32	5681101	Seat, Tilting (L/R)	1				
35	5516313	Washer, Flat	1				
36	5516299	Nut, Jam	1				
37	5681111	Bracket, Adj. Screw	1				
38	5516305	Screw, Cap	2				
39	5681131	Screw, Adjustment	1				
40	5516308	Screw, Cap	6				
42	5681211	Dial Indicator	1				
43	5516314	Washer, Flat	4				
44	5516306	Screw, Cap	4				
45	5681201	Seat, Tilting (F/R)	1				
46	5516462	Support, Lower Guide	1				
47	5516307	Screw, Cap	1				
48	5516463	Shaft, Bearing	2				
49	5516464	Ring, Retaining	2				
50	5516465	Bearing	2				

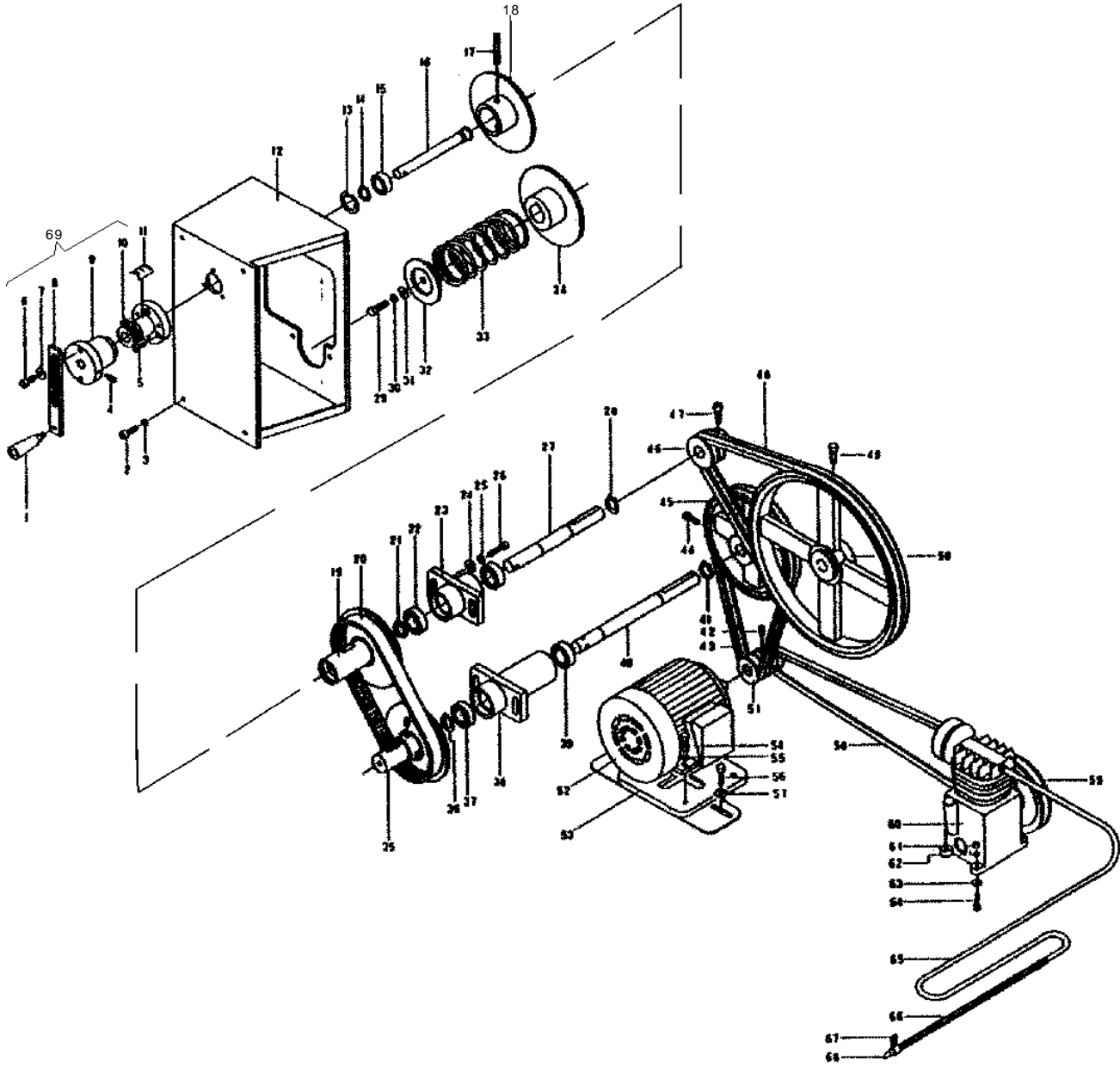
Exploded View - Blade Tensioning Mechanism



Parts Listing - Blade Tensioning Mechanism

Ref. No.	Part Number	Description	Qty	Ref. No.	Part Number	Description	Qty
1	5680941	Rod, Adjustment	1	52	5516342	Pin, Pivot	2
2	5516316	Bearing	1	53	5680851	Support, Bearing	1
3	5681021	Indicate Needle	1	54	5516343	Bearing	1
4	5680921	Spring	1	55	5516344	Ring, Retaining	1
5	5516317	Screw, Set	2	56	5680911	Shaft, Blade Wheel	1
6	5680891	Handwheel	2	57	5680971	Key, Square	1
7	5681251	Shaft, Screw	1	58	5516408	Bolt, Hex	2
8	5516403	Housing	1	59	5516409	Screw, Cap	8
9	5516318	Pin, Spring	2	60	5516410	Spacer	8
10	5516319	Washer, Flat	1	61	5516411	Washer, Flat	8
11	5516320	Bolt, Hex	1	62	5516412	Support, Idler	2
12	5681261	Pin, Spring	2	63	5516413	Washer, Flat	8
13	5681031	Label, Tension Gage	1	64	5516414	Screw, Cap	8
14	5516321	Washer, Flat	1	65	5516415	Shaft, Idler	2
15	5516322	Bolt, Hex	1	66	5516416	Ring, Retaining	4
16	5516334	Bolt, Hex	1	67	5516417	Bearing	4
17	5516335	Washer, Flat	1	68	5516418	Ring, Retaining	2
18	5516336	Spacer	1	69	5516419	Wheel, Idler	2
19	5516337	Bolt, Hex	1	70	5516422	Rubber Ring, Idler	2
20	5516405	Plate	1	71	5516345	Screw, Set	4
21	5516338	Washer, Flat	6	72	5681001	Wheel, Blade	1
22	5516339	Screw, Cap	6	73	5680831	Wheel, Lower	1
23	5516406	Plate	1	74	5680041	Brush	2
24	5681321	Wormshaft	1	75	5516347	Washer, Flat	2
25	5681331	Screw, Worm Gear	1	76	5516420	Screw, Cap	2
26	5681341	Gear, Worm	1	77	5516421	Spacer	2
27	5516326	Collar	1	78	5680071	Chute, Chip	1
28	5516407	Block, Fixed	1	79	5516349	Washer, Flat	2
29	5516324	Screw, Cap	2	80	5516350	Screw, Cap	2
30	5681351	Support, Worm Gear	1	81	5681041	Rubber, Ring	2
31	5516325	Pin, Spring	1	82		Blade, Saw	
32	5516327	Screw, Set	1		9108401	Model 8027 10 Teeth	1
33	5681281	Handwheel	1		9108411	Model 8040 10 Teeth	1
34	5516328	Handle	1	83	5516376	Bracket, Prox. Snsor	1
35	5680901	Bearing, Thrust	1	84	5515226	Prox. Sensor, SFPM	1
36	5680931	Collar	1	85	5516377	Screw, Cap	2
37	5680951	Handwheel	1	86	5516378	Bolt, Hex	1
38	5516329	Pin, Spring	1				
39	5516330	Screw, Set	1				
40	5516331	Washer, Flat	2				
41	5516332	Spacer	2				
42	5516333	Screw, Cap	2				
43	5680871	Ring, Retaining	1				
44	5680861	Bearing	1				
45	5680961	Trunnion	1				
48	5680881	Rod, Adjustment	1				
49	5680981	Leadscrew	1				
50	5516341	Spacer	2				
51	5516340	Washer, Flat	2				

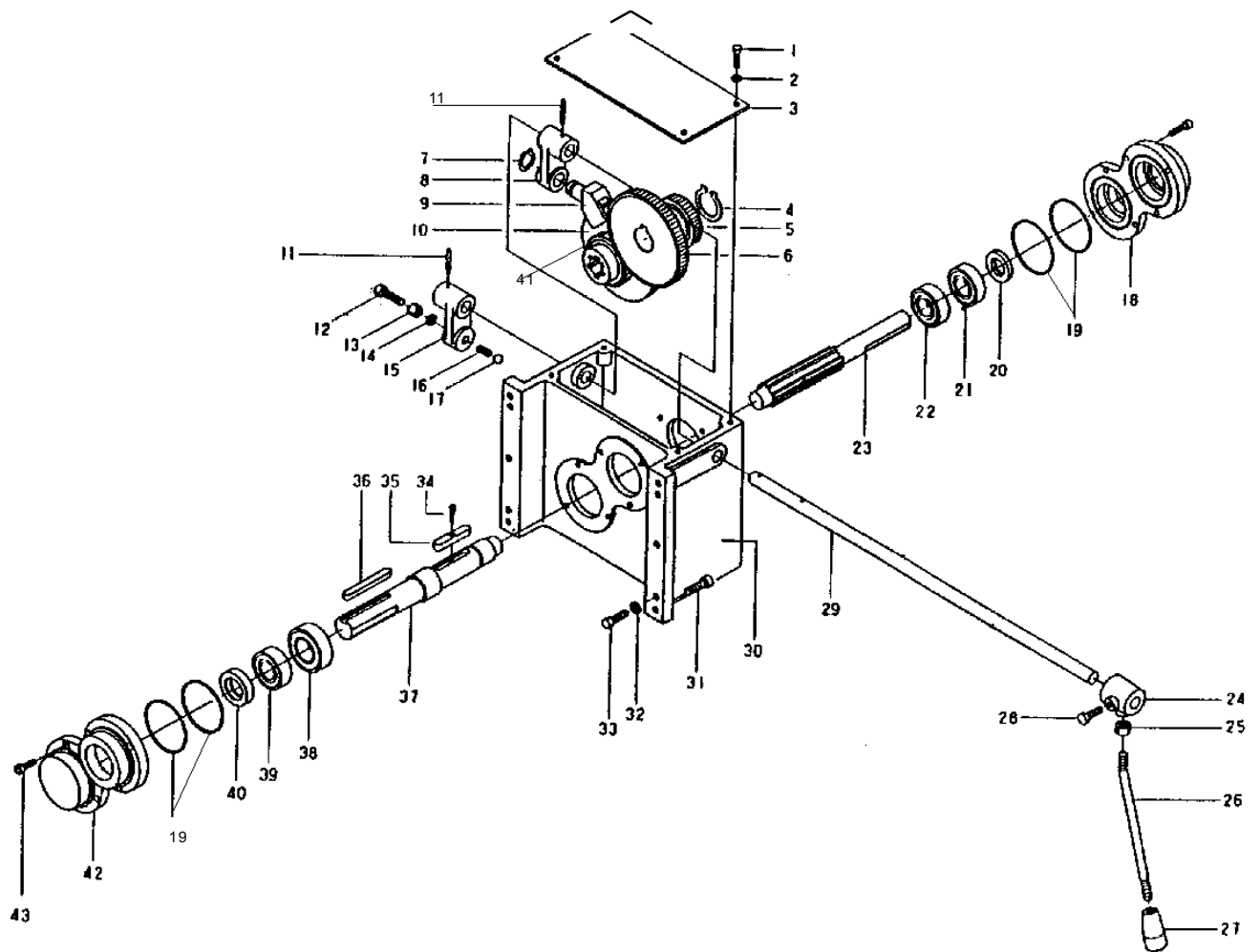
Exploded View - Drive Components



Parts List - Drive Components

Ref. No.	Part Number	Description	Qty	Ref. No.	Part Number	Description	Qty
1	5680451	Handle, Plastic	1	50	5680281	Wheel	1
2	5516351	Screw, Cap	4	51	5680131	Pulley, Motor	1
3	5516352	Washer, Flat	4	52		Motor, Drive	1
4	5516353	Screw, Set	1		5680151	8020, 2 HP	1
5	5516354	Screw, Cap	3		5514798	8120, 3 HP	1
6	5516355	Screw, Cap	2	53	5516374	Plate, Mounting	1
7	5516356	Washer, Flat	2	54	5516375	Bolt, Hex	4
8	5680461	Handle, Speed Adj.	1	55	5517495	Washer, Flat	4
9	5680471	Hub	1	56	5517496	Bolt, Hex	4
10	5680481	Seat, Handwheel	1	57	5517497	Washer, Flat	4
11	5516357	Label, Speed	1	58	5680171	Belt	1
12	5680441	Housing	1	59	5516379	Pulley	1
13	5680501	Ring, Retaining	1	60	5683471	Compressor, Air	1
14	5516358	Washer	1	61	5516380	Nut, Hex	4
15	5710391	Bearing, 6203 ZZ	1	62	5516381	Washer, Lock	4
16	5682511	Shaft, Stepless Adj.	1	63	5516382	Washer, Flat	4
17	5680521	Pin, Spring	1	64	5516383	Screw	4
18	5682521	Pulley, Adj. (R)	1	65	5516384	Tubing, Clear	1
19	5682541	Pulley, Adj. (L)	1	66	5516385	Line, Flexible	1
20	5683691	Belt, Toothed	1	67	5516386	Bracket	1
21	5516359	Washer	1	68	5516387	Nozzle, Air	1
22	5711911	Bearing, 6005	2	69	5680121	Assy., Handwheel	1
23	5682551	Support Mtg., Bearing	1	53	5516374	Plate, Mounting	1
24	5516361	Washer, Flat	2	54	5516375	Bolt, Hex	4
25	5516362	Washer, Lock	2	55	5516376	Washer, Flat	4
26	5516363	Bolt, Hex	2	56	5516377	Bolt, Hex	4
27	5682561	Shaft, Stepless	1	57	5516378	Washer, Flat	4
28	5516364	Ring, Retaining	1	58	5680171	Belt	1
29	5680321	Bolt, Fixed	1	59	5516379	Pulley	1
30	5516365	Washer, Lock	1	60	5683471	Compressor, Air	1
31	5516366	Washer, Flat	1	61	5516380	Nut, Hex	4
32	5680331	Plate, Spring Guard	1	62	5516381	Washer, Lock	4
33	5680341	Spring	1	63	5516382	Washer, Flat	4
34	5680361	Pulley, Stepless (R)	1	64	5516383	Screw	4
35	5682421	Pulley, Stepless (L)	1	65	5516384	Tubing, Clear	1
36	5680381	Washer	1	66	5516385	Line, Flexible	1
37	5680391	Bearing	1	67	5516386	Bracket	1
38	5680411	Support Mtg., Bearing	1	68	5516387	Nozzle, Air	1
39	5516367	Bearing	1	69	5680121	Assy., Handwheel	1
40	5680421	Shaft, Stepless	1				
41	5516368	Ring, Retaining	1				
42	5516369	Screw, Set	1				
43	5680161	Belt	2				
44	5516370	Bolt, Set	1				
45	5680181	Wheel	1				
46	5682311	Pulley	1				
47	5516371	Bolt, Set	1				
48	5680211	Belt	2				
49	5516372	Bolt, Set	1				

Exploded View - Two-Speed Gearbox



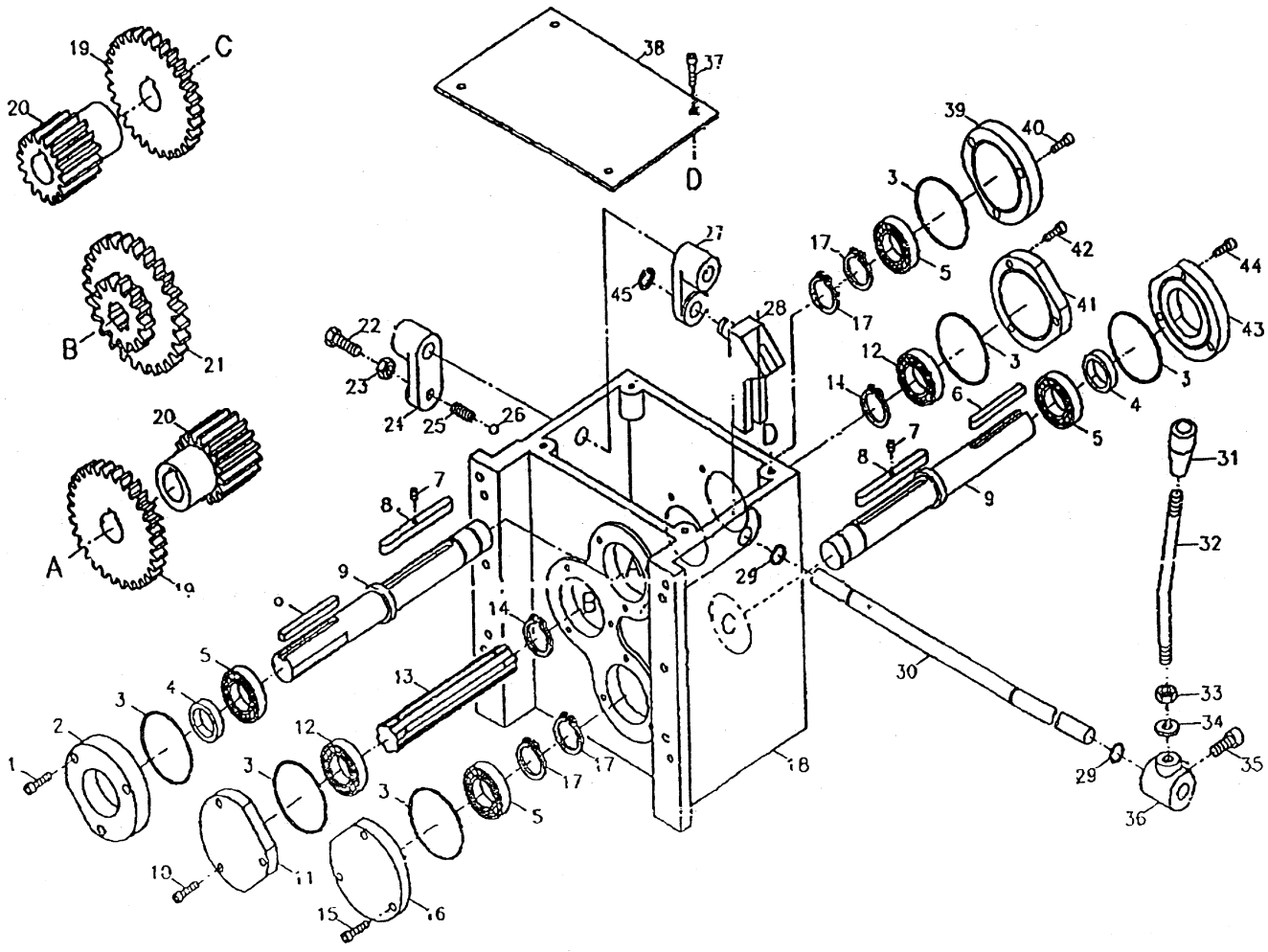
Parts List - Two-Speed Gearbox

Ref. No.	Part Number	Description	Qty
1	5516389	Bolt, Hex	4
2	5516390	Washer, Flat	4
3	5680641	Cover, Top	1
4	5680651	Ring, Retaining	1
5	5680631	Gear, Output (Small)	1
6	5680611	Gear, Output (Large)	1
7	5680791	Ring, Retaining	1
8	5680771	Lever, Shift (Internal)	1
9	5680781	Shifter, Speed	1
10	5680721	Gear, Input (Large)	1
11	5680821	Pin, Spring	2
12	5516391	Screw, Cap	1
13	5516392	Spacer	1
14	5516393	Washer, Flat	1
15	5680291	Lever	1
16	5680811	Spring	1
17	5680801	Ball, Steel	1
18	5680661	Cover, Bearing (Rear)	1
19	5680751	O-Ring	4
20	5680681	Seal, Oil	1
21	9100321	Bearing	1
22	5516394	Bearing	1
23	5680671	Shaft, Input	1
24	5680241	Hub	1
25	5516395	Nut, Jam	1
26	5680301	Handle	1
27	5680311	Knob	1
28	5516396	Screw, Cap	1
29	5683501	Shaft, Var. Speed	1
30	5683511	Housing, Gearbox	1
31	5516397	Screw, Cap	4
32	5516398	Washer, Flat	4
33	5516399	Bolt, Hex	4
34	5516400	Screw, Cap	1
35	5680621	Key	1
36	5680841	Key	1
37	5680581	Shaft, Output	1
38	5629151	Bearing (6206ZZ)	1
39	5516401	Bearing	1
40	5680591	Seal, Oil	1
41	5680731	Gear, Input (Small)	1
42	5680761	Cover, Bearing (Front)	1
43	5516402	Screw, Cap	12

2 Speed Gearbox Complete:

5680261A

Exploded View - Three-Speed Gearbox

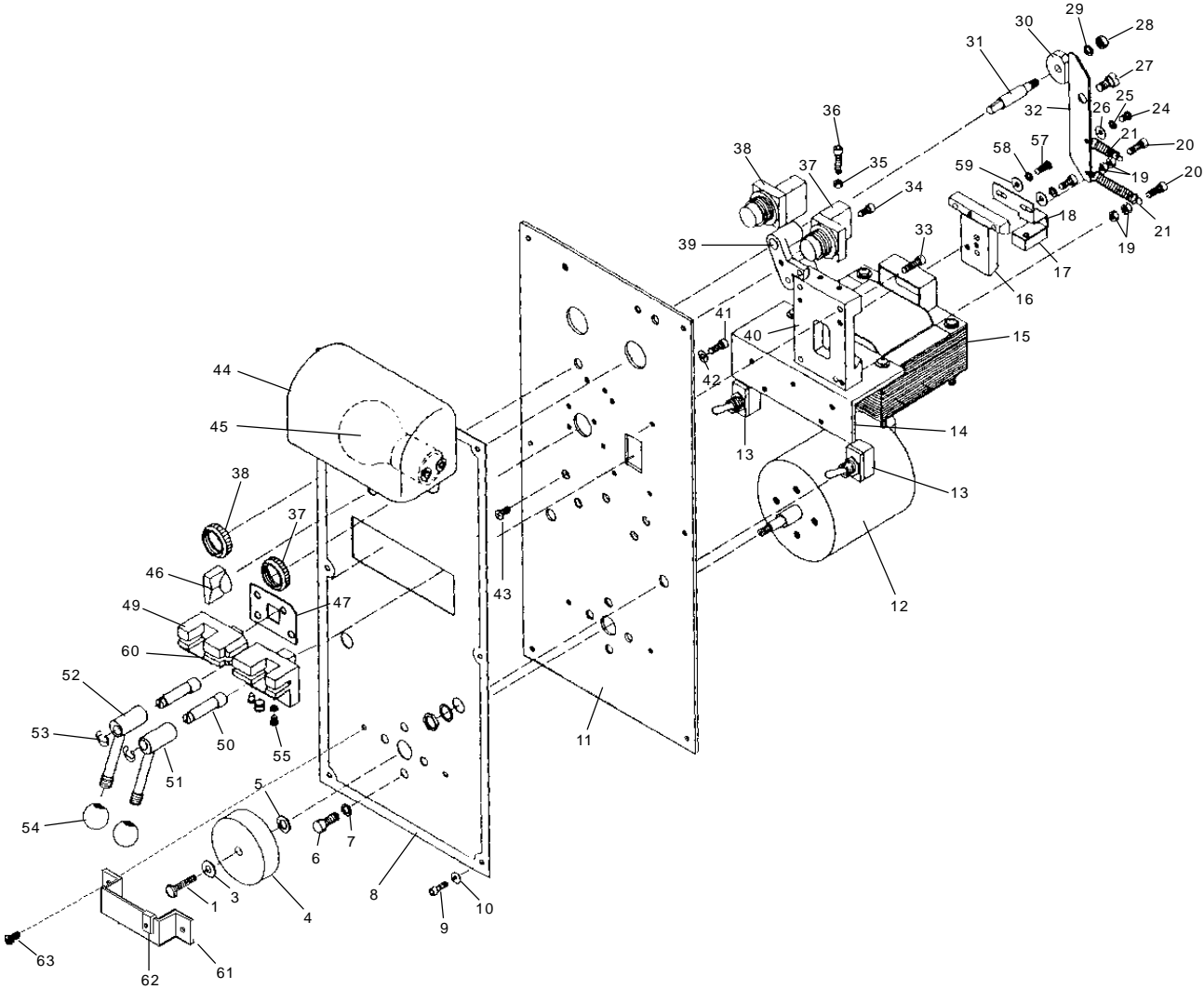


Parts List - Three-Speed Gearbox

Ref. No.	Part Number	Description	Qty
1	5511448	Screw, Cap	3
2	5511449	Retainer, Bearing	1
3	5680751	O-Ring	1
4	5680591	Seal, Oil	2
5	5629151	Bearing (6206ZZ)	4
6	5511453	Key (8 x 8 x 50)	2
7	5511454	Screw, Cap	2
8	5511455	Key (10 x 10 x 105)	2
9	5511456	Shaft, Output	1
10	5511457	Screw, Cap	3
11	5511458	Cover	1
12	5511459	Bearing	2
13	5511460	Shaft	1
14	5511461	Ring, Retaining	2
15	5511462	Screw, Cap	3
16	5511463	Cover	1
17	5511464	Ring, Retaining	4
18	5511465	Housing	1
19A	5680611	Gear, Output, Large	1
19C	5680611	Gear, Output, Large	1
20	5511468	Gear	2
21	5511469	Gear (Bore B)	1
22	5516391	Screw, Cap	1
23	5516392	Spacer	1
24	5680291	Lever	1
25	5680811	Spring	1
26	5680801	Ball, Steel	1
27	5680771	Arm, Shifter	1
28	5511476	Dog, Shifter	1
29	5511477	Ring, Retaining	2
30	5511478	Shaft	1
31	5680311	Knob	1
32	5680301	Handle	1
33	5516395	Nut, Jam	1
34	5511482	Washer, Flat	1
35	5516396	Screw, Cap	1
36	5680241	Hub	1
37	5511485	Screw, Cap	4
38	5511486	Cover, Gearbox	1
39	5511487	Retainer, Bearing	1
40	5511488	Screw, Cap	3
41	5511489	Retainer, Bearing	1
42	5511490	Screw, Cap	3
43	5511491	Retainer, Bearing	1
44	5511492	Screw, Cap	3
45	5680791	Ring, Retaining	1

3 Speed Gearbox Complete:
5680261B

Exploded View - Welder



Parts List - Welder

Ref. No.	Part Number	Description	Qty.	Ref. No.	Part Number	Description	Qty.
1	5507917	Bolt, Hex	1	35	5507939	Nut, Hex	2
3	5507919	Washer, Flat	1	36	5507940	Screw, Cap	2
4	5683151	Wheel, Grinding	1	37	5507941	Button, Weld	1
5	5507920	Spacer	1	38	5507942	Button, Anneal	1
6	5507921	Screw, Cap	4	39	5683171	Support, Cam Shaft	1
7	5507922	Washer, Flat	4	40	5681691	Pad, Sliding	1
8	5681451	Name Plate	1	41	5507943	Screw, Cap	4
9	5507923	Screw, Cap	6	42	5597944	Washer, Flat	4
10	5507924	Washer, Flat	6	43	5507945	Screw, Flat Head	5
11	5681661	Panel, Welding	1	44	5683081	Work Lamp	1
12		Motor, Grinder	1	45	5681511	Bulb	1
	5681711	115 Volts		46	5681531	Knob, Clamp Pressure	1
	5681711A	220 Volts		47	5681541	Plate, B Insulating	1
	5681711B	440 Volts		48	5681461	Base, A Welding	1
13	5681701	Switch, On/Off	1	49	5683001	Base, B Welding	1
14	5507925	Bracket, Transformer	2	50	5681561	Shaft, Centerless Handle	2
15		Transformer	1	51	5681491	Handle, A Centerless	1
	5681631C	220 V/2 KVA		52	5681431	Handle, B Centerless	1
	5681631D	440 V/2 KVA		53	5683131	Ring, Retaining	2
16	5681671	Block, Sliding	1	54	5681441	Knob, Handle	2
17	5683191	Switch, Limit	1	55	5507946	Screw, Set	2
18	5681601	Base, Limit Switch	1	56	5507950	Screw, Cap	1
19	5607926	Nut, Hex	4	57	5507951	Screw, Pan Head	1
20	5507927	Screw, Cap	2	58	5507952	Washer, Lock	2
21	5681681	Spring	2	59	5507953	Washer, Flat	2
24	5507929	Screw, Pan Head	1	60	5681481	Assy., Welding Pad	2
25	5507930	Washer, Lock	1	61	5681581	Guard, Grinding Wheel	1
26	5507931	Washer, Flat	1	62	5517498	Guide/Rest	1
27	5681741	Screw, Pressure Cross	1	63	5517499	Screw, Cap	2
28	5507934	Nut, Hex	1	*	5507529	Relay	3
29	5507935	Washer, Flat	1	*	5507947	Transformer, Control	1
30	5681731	Cam, Pressure	1	*	5597948	Strip, Terminal	1
31	5681721	Shaft, Cam	1				
32	5681751	Plate, Pressure Cross	1				
33	5507937	Screw, Cap	4				
34	5507938	Screw, Slotted	1				

* Noted items not illustrated.

Blade Welders Complete:

5680021A Blade Welder, 220V
 5680021B Blade Welder, 440V

Notes:

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