



Operating Instructions and Parts Manual

7" Zip-Miter Bandsaw

Model J-9180



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Warranty and Service

WMH Tool Group, Inc., warrants every product it sells. If one of our tools needs service or repair, one of our Authorized Service Centers located throughout the United States can give you quick service. In most cases, any of these WMH Tool Group Authorized Service Centers can authorize warranty repair, assist you in obtaining parts, or perform routine maintenance and major repair on your JET® tools. For the name of an Authorized Service Center in your area call 1-800-274-6848.

MORE INFORMATION

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 jettools.com.

WARRANTY

JET products carry a limited warranty which varies in duration based upon the product (MW stands for Metalworking, WW stands for Woodworking).

90 DAY WARRANTY	1 YEAR WARRANTY	2 YEAR WARRANTY	5 YEAR WARRANTY	LIFE LIFETIME WARRANTY
Lathe Accessories Machine Accessories Mobile Bases Safety Equipment Specialty Items	Contractor Air Tools Hydraulic & Shop Tools Industrial Air Tools Light Industrial Air Tools Overhead Lifting Warehouse & Dock Equipment Winches	Metalworking Mechanical Components: Cold Saws MW Finishing Equipment Metalforming MW Lathes Mill/Drills MW Vises Milling Machines Surface Grinders MW Bandsaws Tapping MW Drill Presses Metalworking Electrical Components <i>on above products carry 1 Year Warranty</i>	Air Filtration Buffers Dust Collectors Dust Filters Dust Fittings Jointers Planers Sanders Shapers Tablesaws WW Bandsaws WW Drill Presses WW Lathes	Fastening Tools Lubrication Mechanics Hand Tools Striking Tools Vise Accessories Vises (non-MW) Clamps Workholding
Warranty reverts to 1 Year if above products are used for commercial, industrial or educational purposes				

WHAT IS COVERED?

This warranty covers any defects in workmanship or materials subject to the exceptions stated below. Cutting tools, abrasives and other consumables are excluded from warranty coverage.

WHO IS COVERED?

This warranty covers only the initial purchaser of the product.

WHAT IS THE PERIOD OF COVERAGE?

The general JET warranty lasts for the time period specified in the product literature of each product.

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Five Year and Lifetime Warranties do not cover products used for commercial, industrial or educational purposes. Products with Five Year or Lifetime Warranties that are used for commercial, industrial or education purposes revert to a One Year Warranty. This warranty does not cover defects due directly or indirectly to misuse, abuse, negligence or accidents, normal wear-and-tear, improper repair or alterations, or lack of maintenance.

HOW TO GET SERVICE

The product or part must be returned for examination, postage prepaid, to a location designated by us. For the name of the location nearest you, please call 1-800-274-6848.

You must provide proof of initial purchase date and an explanation of the complaint must accompany the merchandise. If our inspection discloses a defect, we will repair or replace the product, or refund the purchase price, at our option. We will return the repaired product or replacement at our expense unless it is determined by us that there is no defect, or that the defect resulted from causes not within the scope of our warranty in which case we will, at your direction, dispose of or return the product. In the event you choose to have the product returned, you will be responsible for the shipping and handling costs of the return.

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Warnings

1. Read and understand the entire owner's manual before attempting assembly or operation.
2. Read and understand the warnings posted on the machine and in this manual. Failure to comply with all of these warnings may cause serious injury.
3. Replace the warning labels if they become obscured or removed.
4. This band saw is designed and intended for use by properly trained and experienced personnel only. If you are not familiar with the proper and safe operation of a band saw, do not use until proper training and knowledge have been obtained.
5. Do not use this band saw for other than its intended use. If used for other purposes, 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 band saw. Everyday eyeglasses only have impact resistant lenses; they are not safety glasses.
7. Before operating this band saw, remove tie, rings, watches and other jewelry, and roll sleeves up past the elbows. Remove all loose clothing and confine long hair. Non-slip footwear or anti-skid floor strips are recommended. Do **not** wear gloves.
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.**



Warnings

20. Make your workshop child proof with padlocks, master switches or by removing starter keys.
21. Give your work undivided attention. Looking around, carrying on a conversation and “horse-play” are careless acts that can result in serious injury.
22. Maintain a balanced stance at all times so that you do not fall or lean against the blade or other moving parts. Do not overreach or use excessive force to perform any machine operation.
23. Use the right tool at the correct speed and feed rate. Do not force a tool or attachment to do a job for which it was not designed. The right tool will do the job better and safer.
24. Use recommended accessories; improper accessories may be hazardous.
25. Maintain tools with care. Keep blades 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 in the vise. 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 the power off and do not leave the machine until the blade 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:

CAUTION

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

WARNING

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

- - SAVE THESE INSTRUCTIONS - -

Introduction

This manual is provided by WMH Tool Group covering the safe operation and maintenance procedures for a JET Model J-9180 zip-miter bandsaw. 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 with 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.

The JET Model J-9180 bandsaw is designed for medium production cut-off work. Two cutting speeds and a hydraulic feed control allow the efficient cutting of virtually any material.

The Model J-9180 bandsaw is equipped with a coolant system which can greatly extend blade life and speed the cutting of a variety of materials which are best cut with cutting fluids and coolants.

Specifications

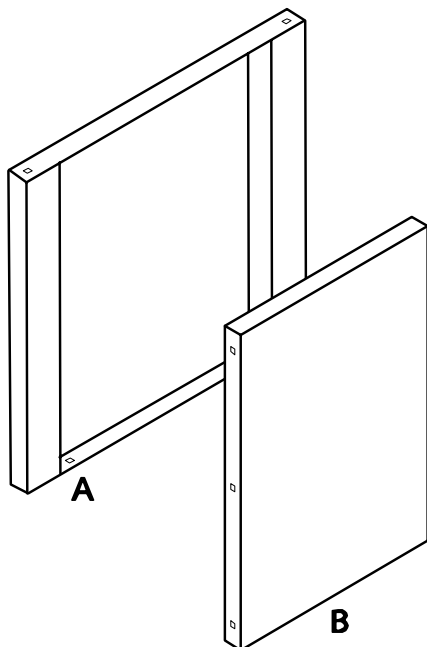
Model.....	J-9180
Stock Number	414464
Cutting Capacity	
Round at 90° (in.).....	7
Round at 45° (in.).....	4-1/2
Round at 60° (in.).....	2-3/4
Rectangle at 90° (in.)	7-7/8 x 6
Rectangle at 45° (in.)	4-7/8 x 4-5/16
Rectangle at 60° (in.)	2-3/4 x 2-3/4
Blade Size (in.).....	3/4 x .035 x 82
Blade Speeds (SFPM)	137, 275
Blade Wheel Diameter (in.)	10-1/2
Coolant Capacity (qt.)	10
Bed Height (in.)	35-7/8
Motor	1HP, 230V, 3Ph
Floor Space Required (L x W x H)(in.).....	44 x 22 x 29-1/2
Net Weight (lbs.)	375

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.

Shipping Contents

Contents of the Carton

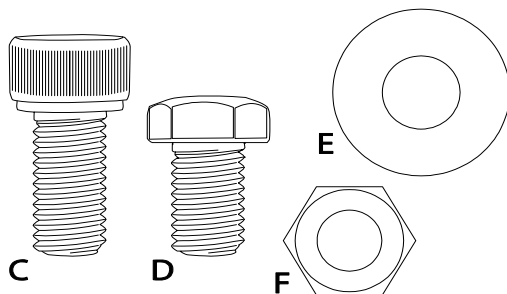
- 1 Band Saw (not shown)
- 2 Side Plate – front/back (A)
- 2 Side Plate – left/right (B)



Contents of the Carton

Hardware

- 4 M8 x 25 Socket Head Cap Screw (C)
- 12 M8 x 20 Hex Cap Screw (D)
- 28 M8 Flat Washer (E)
- 24 M8 Hex Nut (F)



Hardware (Actual Size)

Machine Features

Figure 1 depicts the main features of the Model J-9180 Bandsaw. The machine consists of a machine base onto which is installed a saw head.

Machine Base

The machine base consists of four panels that require assembly.

Saw Head

The saw head (Figure 1) consists of a drive motor, gearbox, blade wheels, blade guides and supports, control panel, blade tension mechanism, wire brush, and the saw blade.

The drive wheel is installed on the output shaft of the gearbox. The driven wheel is located on the left side of the machine and is mounted on a shaft that is part of the blade tension mechanism. The blade tension mechanism is used to tighten the saw blade on the blade wheels.

Blade tension generally requires adjustment only after the saw blade is changed, but the tension should be monitored with the convenient blade tension indicator.

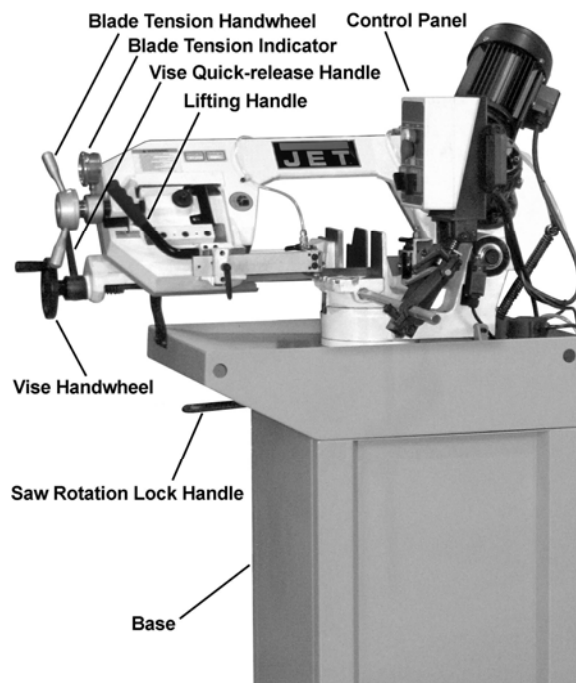


Figure 1

Work Stop

A work stop is provided with the machine to allow cutting multiple pieces of identical length (refer to Figure 5). The stop consists of a set rod onto which is installed a distance set bracket, stop rod assembly and two lock handles. The rod is installed in a bore in the front of the saw bed. The distance set bracket is moved in or out on the set rod to establish the length of the workpiece and the stop rod can be adjusted to accommodate workpieces of various widths.

Control Panel

The control panel is mounted on the top of the saw head. Refer to the *Controls and Indicators* section (page 9) for a description of the controls. Switches and fuses required for operation and protection of the drive motor are inside the box.

Assembly

Stand Assembly

Tools required for assembly:

Two 1/2-inch wrenches (**Note:** A ratchet wrench may speed assembly time.)

Referring to Figure 2:

1. Assemble the *left* (D₁) and *rear* (E₁) *side plates* with three M8 x 20 *hex cap screws* (A), six M8 *flat washers* (B₁, B₂) and three M8 *hex nuts* (C). Tighten the hex nuts.
2. Assemble E₂ and D₂ in the same manner.
3. Finish assembling E₂ to D₁ and E₁ to D₂ in the same manner.

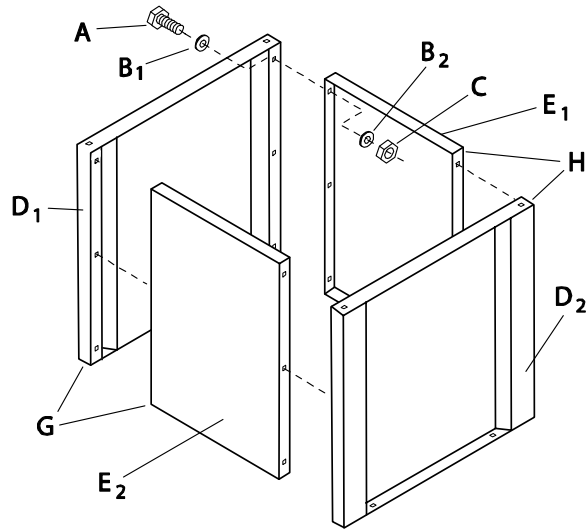


Figure 2

Mounting Saw to Stand

Tools required for assembly:

– 8mm hex wrench

Remove any plastic or holding straps from around the band saw. Areas of the machine have been given a protective coating at the factory. This should be removed using a soft cloth moistened with kerosene or a cleaner-degreaser. Do not use gasoline, paint thinner, or lacquer thinner as these will damage painted surfaces. Do not use an abrasive pad.

Determine the final location for the saw and allow for a sufficient work space around it.

CAUTION The saw is extremely heavy. Use a hoist to lift.

CAUTION When moving the saw/stand top assembly the cutting head, or “bow”, should be in the down position.

Referring to Figure 3:

1. The saw (A) and *stand top* (B) come as an assembled unit. Use a hoist to lift and place the saw onto the *stand* (C).
- Note that the *front* of the saw faces the same direction as the *indented panel* of the stand.
2. Adjust the *stand top* (B) and *stand* (C) so the corner mounting holes (D) are aligned.
3. Secure the *stand top* (B) to the *stand* (C) with four each M8 *hex socket head screws* (E) with M8 *flat washers* (F). Tighten with an 8mm hex wrench.

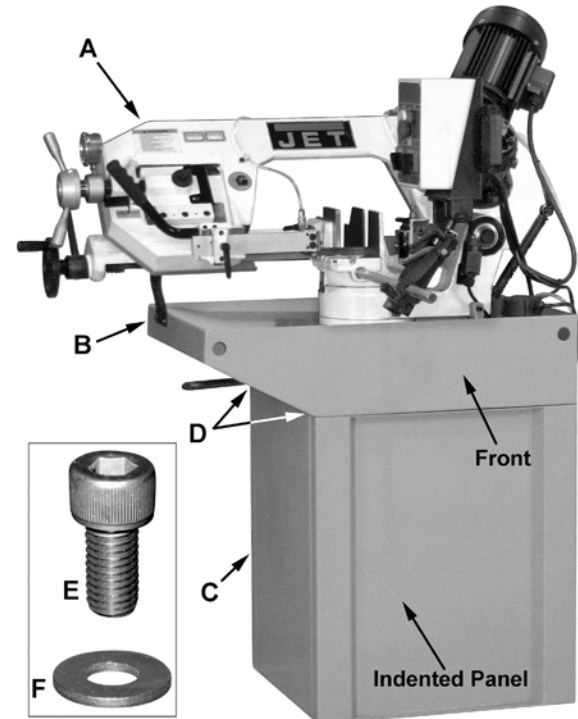


Figure 3

Electrical Connection

WARNING All electrical connections must be done by a qualified electrician. All adjustments or repairs must be done with the machine disconnected from the power source, unplugged. Failure to comply may result in serious injury!

The Model J-9180 bandsaw is rated at **230V**.

This machine is not supplied with a plug. Use a plug and outlet rated at least 20amps. The circuit for the machine should also be protected by at least a 20 amp circuit breaker or fuse.

Make sure that the blade moves in the correct direction. If it does not, simply reverse two of the phase wires on the supply input.

The sawing machine is now ready for use.

Controls and Indicators

Control Panel

The operating controls for the bandsaw are located on the *control panel* (Figure 4) and consist of the following controls and indicators:

Emergency Stop Switch – by depressing this switch the user can quickly stop the machine when it is in operation; to restart, turn clockwise slightly to release then press Start switch

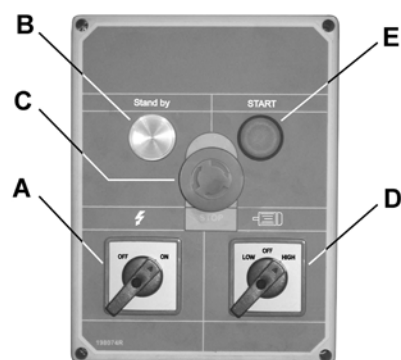
Feed Rate Control – used in conjunction with the Feed Rate Start/Stop Control (see below); this knob is used to set the downward head speed that is applied to the saw blade. The feed rate is proportional to the opening of the valve. When set to zero, the saw head is locked in position. Increasing the valve opening (counter-clockwise adjustment) increases the feed rate; decreasing the valve opening (clockwise adjustment) reduces the feed rate.

Motor Speed Selector – select Low for 137 SFPM, High for 275 SFPM; machine will not operate when Off is selected.

On/Off Switch – main power switch

Standby Lamp Indicator – indicates that power is present, i.e., machine is plugged in and On/Off Switch in set to ON.

Start Switch – press to start machine, also: set On/Off Switch to ON, select Motor Speed Selector to Low or High, Emergency Stop must be released.



- A – On/Off Switch
- B – Standby Lamp Indicator
- C – Emergency Stop Switch
- D – Motor Speed Selector
- E – Start Switch

Figure 4

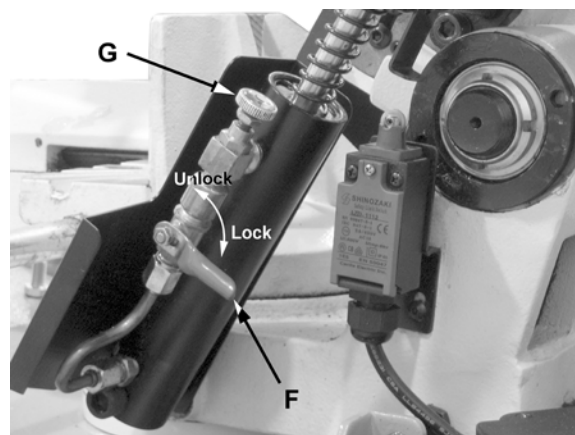


Figure 5

Feed Rate Control

The Feed Rate Controls (Figure 5) are mounted on the hydraulic cylinder located below the control panel.

With the *Feed Rate Start/Stop* (F) lever in the locked position the saw head is prevented from descending; in the unlocked position the saw head will descend at the rate determined by the *Feed Rate Control* (G) setting.

Blade Tension Indicator

The *Blade Tension Indicator* is located on the saw head (see Figure 1) – indicates the blade tension. To set blade tension refer to the *Changing Blades* section on page 15.

Blade Speeds

See *Motor Speed Selector* above.

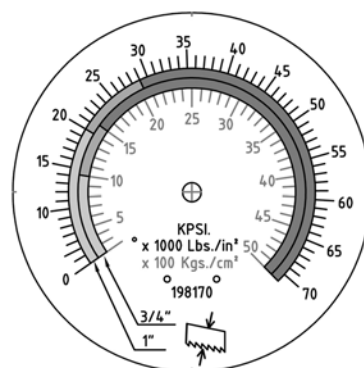


Figure 6

Blade Selection

The cut-off saw is delivered with a saw blade that is adequate for a variety of cut-off jobs on a variety of common materials. A general-purpose blade is provided as standard equipment with the machine.

Optional blades for specific applications are available from JET. (Refer to the *Parts* section for saw blade part numbers.)

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

A minimum of three teeth should be on the workpiece at all times for proper cutting. The blade and workpiece can be damaged if the teeth are so far apart that they straddle the workpiece.

For very high production on cutting of special materials, or to cut hard-to-cut materials such as stainless steel, tool steel, or titanium, call JET for more specific blade recommendations. JET can provide you with very specific instructions regarding the best blade (and coolant or cutting fluid, if needed) for the material or shape supplied.

Blade Break-in Procedures

New blades are very sharp and, therefore, have a tooth geometry that is easily damaged if a careful break-in procedure is not followed. Consult the blade manufacturer's literature for break-in of specific blades on specific materials. However, the following procedure will be adequate for break-in of JET-supplied blades on lower alloy ferrous materials.

1. Clamp a section of round stock in the vise. The stock should be 2 inches or larger in diameter.
2. Operate the saw at low speed. Start the cut with a very light feed rate.
3. When the saw has completed 1/3 of the cut, increase the feed rate slightly and allow the saw to complete the cut.
4. Keep the hydraulic cylinder needle valve in the same position and begin a second cut on the same or similar workpiece.
5. When the blade has completed about 1/3 of the cut, increase the feed rate.

Watch the chip formation until cutting is at its most efficient rate and allow the saw to complete the cut (refer to *Evaluating Blade*

Efficiency below). The blade is now considered ready for use.

Operations

Hydraulic Feed Control

The weight of the saw head provides the force needed to cut through the workpiece. The cut-off saw has a hydraulic cylinder that controls the feed rate of the saw.

The hydraulic feed control circuit consists of a single acting *hydraulic cylinder* and a *feed rate control*. The feed control cylinder resists motion in the downward direction to control the feed rate. The control cylinder offers no resistance when raised upward.

The *feed rate adjustment* (G, Fig. 4) controls the rate at which the saw head is lowered. The control knob (needle valve) controls the rate at which the hydraulic fluid is released from the hydraulic cylinder. When the needle valve is closed, the cylinder is locked. With the needle valve slightly open, the cylinder permits slow, or light, downward force. Opening the needle valve further increases the feed rate.

The needle valve is adjusted until the saw is operating efficiently. The efficiency of operation is usually evaluated by observing chip formation. Blade efficiency is further described below.

A *lever* (F, Fig. 5) is used to permit or stop the saw head from descending regardless of the *feed rate adjustment* (G, Fig. 5) setting.

Evaluating Cutting Efficiency

Is the blade cutting efficiently? The best way to determine this is to observe the chips formed by the cutting blade.

If the chip formation is powdery, then the feed is much too light or the blade is dull.

If the chips formed are curled, but colored – blue or straw colored from heat generated during the cut – then the feed rate is too high.

If the chips are slightly curled and are not colored by heat – the blade is sufficiently sharp and is cutting at its most efficient rate.

Setting the Work Stop

Referring to Figure 7:

The *work stop* is an accessory that is included with the JET J-9180 Bandsaw. It is used to set up the saw for making multiple cuts of the same length.

CAUTION Do not allow the blade to rest on the workpiece when the saw is not cutting.

Installation

1. Screw the threaded end of the *distance set rod* (A) into the hole at the front of the base (B) as shown.
2. Secure by tightening the *lock nut* (C) with a 22mm hex wrench.

Adjustment

3. The *distance set bracket* (D) is moved along the *distance set rod* (A) by loosening the *lock handle* (H). The *stop rod* (F) can be repositioned (G) by loosening *lock handle* (E) – also by loosening the *lock nut* (C) and rotating the *set rod* (A) to reposition the angle of the *bracket* (D).

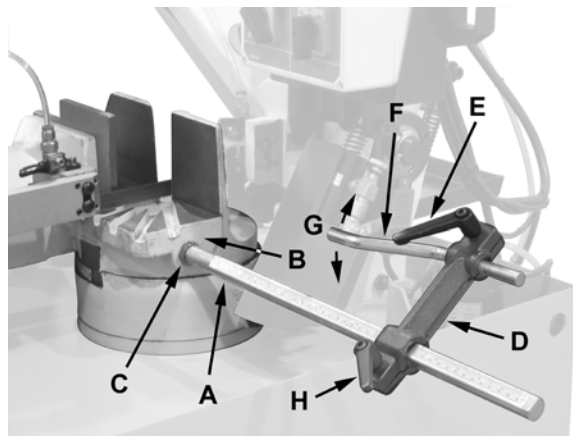


Figure 7

Quick Release Vise Operation

Referring to Figure 8:

The vise on the J-9180 bandsaw comes equipped with a quick-release handle that permits the workpiece to be rapidly repositioned or changed for a repeated cutting operation while requiring only one initial adjustment of the vise handwheel. This is done as follows:

1. Place the *quick-release handle* (A) in the up position as shown.
2. Turn the *handwheel* (B) counterclockwise until the workpiece can be placed in position.
3. Place the *workpiece* (C) in the *vise* (D) and against the *work stop* (E); turn the *handwheel* (B) until the vise begins to clamp onto the workpiece. Then back the handwheel off just enough to permit the workpiece to slide in and out of the vise.
4. Place the *quick-release handle* (A) in the down position. The workpiece is secure and ready for cutting.

The vise is now set up for a repeated cutting operation. Simply raise the quick-release handle, reposition or replace the workpiece and reset the handle down again.

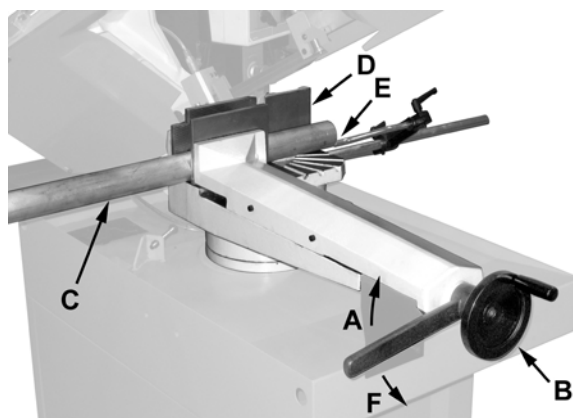


Figure 8

Miter Cuts

Referring to Figure 9, the J-9180 bandsaw is capable of making angle cuts from 0–60°. The vise remains stationary while the saw head is adjusted as follows:

1. Place the *saw head* (F) in the raised position so the blade doesn't catch in the table slots.
2. Set the *lock handle* (A) to the *unlock* position as indicated by the arrows.
3. Using *handles* (B and C), rotate the *saw head* (F) to any desired angle within a range of 0° (square cut) to 60°, setting it to the *scale* (D) on the base.
4. Set the *lock handle* (A) to the *lock* position.

Note: Two *miter stops* (E) on either side of the saw base set the miter range of 0–60°. Adjust only if necessary so the saw travel stops at 0° and 60°.

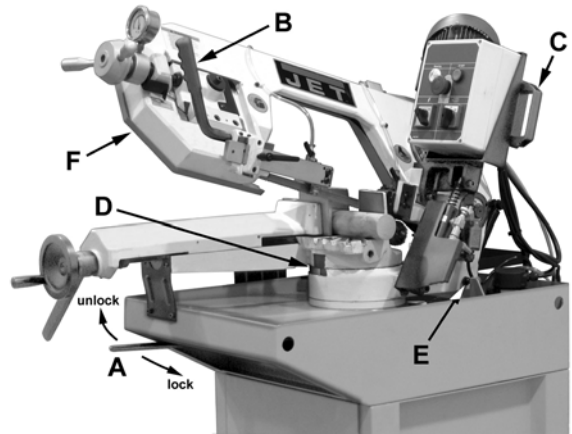


Figure 9

Coolant Flow Control

CAUTION The coolant pump must be submerged before operating to prevent damage to the pump.

A coolant pump, which provides coolant to the workpiece, runs at all times when the machine is turned on.

Two *coolant flow control valves* (A, Fig. 10), located on the top of the bearing blocks, control the amount of flow from the nozzles. Coolant flow should be adjusted to be no more than the saw blade can draw into the workpiece by the movement of the blade. To stop coolant flow, turn the control valves fully counterclockwise.

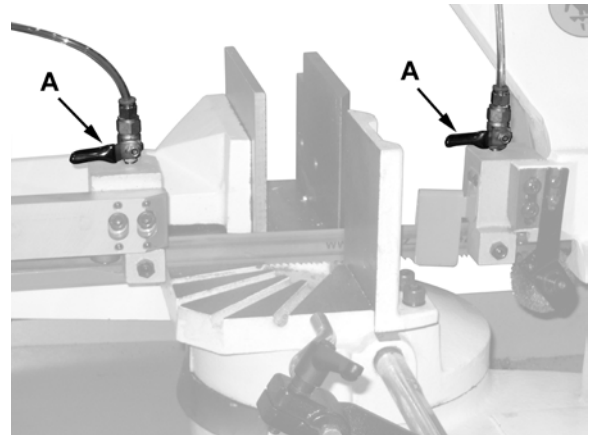


Figure 10

Adjustments

Blade Guide Adjustment

Refer to Figure 11. The J-9180 Bandsaw has two blade guide assemblies; one is stationary (A) and mounted to the body of the saw head. The other, consisting of a *blade guide support* or *bracket* (B) and *blade guide* (C), is adjustable.

The position of the blade guides is important in order to make accurate cuts and prolong blade life and is determined by the size of the workpiece. Adjustment is made as follows:

1. Place the *workpiece* (D) in the *vise* (E) and clamp tightly.
2. Loosen the *lock handle* (F).
3. Slide the *guide support* (B) left or right so that it just clears the piece to be cut (D).
4. Tighten the *lock handle* (F).

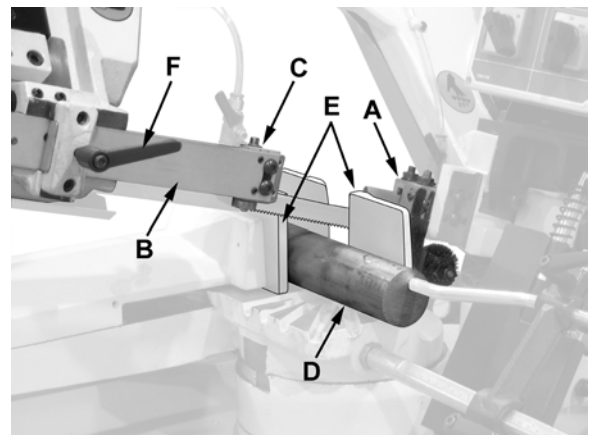


Figure 11

Guide Bearing Adjustment

Referring to Figure 12:

Guide bearings are located on either side of the saw blade and provide stability for the blade when the saw is in operation. These bearings rotate on an eccentric shaft so the distance from the blade can be adjusted for optimal performance.

Guide bearings are initially adjusted at the factory and should rarely require adjustment.

It is always better to try a new blade when cutting performance is poor. If performance remains poor after changing the blade, check the blade guides for proper guide bearing spacing. For most efficient operation and maximum accuracy, clearance between the blade and the guide bearings should be 0.001-inch. The bearings will still turn freely with this clearance. If the clearance is incorrect, the blade may track off the drive wheel.

⚠WARNING Disconnect the bandsaw saw from its electrical power source.

If required, adjust *guide bearings* on one assembly then the other as follows:

1. Using a 14mm wrench loosen two *lock nuts* (A) that secure the *eccentric bushings* (B) while maintaining the positions of the eccentric bushings with a 6mm wrench.
2. Position the *bearings* (B) by adjusting the *bushings* (C) with the 6mm wrench. Set the clearance between the *bearings* (B) and *blade* (D) at approximately 0.001 inch.

Note: Only the bearing towards the front is mounted on an eccentric bushing. Make adjustments on this bearing.

When properly adjusted, the blade should be in a vertical position between the bearings as shown in Figure 13.

3. While maintaining the new position of the bushings with the 6mm wrench, secure the settings by tightening the *lock nuts* (A).

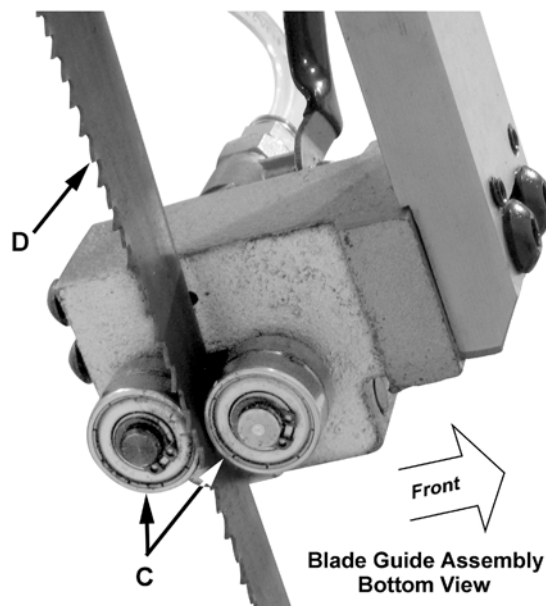
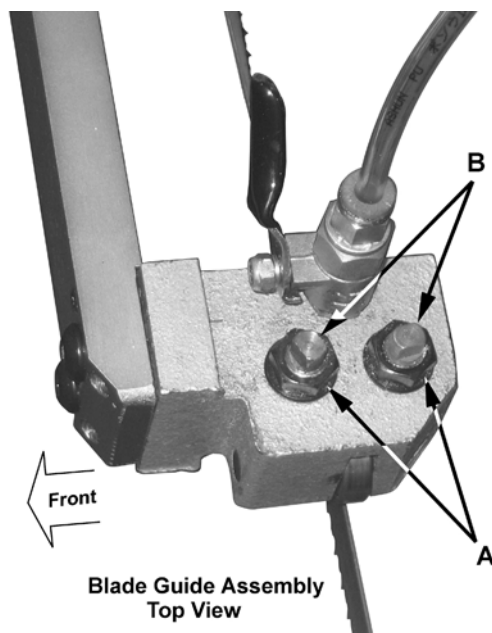


Figure 12

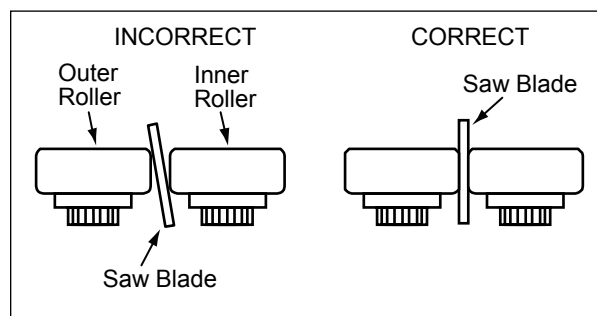


Figure 13

Blade Tension

Blade tension is covered in the *Changing Blades* section on page 15.

Limit Switch Adjustment

Refer to Figure 14.

The J-9180 bandsaw should shut off automatically when a cut is completed. If not, the *limit switch* (A) located below the *control panel* (Figure 1) probably needs to be adjusted as follows:

⚠ WARNING Disconnect the cut-off saw from its electrical power source.

1. Place the saw in the lowered position to represent the completion of a cutting operation.

The *microswitch wheel* (E) should be pressed against the *plate* (F) which is attached to the *hydraulic cylinder bracket* (G). If this is not the case, make a note of how much the *switch assembly* (A) should be repositioned upwards.

2. Using a crosspoint screwdriver, remove two screws (C) and the switch (A) from its *mounting plate* (B).
3. With a 3mm hex wrench, loosen two screws (D) and reposition the mounting plate (B) as determined in step 1.
4. Tighten the mounting plate screws (D) and reinstall the switch assembly (A).
5. Test to verify that the bandsaw shuts off when a cut is completed. If it does not, repeat above steps.

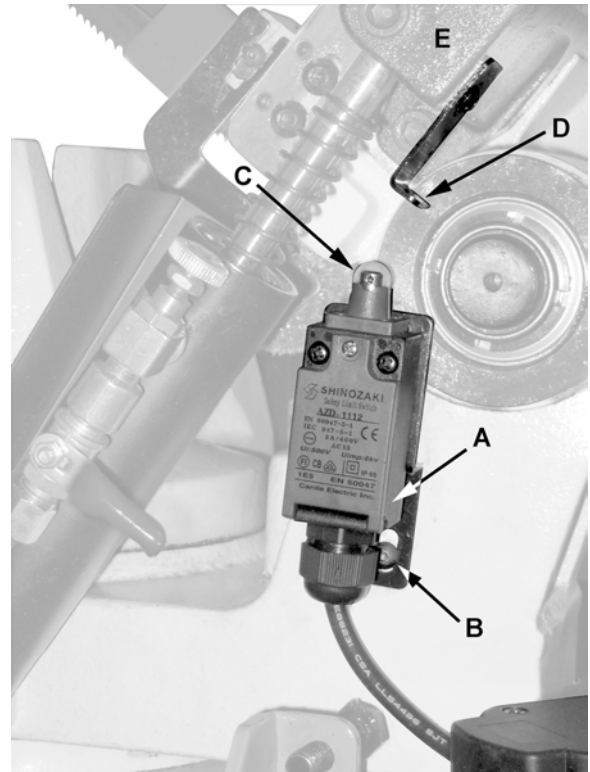


Figure 14

Maintenance

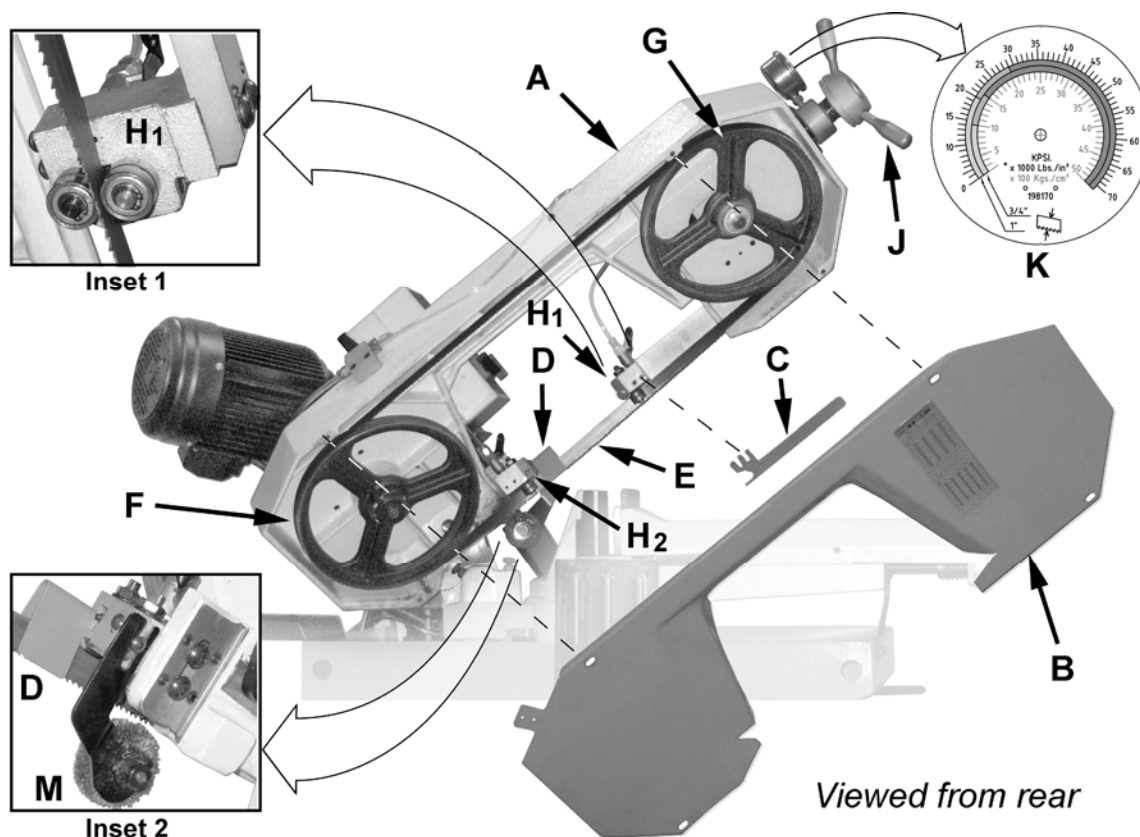


Figure 15

Changing Blades

Refer to Figure 15 except where specified otherwise.

⚠ WARNING Use leather gloves when changing the saw blade to protect your hands from cuts and scratches. Use protective eye wear that meets ANSI Specification Z87.1

⚠ WARNING Disconnect the cut-off saw from its electrical power source.

Tools required:

- 3mm, 4mm and 5mm hex wrenches
- 12mm wrench

Removing the Blade

1. Lock the hydraulic cylinder that controls the descent of the saw head with the *feed rate start/stop control* (F, Fig. 5). Raise the saw head (A) about half way up.
2. Remove the *wheel cover* (B) and *blade guards* (C, D) and brush (Inset 2 - M).
3. Turn the *blade tension handle* (J) counter-clockwise until the *blade* (E) hangs loose.

4. Pull the *blade* (E) off the *drive wheel* (F) and *idler wheel* (G) and out of the *blade guides* (H₁, H₂). Store the removed blade carefully before proceeding.

Installing New Blade

5. Slide the new blade into the *blade guides* (H₁, H₂, Inset 1), then loop the blade (E) around the *drive wheel* (F) and *idler wheel* (G) such that the teeth face towards the rear of the saw and the smooth side faces towards the front.
6. Push the blade so it seats against the shoulders of the *wheels* (F, G).

Adjusting the proper Blade Tension

7. When it is seated against the shoulder, turn the *blade tension handle* (J) clockwise to increase the tension until the scale for the 3/4" blade tension measures 14–21KPSI (green zone) on the tension indicator (K).
8. Replace the *wheel cover* (B) and *blade guards* (C, D) and *brush* (M).
9. Reconnect the saw to the electrical power source.

Cleaning

Clean off any preservative on machine surfaces.

After cleaning:

1. Coat machined surfaces of the cutoff saw with a medium consistency machine oil. Reapply the oil coating at least every six months.
2. Clean up accumulated saw cuttings after use. Make sure the lead screw and rapid nut are kept free from saw cuttings and other material that would cause damage.
3. Clean the chip sludge from the coolant tank. The frequency should be determined by how often the saw is used.

Lubrication

Lubricate the following components at the specified frequencies and using the lubricants defined as follows:

Ball Bearings – the bearings are lubricated and sealed – periodic lubrication is not required.

Blade Guide Bearing – the bearings are lubricated and sealed – periodic lubrication is not required.

Wheel Bushings – six to eight drops of oil each week.

Pivot Points, Shafts, and Bearing areas – six to eight drops of oil each week.

Coolant

Change coolant on a frequency appropriate to the type of coolant being used. Oil based coolants can sour. Refer to the coolant supplier's instructions for change frequency.

The general-purpose coolant is a mixture of water-soluble oil or synthetic based coolant and water. Mix one part of coolant to ten parts of water (one quart of oil to ten quarts water). Ten quarts of coolant is the amount required for the coolant pump to operate properly.

There are numerous coolants on the market that are formulated for special applications. Consult your local distributor for details in the event you have a long range production task, or are required to cut some of the more exotic materials.

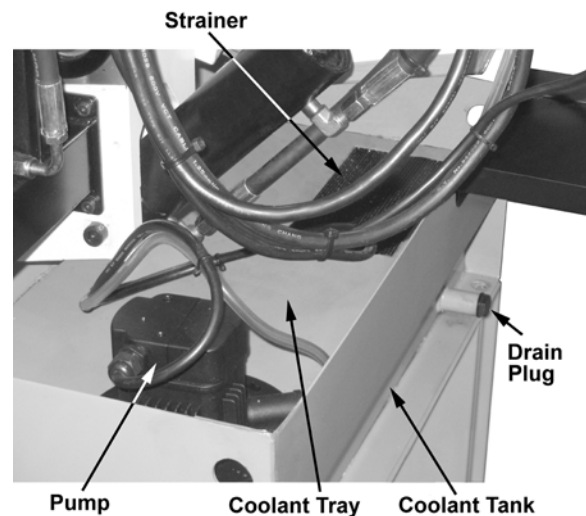


Figure 16

Troubleshooting

Fault	Probable Cause	Suggested remedy
Excessive blade breakage	<ol style="list-style-type: none"> 1. Material loose in vise. 2. Incorrect speed or feed. 3. Teeth too coarse for material. 4. Incorrect blade tension. 5. Saw blade is in contact with work-piece before the saw is started. 6. Misaligned guides. 7. Cracking at weld. 	<ol style="list-style-type: none"> 1. Clamp work securely. 2. Check Machinist's Handbook for speed/feed appropriate for the material being cut. 3. Check Machinist's Handbook for recommended blade type. 4. Adjust blade tension to the point where the blade just does not slip on the wheel. 5. Start the motor before placing the saw on the workpiece. 6. Adjust guides. 7. Longer annealing cycle.
Premature blade dulling	<ol style="list-style-type: none"> 1. Blade teeth too coarse. 2. Blade speed too high. 3. Inadequate feed pressure. 4. Hard spots in workpiece or scale on/in workpiece. 5. Work hardening of material (especially stainless steel). 6. Insufficient blade tension. 7. Operating saw without pressure on workpiece. 	<ol style="list-style-type: none"> 1. Use a finer tooth blade. 2. Try a lower blade speed. 3. Decrease spring tension. 4. Increase feed pressure (hard spots). Reduce speed, increase feed pressure (Scale). 5. Increase feed pressure by reducing spring tension. 6. Increase tension to proper level. 7. Do not run blade at idle in/on material.
Bad cuts (crooked)	<ol style="list-style-type: none"> 1. Workpiece not square with blade. 2. Feed pressure too fast. 3. Guide bearings not adjusted properly. 4. Inadequate blade tension. 5. Span between the two blade guides too wide. 6. Dull blade. 7. Incorrect blade speed. 8. Blade guide assembly is loose. 9. Blade guide bearing assembly loose. 10. Blade track too far away from wheel flanges. 11. Guide bearing worn. 	<ol style="list-style-type: none"> 1. Adjust vise so it is square with the blade. (Always clamp the workpiece tightly in the vise.) 2. Decrease pressure. 3. Adjust guide bearing clearance to 0.001 inch (0.002 inch maximum). 4. Gradually increase blade tension. 5. Move blade guide bracket closer to work. 6. Replace blade. 7. Check blade speed. 8. Tighten blade guide assembly. 9. Tighten blade guide bearing assembly. 10. Adjust blade tracking. 11. Replace worn bearing.

Troubleshooting

Fault	Probable Cause	Suggested remedy
Bad cuts (rough)	1. Blade speed too high for feed pressure. 2. Blade is too coarse.	1. Reduce blade speed and feed pressure. 2. Replace with finer blade.
Blade is twisting	1. Blade is binding in the cut. 2. Blade tension too high	1. Decrease feed pressure. 2. Decrease tension on Blade
Unusual wear on side/back of blade	1. Blade guides worn 2. Blade guide bearings not adjusted. 3. Blade guide bearing bracket is loose.	1. Replace blade guides. 2. Adjust blade guide bearings. 3. Tighten blade guide bearing bracket.

Parts

Replacement Parts

Replacement parts are listed on the following pages. To order parts or reach our service department, call 800-274-6848 between 7:30 a.m. and 5:30 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.

Saw Assembly – Parts

Index No.	Part No.	Description	Size	Qty
1	J-9180-01	Body Frame		1
2	J-9180-02	Anchor Block		1
2A	9180-02A	Anchor Plate		1
2B	TS-2245102	Button Head Socket Screw	M5x10	2
3	9180-03	Shaft		1
4	TS-1504041	Socket Head Cap Screw	M8x20	1
5	9180-05	Bearing Cover		2
6	9180-06	Tapered Bearing		2
7	9180-07	Washer		1
10-1	9180-10-1	Blade Tension Gauge		1
11	9180-11	Bearing		1
12	9180-12	Handle		2
13	9180-13	Hub		1
14	9180-14	Spring Washer	øID16.3xø31.5x1.8t	10
15	9180-15	Lead Screw		1
16	TS-154010	Hex Nut	M16	1
17	TS-1504051	Socket Head Cap Screw	M8x25	3
18	9180-18	Fixed Block		1
19	9180-19	Pin	ø 5x40	2
20	TS-1503051	Socket Head Cap Screw	M6x20	2
21	9180-21	Fixed Block		1
22	TS-2248252	Button Head Socket Screw	M8x25	2
23	TS-1523051	Set Screw	M6x16	2
23-1	TS-1523061	Set Screw	M6x20	6
24	9180-24	Locking Handle	M8x30	1
25	9180-25	Blade Adjust Bar		1
26	TS-1524021	Set Screw	M8x10	2
27	TS-1503021	Socket Head Cap Screw	M6x10	1
28	9180-28	Lift Handle		1
29	9180-29	Handle Grip		1
30	9180-30	Fixed Plate		1
36-1	TS-1505081	Socket Head Cap Screw	M10x60	1
37	9180-37	Bearing Shaft		2
38	9180-38	Guide Block (Front)		1
39-1	TS-1551071	Lock Washer	M10	1
40	9180-40	Hose Clip	ø8	3
41	TS-1504031	Socket Head Cap Screw	M8x16	3
43	9180-43	Eccentric Guide		2
44	BB-608ZZ	Bearing	608ZZ	10
45	9180-45	C-Retainer Ring	ø8	4
46	9180-46	Eccentric Guide		2
47	TS-2245122	Button Head Socket Screw	M5x12	2
48	J-9180-48	Blade Guard (Front)		1
50	TS-1550031	Flat Washer	M5	2
51	9180-51	Hex Nut	M10xP1	4
52	TS-2361101	Lock Washer	M10	4
53	J-9180-53	Deflector Plate		1
54	9180-54	Guide Block (Rear)		1
56	9180-56	Button Head Socket Screw	M8x35	2
58S	9180-58S	Brush Assembly		1
58-1	9180-58-1	Brush Support		1
58-2	9180-58-2	Brush		1
58-3	TS-1482061	Hex Cap Screw	M6x30	1
58-4	9180-58-4	Washer	ø6.5xø18xT1.5mm	1
58-6	TS-1540041	Hex Nut	M6	1

Saw Assembly – Parts

Index No.	Part No.	Description	Size	Qty
61	9180-61	Cover		1
62	TS-2248162	Button Head Socket Screw	M8x16	2
64	TS-1524041	Set Screw	M8x16	1
65	9180-65	Frame Pivot Shaft		1
67	9180-67	Tapered Bearing		2
69	9180-69	Cover		2
70	9180-70	Washer		2
71	9180-71	Motor	1HP, 3Ph, 230V	1
72	TS-1482051	Hex Cap Screw	M6x25	4
73	TS-2361061	Lock Washer	M6	4
74S	9180-74S	Gear Box	3Ph, 1:28	1
75	TS-1551071	Lock Washer	M10	4
76	TS-1505031	Socket Head Cap Screw	M10x25	4
77	9180-77	Hose	ø6x750L	1
78	9180-78	Hose Fitting	ø8x1/4"PT	1
79	TS-1503041	Socket Head Cap Screw	M6x16	2
80	9180-80	Coolant Block		1
81	9180-81	Hose	ø6x240L	1
82	9180-82	Valve	1/8"	2
83	9180-83	Hose Fitting	ø6x1/8"PT	4
84	9180-84	Bushing		1
85	TS-1505031	Socket Head Cap Screw	M10x25	1
86	9180-86	Washer		1
87	9180-87	Round Head Key	8x7x50	1
88	9180-88	Output Shaft		1
89	9180-89	Round Head Key	7x7x30	1
90	9180-90	Bearing		1
91	9180-91	Spring		1
92	9180-92	Spring		1
96	9180-96	Idler Wheel		1
99	9180-99	Nut	M20xP1	1
100	5674035	Blade (Standard)	3/4"x.035x82"x5/8VT	1
	5674036	Blade (Optional)	3/4"x.035x82"x6/10VT	
	5674037	Blade (Optional)	3/4"x.035x82"x10/14VT	
101	9180-101	Drive Wheel		1
102	9180-102	Drive Shaft Washer		1
103	TS-1491031	Hex Cap Screw	M10x25	1
104	9180-104	Frame Back Cover		1
105	TS-1503041	Socket Head Cap Screw	M6x16	4
106	TS-1550041	Flat Washer	M6	4
111	TS-2245162	Button Head Socket Screw	M5x16	2
112	TS-1550031	Flat Washer	M5	2
113	TS-1550031	Flat Washer	M5	1
114	TS-2245122	Button Head Socket Screw	M5x12	1
161	9180-161	Scale		1
162	9180-162	Rivet	ø2X6	2
165S	9180-165	Stock Stop Assembly		1
165-1	9180-165-1	Stop Block		1
165-2	TS-1550061	Flat Washer	M8	2
165-3	9180-165-3	Locking Handle		2
165-4	9180-165-4	Stock Stop Rod		1
165-5	9180-165-5	Distance Set Rod		1
165-6	TS-2310142	Hex Nut	M14xP1.5	1
165-7	9180-165-7	Scale		1
165-8	9180-165-8	Rivet	ø2	4
170	9180-170	Hand Wheel		1
171	9180-171	Pin	ø5x35	1

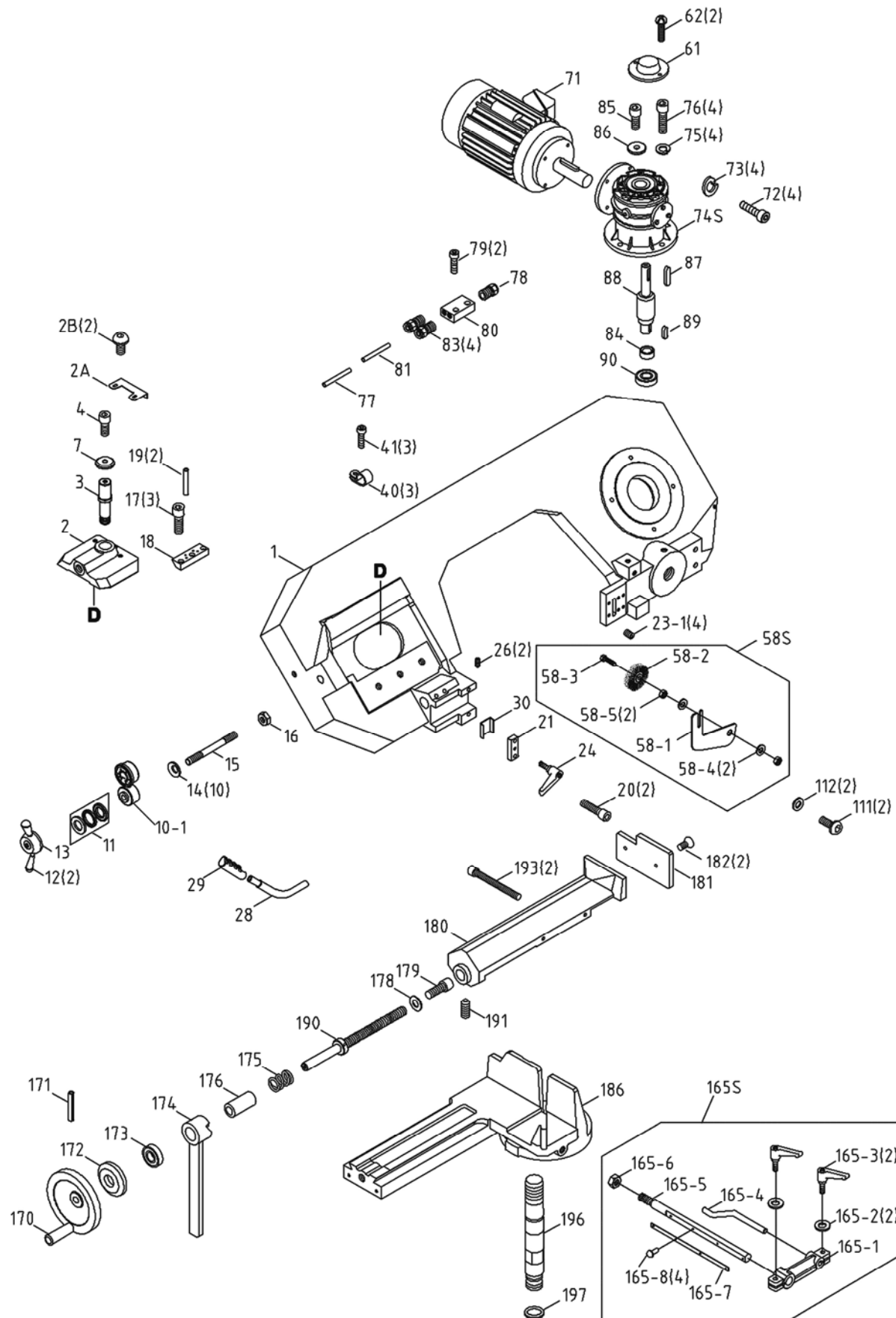
Saw Assembly – Parts

Index No.	Part No.	Description	Size	Qty
172	9180-172	Bearing Cover		1
173	9180-173	Bearing	ø30xø47x3.5	1
174	9180-174	Vise Handle		1
175	9180-175	Spring		1
176	9180-176	Bushing		1
178	9180-178	Washer		1
179	TS-1503041	Socket Head Cap Screw	M6x16	1
180	J-9180-180	Front Moveable Vise Jaw		1
181	9180-181	Vise Jaw Insert		1
182	TS-1514011	Flat Head Socket Screw	M6x12	2
186	J-9180-186	Rear Stationary Vise Jaw		1
190	9180-190	Lead Screw		1
191	TS-1524051	Set Screw	M8x20	1
193	TS-2236911	Socket Head Cap Screw	M6x100	2
194	J-9180-194	Swivel Arm		1
195	TS-1540071	Hex Nut	M10	2
196	9180-196	Vise Swivel Rod		1
197	9180-197	O-Retainer Ring	ø19.8xø2.4	1
198	TS-2210451	Hex Cap Screw	M10x45	2
200	9180-200	Bushing		1
201	9180-201	Nut		1
202	9180-202	Spring Eye Bolt		1
202-1	TS-1540071	Hex Nut	M10	1
203	9180-203	Cylinder Assembly		1
204	TS-2360121	Flat Washer	M12	2
205	TS-1506131	Socket Head Cap Screw	M12x80	1
207	TS-1523051	Set Screw	M6x16	2
208	TS-1540081	Hex Nut	M12	1
210	9180-210	Cylinder Cover		1
214	9180-214	Control Box Label		1
215		Electrical Control Box Assembly (Reference Only)		1
216	9180-216	Hex Socket Plug	3/8"PT	1
216-1	9180-216-1	Washer		1
218	9180-218	O-Retainer Ring	ID170x5.7W	1
219	TS-1551071	Lock Washer	M10	6
220	TS-1505021	Socket Head Cap Screw	M10x20	6
221	J-9180-221	Stand Top		1
221-1	9180-221-1	Swivel Arm Base		1
222	9180-222	Screen		1
223	TS-2284082	Pan Head Screw	M4x8	2
224	9180-224	Stop Bolt	M10x50	1
224-1	9180-224-1	Stop Bolt	M10x100	1
225	TS-1540071	Hex Nut	M10	2
227	TS-1491031	Hex Cap Screw	M10x25	2
228	TS-2361101	Lock Washer	M10	2
229	9180-229	Fixed Plate		1
230	TS-2246102	Button Head Socket Screw	M6x10	2
231	TS-1505051	Socket Head Cap Screw	M10x35	1
232	9180-232	Nut		1
233	9180-233	Swivel Lock Handle		1
234	TS-1550071	Flat Washer	M10	4
235	TS-1505021	Socket Head Cap Screw	M10x20	4
240	9180-240	Pump	1/8HP	1
241	TS-1534052	Pan Head Screw	M6x16	2
242	TS-2361061	Lock Washer	M6	2
243	9180-243	Elbow	3/8"X3/8"	1
245	9180-245	Hose	ø8x1300L	1

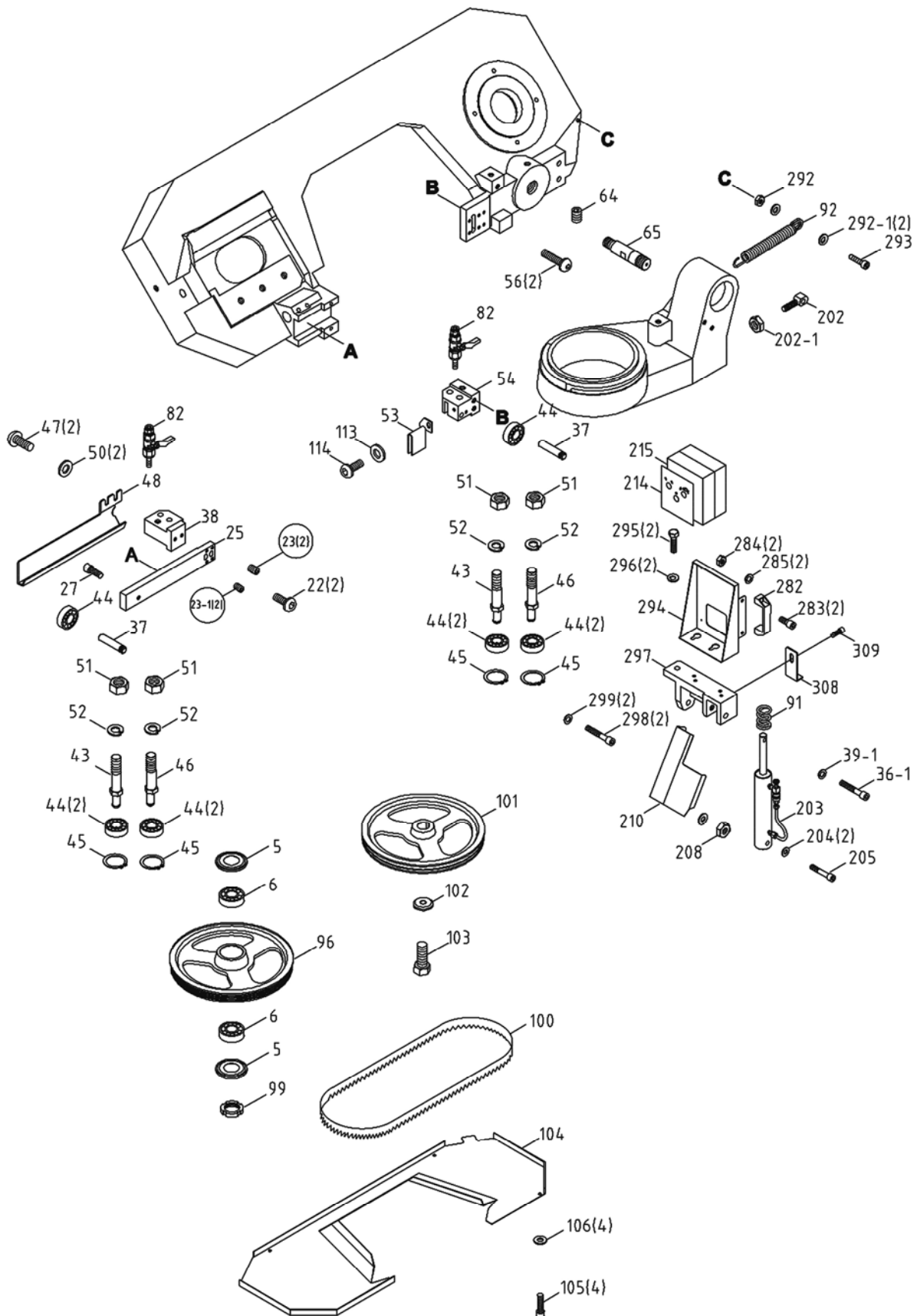
Saw Assembly – Parts

Index No.	Part No.	Description	Size	Qty
241	TS-1534052	Pan Head Screw	M6x16	2
242	TS-2361061	Lock Washer	M6	2
243	9180-243	Elbow	3/8"X3/8"	1
245	9180-245	Hose	ø8x1300L	1
248	9180-248	Tray		1
249	9180-249	Feed Support		1
	9180-250	Stand Panel Set (Index #250-1, 250-2)		1
250-1	J-9180-250-1	Stand Panel (Front/Back)		2
250-2	J-9180-250-2	Stand Panel (Side)		2
253	TS-1490031	Hex Cap Screw	M8x20	12
254	TS-1550061	Flat Washer	M8	24
255	TS-1540061	Hex Nut	M8	12
258	9180-258	Bracket		1
259	TS-1550031	Flat Washer	M5	2
260	TS-1502021	Socket Head Cap Screw	M5x10	2
282	9180-282	Handle		1
283	TS-1504031	Socket Head Cap Screw	M8x16	2
284	TS-1540061	Hex Nut	M8	2
285	TS-2361081	Lock Washer	M8	2
292	TS-1540071	Hex Nut	M10	1
292-1	TS-2360121	Flat Washer	M10	2
293	TS-1505061	Socket Head Cap Screw	M10x40	1
294	9180-294	Control Box Base		1
295	TS-1490031	Hex Cap Screw	M8x20	2
296	TS-1550061	Flat Washer	M8	2
297	9180-297	Cylinder Bracket		1
304	TS-1503041	Socket Head Cap Screw	M6x16	2
305	TS-1551041	Lock Washer	M6	2
306	TS-1550041	Flat Washer	M6	2
307	TS-1540041	Hex Nut	M6	2
308	9180-308	Plate		1
309	TS-1502021	Socket Head Cap Screw	M5x10	1

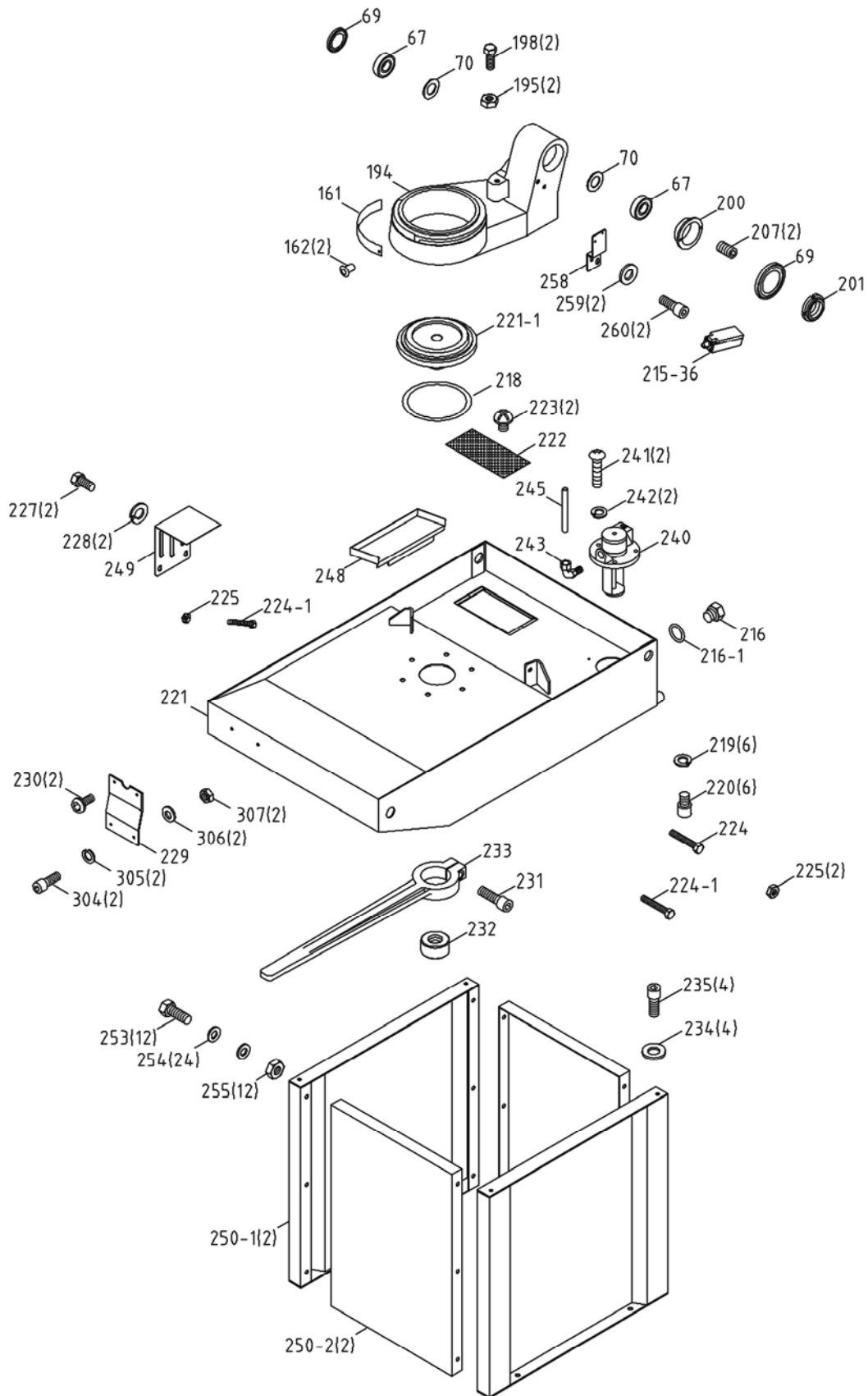
Saw Assembly Drawing (1 of 3)



Saw Assembly Drawing (2 of 3)



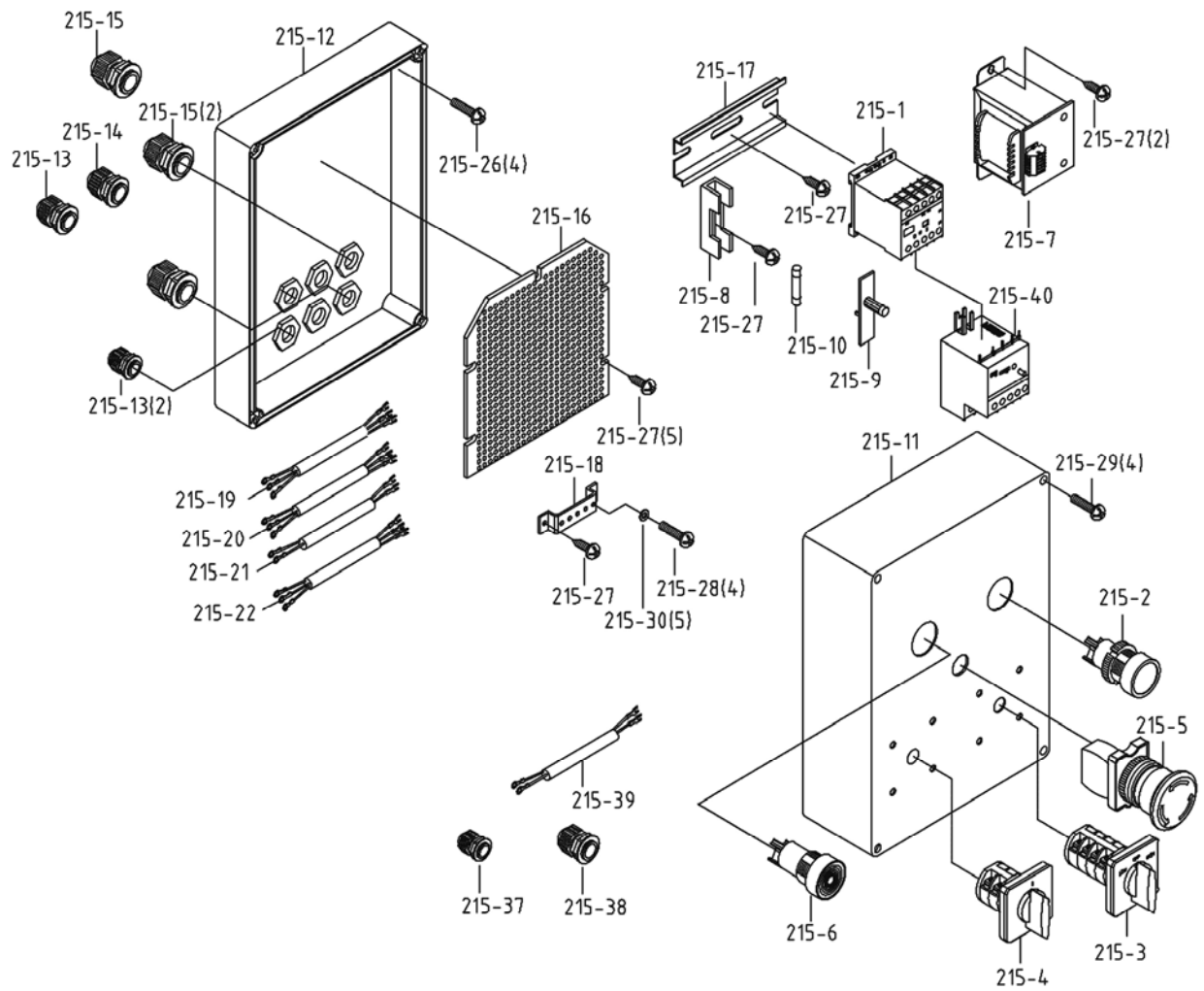
Saw Assembly Drawing (3 of 3)



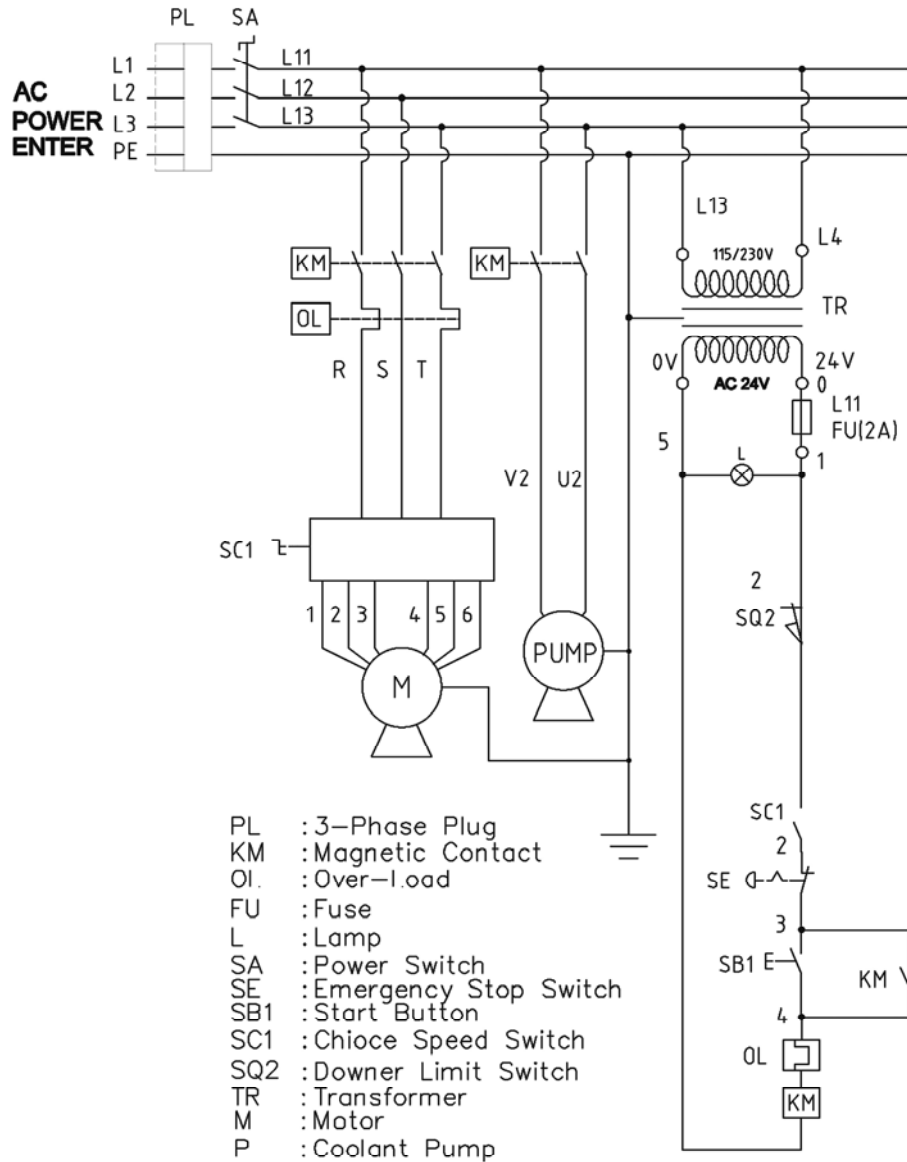
Electrical Box Assembly – Parts

Index No.	Part No.	Description	Size	Qty
215		Electrical Control Box Assembly: 3Ph (Reference Only)		1
215-1	9180-215-1	Magnetic Contactor		1
215-2	9180-215-2	Push Button Start Switch		1
215-3	9180-215-3	Speed Switch		1
215-4	9180-215-4	On/Off Switch		1
215-5	9180-215-5	Emergency Stop Switch		1
215-6	9180-215-6	Power Lamp		1
215-7	9180-215-7	Transformer		1
215-8	9180-215-8	Fuse Base		1
215-9	9180-215-9	Fuse Lid		1
215-10	9180-215-10	Fuse	2A	1
215-11	J-9180-215-11	Electrical Box Cover		1
215-12	J-9180-215-12	Electrical Box		1
215-13	9180-215-13	Cable Relief		3
215-14	9180-215-14	Cable Relief		1
215-15	9180-215-15	Cable Relief		3
215-16	9180-215-16	Net Plate		1
215-17	9180-215-17	Rail		1
215-18	9180-215-18	Bracket		1
215-19	9180-P4C15	Power Cable (for 3Ph)	4cx1.5mm	1
215-20	9180-M4C15	Motor Cable (for 3Ph)	4cx1.5mm	1
215-21	9180-215-21	Limit Cable		1
215-22	9180-215-22	Pump Cable		1
215-26	TS-1533032	Pan Head Screw	M5x10	4
215-27	9180-215-27	Tapping Screw	M4x8	11
215-28	9180-215-28	Screw	M4x6	4
215-29	TS-1532052	Pan Head Screw	M4x16	4
215-30	9180-215-30	Washer	M5	5
215-36	9180-215-36	Limit Switch		1
215-37	9180-215-37	Cable Relief		1
215-38	9180-215-38	Cable Relief		1
215-39	9180-215-39	Wire		1
215-40	9180-OL-3	Overload (for 3Ph)	3.7-5.5A	1

Electrical Box Assembly



Wiring Diagram



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