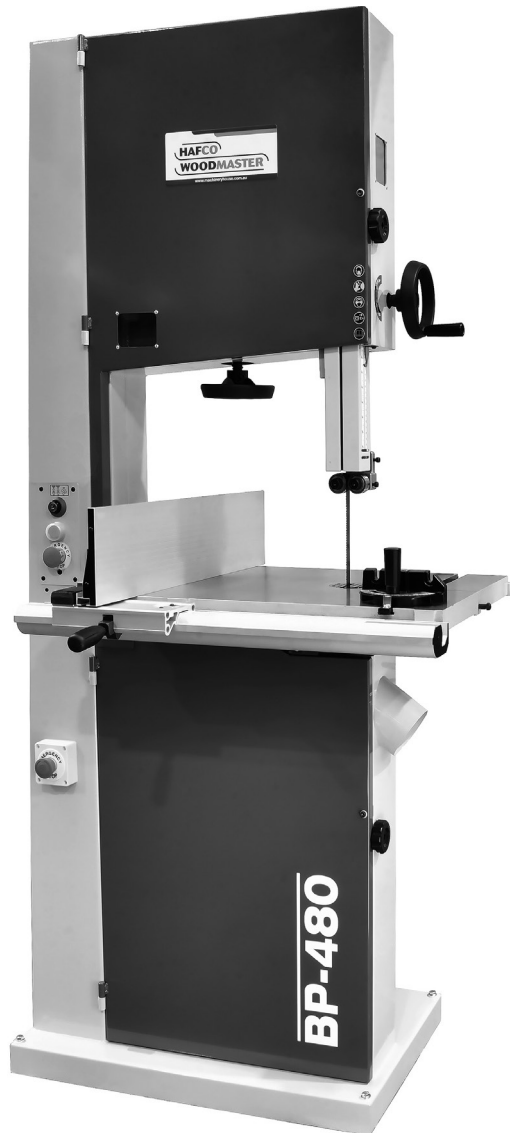


HAFCO

WOODMASTER



Edition : 2.0
Date: (08/25)

Instruction Manual

WOOD BAND SAW

BP-480 CE

Order Code: (W4346)

MACHINE DETAILS

MACHINE.	Wood Band Saw
MODEL NO.	BP-480 CE
SERIAL NO.	
DATE OF MANF.	

Imported by

Australia



www.machineryhouse.com.au

New Zealand



www.machineryhouse.co.nz

NOTE:

This manual is only for your reference. At the time of the compiling of this manual every effort to be exact with the instructions, specifications, drawings, and photographs of the machine was taken. Owing to the continuous improvement of the HAFCO WOODMASTER machine, changes may be made at any time without obligation or notice. Please ensure the local voltage is the same as listed on the specification plate before operating any electric machine.

SAFETY SYMBOLS:

The purpose of safety symbols is to attract your attention to possible hazardous conditions



Indicates a potentially hazardous situation causing injury or death

Indicates an alert against unsafe practices.

Note: Used to alert the user to useful information

NOTE:

In order to see the type and model of the machine, please see the specification plate. Usually found on the back of the machine. See example (Fig.1)

HAFCO
WOODMASTER

PRODUCT SPECIFICATIONS

Model: BP-480	Voltage: 415V, 50Hz
Capacity: 465mm	Motor: 1.5 KW
Nett Weight: 174kg	FLC: 8.0 Amps
MFG Date:	

Serial No:

www.machineryhouse.com.au www.machineryhouse.co.nz
Made in Taiwan

Fig.1

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1.1 SPECIFICATIONS

Order Code	W4346
Model	BP-480 CE
Wheel Diameter (Ø) (mm)	480
Throat Capacity (mm)	465
Height Capacity (mm)	310
Maximum Cut with Rip Fence	422
Table Size (mm)	480 x 682
Table Tilt (deg)	Left-10° / Right-45°
Frame Type	Steel
Motor Power (kW / hp)	1.5 / 2 [WITH BRAKE SYSTEM]
Voltage / Amperage (V / A)	415 / 3.3
Blade Code	W434A, W434B
Blade Size (L x W x T) (mm)	3630 x 19 x 0.65
Blade Width (mm)	6 ~ 25 [3/4 Standard]
Blade Speed (F.P.M)	1500 / 3200
Floor Space (W x D x H) (mm)	960 x 850 x 1935
Nett Weight (kg)	180.5
Gross Weight (kg)	208.5

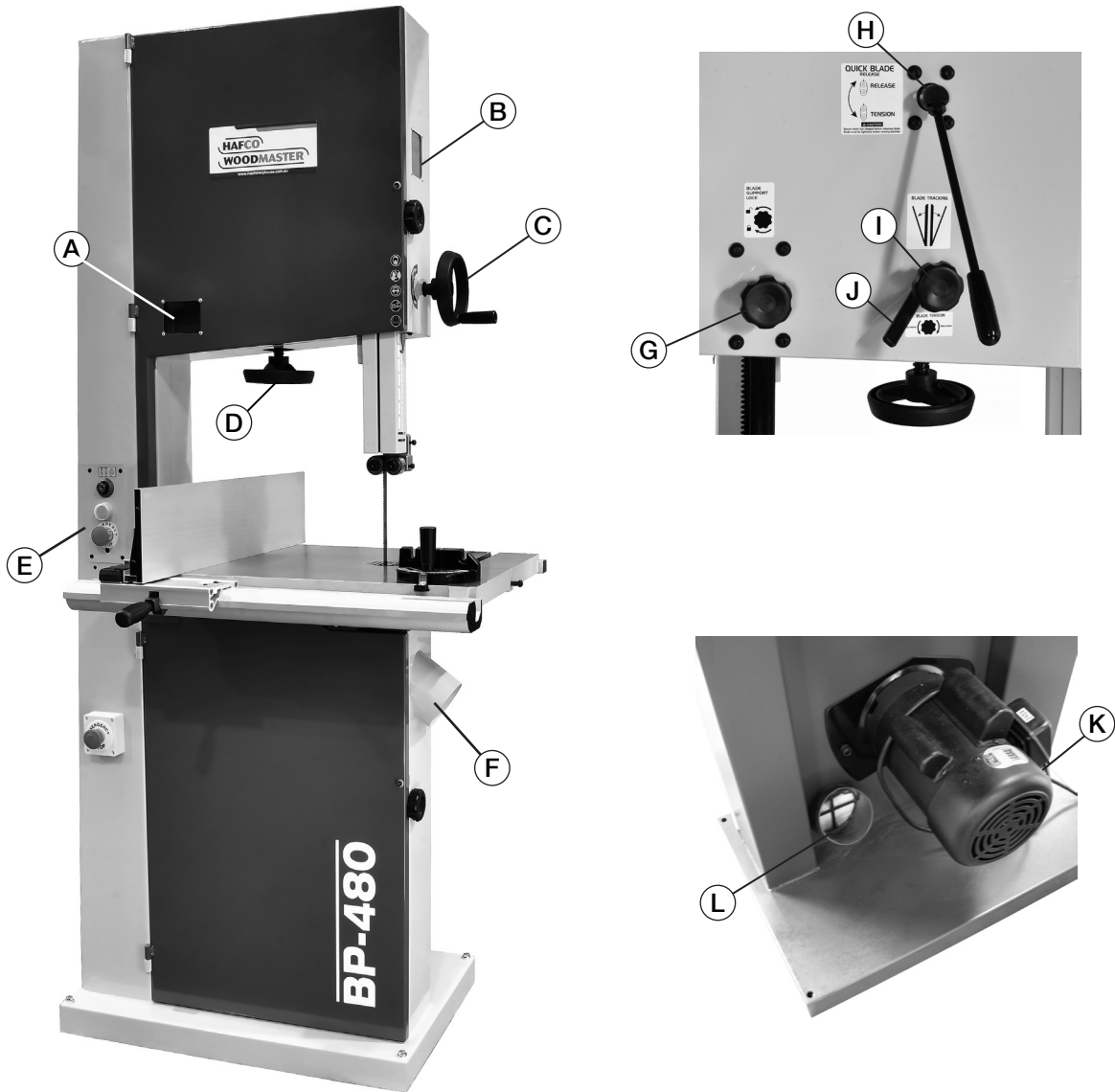
1.2 INCLUDED ACCESSORIES

- 1 x High / Low ripping fence
- 1 x Mitre gauge
- 1 x 6TPI, Blade - 3630 x 19 x 0.65mm



1.3 IDENTIFICATION

Become familiar with the names and locations of the controls and features shown below to better understand the instructions when mentioned later in this manual.



A	Blade Tension Scale	G	Guide Post Clamp
B	Blade Tracking Window	H	Blade Quick Release
C	Guide Post Hand Wheel Handle	I	Tracking Control Knob
D	Blade Tension Handle	J	Tracking Control Knob Lock
E	Control Panel	K	Motor
F	Dust Chute	L	Dust Port

2. IMPORTANT INFORMATION

2.1 GENERAL WOODWORKING SAFETY REQUIREMENTS

DO NOT use this machine unless you have read this manual or have been instructed in the use of this machine in its safe use and operation.



WARNING

This manual provides safety instructions on the proper setup, operation, maintenance, and service of this machine. Save this manual, refer to it often, and use it to instruct other operators.

Failure to read, understand and follow the instructions in this manual may result in fire or serious personal injury—including amputation, electrocution, or death.

The owner of this machine is solely responsible for its safe use. This responsibility includes, but is not limited to proper installation in a safe environment, personnel training and authorization to use, proper inspection and maintenance, manual availability and comprehension of the application of the safety devices, integrity, and the use of personal protective equipment.

The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.

Exposure to the dust created by power sanding, sawing, grinding, drilling and other construction activities may cause serious and permanent respiratory or other injury, including silicosis (a serious lung disease), cancer, and death. Avoid breathing the dust, and avoid prolonged contact with dust. Some examples of these chemicals are:



- Lead from lead-based paints.
- Crystalline silica from bricks, cement and other masonry products.
- Arsenic and chromium from chemically-treated timber.

Always operate tool in well ventilated area and provide for proper dust removal. Use a dust collection system along with an air filtration system whenever possible. Always use properly fitting approved respiratory protection appropriate for the dust exposure, and wash exposed areas with soap and water.



Safety glasses must be worn at all times in work areas. Earmuffs should be worn if the work area is noisy.



Sturdy footwear must be worn at all times in work areas.



Gloves should NOT be worn when operating machinery. Should only be worn when handling the material.



Long and loose hair must be contained with a net or under a hat.

2.1 GENERAL SAFETY REQUIREMENTS Cont.

DISCONNECT POWER FIRST. If using power, always disconnect the machine from power supply before making adjustments, or servicing the machine. This prevents any risk of injury from unintended startup or contact with live wires.

WEARING PROPER APPAREL. Do not wear clothing, apparel or jewellery that can become entangled in moving parts. Always tie back or cover long hair. Wear non-slip footwear to avoid accidental slips, which could cause loss of operating control.

HEARING PROTECTION. Always wear hearing protection when operating or observing loud machinery. Extended exposure to this noise without hearing protection can cause permanent hearing loss.

REMOVE ADJUSTING TOOLS. Tools left on machinery can become dangerous projectiles upon startup. Never leave hex keys, wrenches, or any other tools on machine. Always verify removal before starting!

USE CORRECT TOOL FOR THE JOB. Only use this tool for its intended purpose. Do not force the machine or its attachments to do a job for which they were not designed. Never make unapproved modifications. Modifying the machine or using it differently than intended may result in malfunction or mechanical failure that can lead to personal injury or death!

AWKWARD POSITIONS. Keep proper footing and balance at all times when operating machine. Do not overreach! Avoid awkward hand positions that make operating control difficult. This could increase the risk of accidental injury

GUARDS & COVERS. Guards and covers reduce accidental contact with moving parts or flying debris. Make sure they are properly installed, undamaged, and working correctly.

TRAINED OPERATORS ONLY. Only allow trained or supervised people to use this machine. When the machine is not being used, disconnect the power, to the machine to prevent unauthorized use especially around children. Make the workshop safe.

FORCING MACHINERY. Do not force the machine. It will do the job safer and better at the rate for which it was designed.

NEVER STAND ON MACHINE. Serious injury may occur if the machine is tipped or if the cutting tool is unintentionally contacted

STABLE MACHINE. Unexpected movement during operation greatly increases risk of injury or loss of control. Before starting, verify the machine is stable and if using a mobile base it is locked in position.

UNATTENDED OPERATION. To reduce the risk of accidental injury, turn the machine OFF and ensure all moving parts have completely stopped before walking away. Never leave the machine running while unattended.

MAINTAIN WITH CARE. Follow all the maintenance instructions and lubrication schedules to keep the machine in good working condition.

A machine that is improperly maintained could malfunction, leading to serious personal injury or death.

CHECK DAMAGED PARTS. Regularly inspect the machine for any condition that may affect the safe operation. Immediately repair or replace damaged or parts that are incorrectly fitted before operating.

CHILDREN & BYSTANDERS. Keep children and bystanders at a safe distance from the work area. Stop using machine if they become a distraction.

2.2 SPECIFIC SAFETY FOR BAND SAWS

DO NOT use this machine unless you have been instructed in its safe use and operation and have read and understood this manual



Safety glasses must be worn at all times in work areas



Long and loose hair must be contained.



Gloves must not be worn when using this machine.



Sturdy footwear must be worn at all times in work areas



Close fitting protective clothing must be worn



Rings and jewelry must not be worn.

PRE-OPERATIONAL SAFETY CHECKS

1. Ensure no slip/trip hazards are present in workspaces and walkways.
2. Locate and ensure you are familiar with the operation of the ON/OFF starter and E-Stop.
3. Check that all guards are in position.
4. Ensure push stick is available.
5. Lower the blade guide and guard to full effect.
6. Start the dust extraction unit before using the saw.
7. Faulty equipment must not be used. Immediately report suspect machinery.

OPERATIONAL SAFETY CHECKS

NOTE: Keep your fingers off the line of the cut at all times.

1. Never leave the machine running unattended.
2. The work piece should be fed forward evenly and held firmly on the table to ensure effective control during cutting whilst keeping hands in a safe position.
3. Use a push stick when feeding material past the blade.
4. Do not force a wide blade on a cut of small radius. Use relief cuts when cutting sharp curves.
5. Before making adjustments switch off the saw and bring the machine to a complete stand still.
6. Stop the machine before attempting to back the work away from the blade.
7. Stop the saw immediately if the blade develops a 'click'. Report it to your supervisor.

AFTER OPERATION

1. Switch off the saw and reset all guards to a fully closed position.
2. Leave the machine in a safe, clean and tidy state.

DO NOT

- Attempt to cut very small items
- Leave the machine running unattended
- Cut cylindrical or irregular stock
- Cut any form of meat.

3. POWER SUPPLY

3.1 ELECTRICAL INSTALLATION

Place the machine near an existing power source. Make sure all power cords are protected from traffic, material handling, moisture, chemicals, or other hazards. Make sure there is access to a means of disconnecting the power source. The electrical circuit must meet the requirements for 240V.

NOTE : *The use of an extension cord is not recommended as it may decrease the life of electrical components on your machine.*

ELECTRICAL REQUIREMENTS

	W4344	W4346
Nominal Voltage.....	240V	415V
Cycle.....	50 Hz	50 Hz
Phase.....	Single Phase	Three Phase

(Full load current rating is also on the specification plate on the motor.)

3.2 FULL-LOAD CURRENT RATING

The full-load current rating is the amperage a machine draws when running at 100% of the output power. Where machines have more than one motor, the full load current is the amperage drawn by the largest motor or a total of all the motors and electrical devices that might operate at one time during normal operations.

Full-Load Current Rating for these machine is available on the motor plate.

It should be noted that the full-load current is not the maximum amount of amps that the machine will draw. If the machine is overloaded, it will draw additional amps beyond the full-load rating and if the machine is overloaded for a long period of time, damage, overheating, or fire may be caused to the motor and circuitry.

This is especially true if connected to an undersized circuit or a long extension lead. To reduce the risk of these hazards, avoid overloading the machine during operation and make sure it is connected to a power supply circuit that meets the requirements.



4 SET-UP

4.1 UNPACKING

This machine was carefully packaged for safe transport. When unpacking, separate all enclosed items from packaging materials and inspect them for shipping damage. If items are damaged, please contact your distributor.

NOTE: Save all the packaging materials until you are completely satisfied with the machine and have resolved any issues with the distributor, or the shipping agent.

When unpacking, check the packing list to make sure that all parts shown are included. If any parts are missing or broken, please contact your distributor.

4.2 CLEAN - UP

The unpainted surfaces of the machine have been coated with a waxy oil to protect them from corrosion during shipment. Remove the protective coating with a solvent cleaner or a citrus based degreaser.

Optimum performance from your machine will be achieved when you clean all moving parts or sliding contact surfaces that are coated with rust preventive products.

It is advised to avoid chlorine based solvents, such as acetone or brake parts cleaner, as they will damage painted surfaces and strip metal should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.

4.3 SITE PREPARATION

When selecting the site for the machine, consider the largest size of workpiece that will be processed through the machine and provide enough space around the machine for operating the machine safely. Consideration should be given to the installation of auxiliary equipment. Leave enough space around the machine to open or remove doors/covers as required for the maintenance and service as described in this manual.

It is recommended that the machine is anchored to the floor to prevent tipping or shifting. It also reduces vibration that may occur during operation.

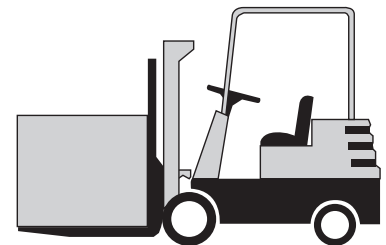
4.4 LIFTING INSTRUCTIONS



WARNING

This machine is extremely heavy.

Serious personal injury may occur if safe moving methods are not followed. To be safe, you will need assistance and power equipment when moving the shipping crate and removing the machine from the crate.



On the day that the machine arrives, make sure that a forklift or lifting device, with sufficient capacity is available to unload the machine from the vehicle. Ensure access to the chosen site is clear and that doors and ceilings are sufficiently high and wide enough to receive the machine.

4.4 LIFTING INSTRUCTIONS CONT.

Lifting Point

An eye bolt lifting point has been provided on the top of the machine. (Fig.4.1)

When lifting the machine only certified lifting slings should be used. Ensure that when lifting, the machine does not tip over. Check that the lifting slings do not interfere with the parts of the machine that may be damaged.

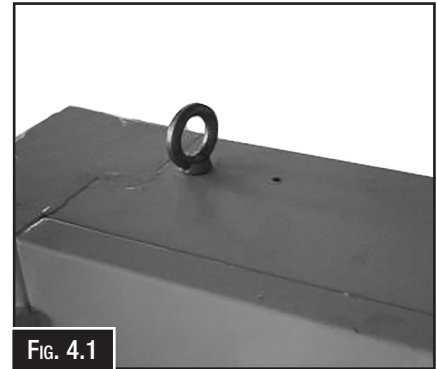
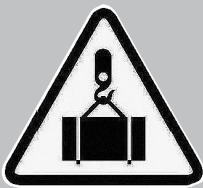


FIG. 4.1



WARNING.

Make sure everyone is away from the load before hoisting. The load must be under control when lowering loads or when the load is suspended. Rigging and crane operation must be carried out by persons with approved qualifications.

4.5 ANCHORING TO THE FLOOR

The machine is best mounted on a concrete slab.

Masonry anchors with bolts are the best way to anchor machinery, because the anchors sit flush with the floor surface, making it easy to unbolt and move the machine later if needed (Fig. 4.2).

Machine Mounting Options

Although it is not required Hafco recommends that you secure your machine to the floor. Masonry anchors with bolts are the best way to anchor machinery, because the anchors sit flush with the floor surface, making it easy to unbolt and move the machine later if needed. (Fig. 4.3)

Other methods of mounting is the use of machine mounts which also help with the levelling of the machine and isolating vibration. (Fig. 4.4)

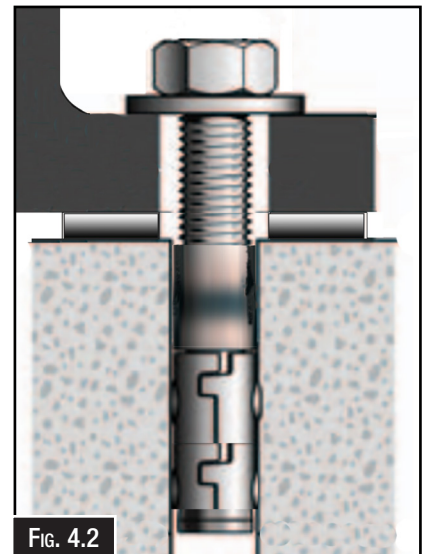


FIG. 4.2



FIG. 4.4



FIG. 4.3

4.6 ASSEMBLY

The machine must be fully assembled before it can be operated. First clean any parts that are coated in rust preventative to ensure the assembly process can proceed smoothly.

To assemble the machine:

1. Secure the guide post hand wheel on hand wheel shaft with the set screw. (Fig. 4.5)
2. Thread the M8-1.25 hex nut halfway onto M8 x 90 positive stop bolt (Fig. 4.6).
3. Thread the positive stop bolt into threaded hole on the band saw body (Fig. 4.6).

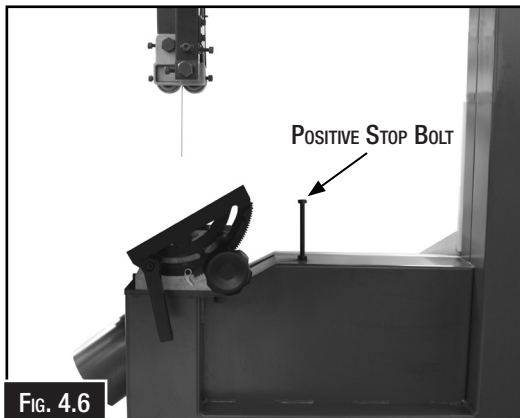


FIG. 4.6



FIG. 4.5

4. Loosen the blade tension by rotating the quick release tension lever and remove the blade from the guides. (Fig 4.7)

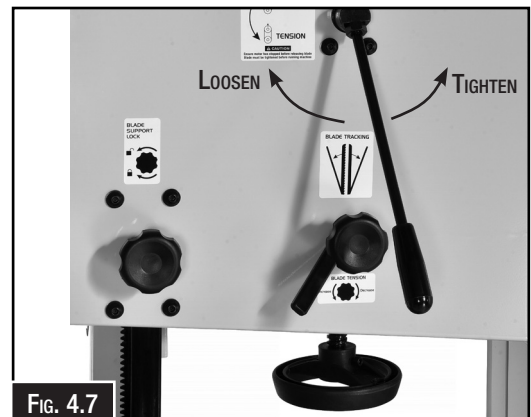


FIG. 4.7

5. With the help of another person, lift the table onto the table mount. (Fig.4.8)

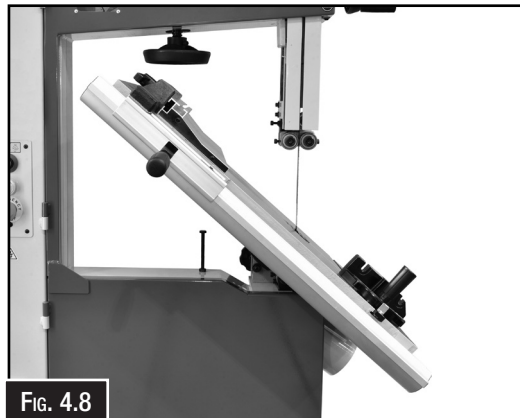


FIG. 4.8

6. Slide the table slot to the saw blade and slowly move it to the center of the table. Adjust the table until the saw blade is in the center of table insert.

7. Install table insert. Then, install table gap screw assembly. (Fig. 4.9)

8. Make sure the table is in the center. Then, secure the table to the trunnion. Attach using the M8x25mm Hex Head bolt, M8 washer, and M8 spring washer.
 - (1) M8 flat washer

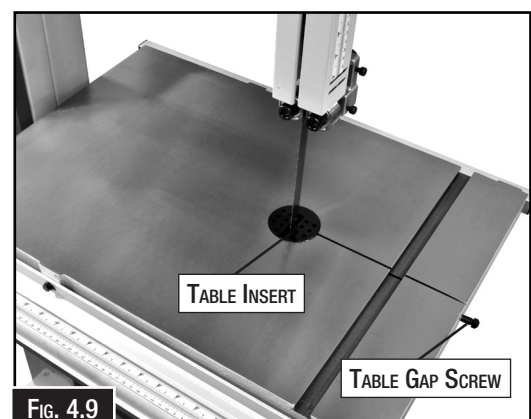


FIG. 4.9

! WARNING	
SAFETY FIRST	<i>Make sure that the machine is fully assembled before operating. Failure to do so could cause injury and damage to the machine</i>

4.6 ASSEMBLY Cont.

Assembling The Rip Fence

To assemble the rip fence:

1. Attach the fixed base to the cast iron table with two M6x20 hex head bolts and two M6 spring washers. (Fig. 4.10)
2. Attach the fence assembly to the sliding mount with four M6x25 socket head cap screws.
3. After the fence assembly has been attached, slide the fence on its guides onto the rail until it is the required distance from the blade.
4. Check the scale, make sure the distance between the edge of the miter slot and both the front and rear of the rip fence. Adjust by loosening the four M6x25mm cap screws and moving so both distances are equal. Once they are equal tighten the bolts.
5. Lock the fence by pushing down the locking handle. (Fig. 4.11)

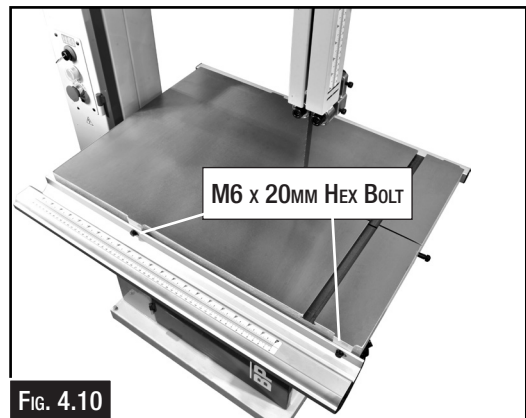


FIG. 4.10

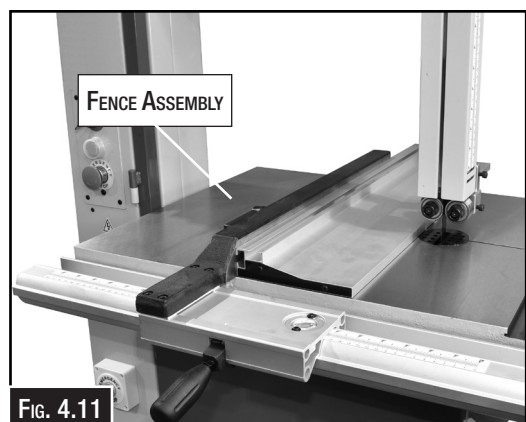


FIG. 4.11

4.7 TABLE STOP CALIBRATION

After installing or tilting the table the adjustable positive stop allows the table to be reset 90° to the blade.

To set the positive stop:

1. DISCONNECT BAND SAW FROM POWER!
2. Adjust the blade tension until the blade tension is correct or matches the predetermined setting on the tension scale.
3. Loosen the hex nut that locks the positive stop bolt in place and loosen the table tilt hand knobs.
4. Raise the guide post and place a machinist's square on the table next to the side of the blade, as illustrated in Fig. 4.12. Adjust the table square with the blade, then secure with the table tilt knobs.
5. Adjust the positive stop bolt to the table. (Fig. 4.13)
6. Secure the positive stop bolt by tightening the hex nut against the trunnion bracket.
7. Check the adjustment for accuracy once you have tightened the hex nut.

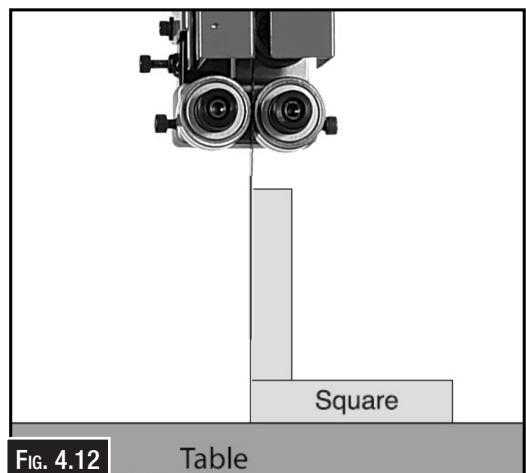


FIG. 4.12

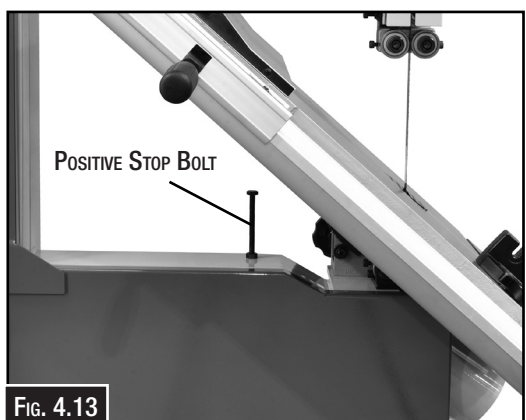


FIG. 4.13

4.8 TENSIONING THE BLADE.

A properly tensioned blade is essential for making accurate cuts and is necessary before making other band saw adjustments. (For blade change instructions see Page 20)

To tension the blade:

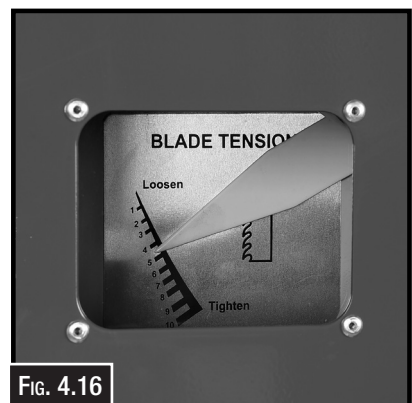
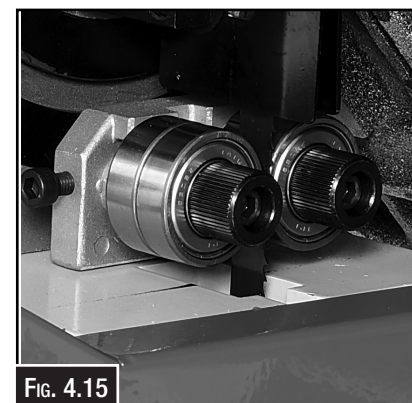
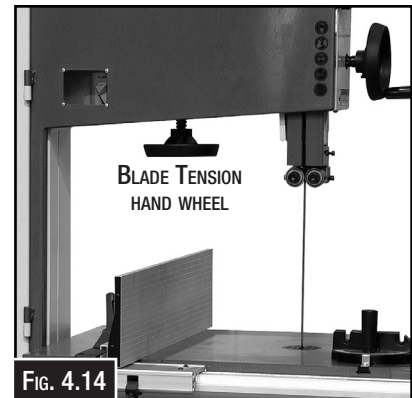
1. DISCONNECT THE MACHINE FROM THE POWER SUPPLY
2. Raise the upper blade guide assembly as high as it will go, (Fig.4.14) and adjust the upper and lower guide blocks approximately 0.5mm away from the blade. (Fig. 4.15)
3. Ensure the blade tension quick-release lever is in the tighten position.
4. Adjust the blade tension hand wheel. Turning the tension hand wheel clockwise will increase the blade tension and turning the tension hand wheel counter-clockwise reduces the blade tension.

NOTE: This procedure will not work if the guide blocks have any contact with the blade.

5. Check the tension by pushing with a finger against the side of the blade, halfway between table and upper guide. (the blade should flex approximately 6mm)
6. Turn the band saw ON, and very slowly release the tension one quarter of a turn at a time. When you see the band saw blade start to flutter, stop decreasing the tension.
7. Now, slowly increase the tension until the blade stops fluttering, then tighten the tension another quarter of a turn.
8. Note what the tension gauge reads. Use that as a guide for tensioning that specific blade in the future. (Fig. 4.16)

WARNING: Too much tension can cause the band saw blade to break. Too little tension can cause the driven band saw wheel to slip and the saw blade to stop.

9. Re-adjust the blade guides as described in Blade Guide Adjustment beginning on Page 22



WARNING.

Blades are very sharp. If not careful serious injury can result from touching the blades with bare hands. Leather work gloves should be worn when handling these blades.

4.9 BLADE TRACKING

To operate correctly, the saw blade needs to run in the centre of the rubber tyres. If the blade rides in the centre of the upper wheel and is centred on the peak of the wheel crown, then the band saw is tracking correctly and no adjustment is needed. If the blade does not ride in the centre of the upper wheel and is not centred on the peak of the wheel crown, then adjustment is required.

To check or adjust the tracking:

1. DISCONNECT THE MACHINE FROM THE POWER
2. Open the upper and lower covers. (Fig. 4.17)
3. Adjust the top and bottom guides so they are not touching the blade.
4. Make sure that the blade has been tensioned as per the instructions on Page 15.

CAUTION *The cast iron spokes of the upper wheel may have sharp burrs and the blade teeth may extend beyond the edge of the wheel, creating a laceration hazard. Be careful when turning the wheels by hand.*

5. Turn the upper wheel by hand around two to three times to see how the blade is tracking.
6. Loosen the lock lever (Fig. 4.18) so that the blade tracking knob can rotate.
7. Manually rotate the upper wheel, taking care not to touch the blade. At the same time turn the adjusting knob (Fig. 4.18) clockwise or anti-clockwise until the saw blade tracks centred on the rubber tyre.
8. After adjustment, re-tighten the tracking lock lever and close the cover.

Fine Tracking Adjustment

In this procedure, the band saw is turned ON to perform fine blade tracking. Make small changes with the blade tracking knob as you monitor the effect on the blade tracking.

Close the wheel covers and turn the band saw ON.

Observe the blade tracking path through the clear window on the right edge of the band saw, (Fig. 4.19) Using the tracking controls, adjust the blade so that it tracks on the center of the wheel. Tighten the tracking lock to secure the setting.

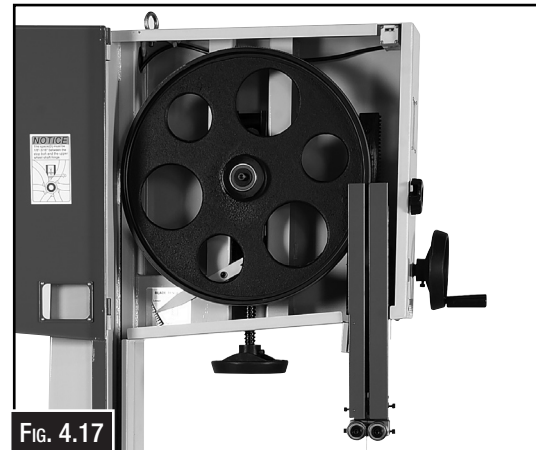


FIG. 4.17

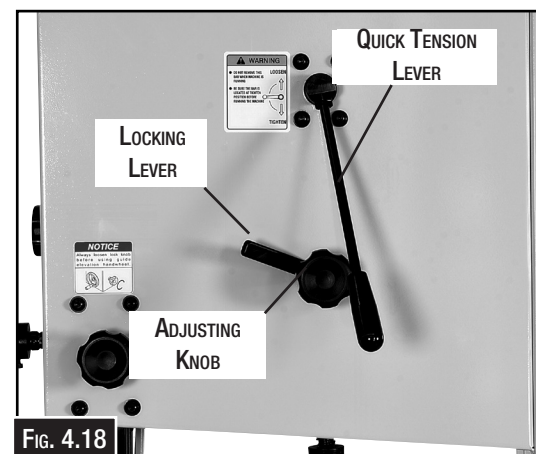


FIG. 4.18

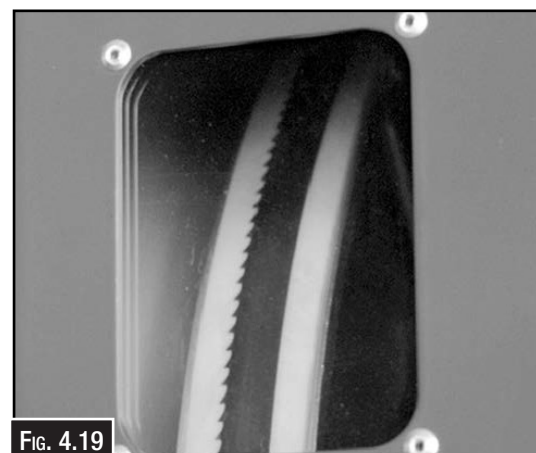


FIG. 4.19

4.10 TEST RUN

Once assembly is complete, test run the machine to ensure it is properly connected to the power and safety components are functioning correctly. Check that the direction of the motor is correct and make sure that the machine rotates in the correct direction.

If the direction is incorrect, isolate the machine and have the electrician make changes to the wiring.

If you find an unusual problem during the test run, immediately stop the machine, disconnect it from power, and fix the problem BEFORE operating the machine again. The Troubleshooting table in the Maintenance section of this manual may be able to help. If the problem persists then contact your dealers service technician.

To test run the machine:

1. Connect the machine to the power supply.
2. Make sure that the manual has been read and that the safety instructions at the beginning of the manual are understood. Make sure the machine has been setup correctly
3. Make sure all tools and objects used during set up have been cleared away from the machine.
4. Turn the machine ON.
5. Make sure that the machine is travelling in the correct direction.
6. Listen to and watch for abnormal noises or actions. The machine should run smoothly with little or no vibration or rubbing noises.
7. Any strange or unusual noises should be investigated and corrected before operating the machine again. Always disconnect the machine from power supply when investigating or correcting potential problems. The troubleshooting chart in the maintenance section may be helpful in rectifying a problem.

Testing The Emergency Stop Button

Make sure that the emergency button is working correctly

1. Twist the top of the Emergency Stop button to ensure that it is in the raised position.
2. Start the machine and then press the emergency stop button. The machine should stop and the power should be cut off. If the machine cannot be started then the emergency stop is working correctly.
3. To reset the Emergency Stop twist the red top until it pops up. The machine should now work again.



WARNING!

DO NOT operate any machine before it is fully assembled and all guards have been fitted and secured. Failure to do so may cause death or injury.

5. OPERATION

The purpose of this control overview is to provide the novice machine operator with a basic understanding of how the machine is used during operation, and the machine controls and what they do. It also helps the operator to understand if they are discussed later in this manual.

5.1 BASIC CONTROLS

Use the descriptions below to become familiar with the basic controls of your machine.

Blade Tension Hand Wheel: Adjusts the tension on the blade. (Fig. 5.1)

Blade Tracking Adjustment Knob: Adjusts the blade tracking. (Fig. 5.2)

Blade Tension Quick Release: Quickly tensions or releases the blade without losing its setting. (Fig.5.2)

Guide Post Adjustment Knob: Raises and lowers the blade guide post. (Fig. 5.3)

Guide Post Locking Knob: Locks the blade guide post. (Fig. 5.3)

ON/OFF Switch: Starts and stops the blade motor. (Fig. 5.4) (240V Only)

ON Switch: Starts the blade motor. (Fig. 5.5) (415V Only)

OFF and Emergency Stop Switch: Stops the blade motor. (Fig. 5.5) (415V Only)

Master Power Key Switch: Turns incoming power ON and OFF. Requires key. (Fig. 5.5) (415V Only)

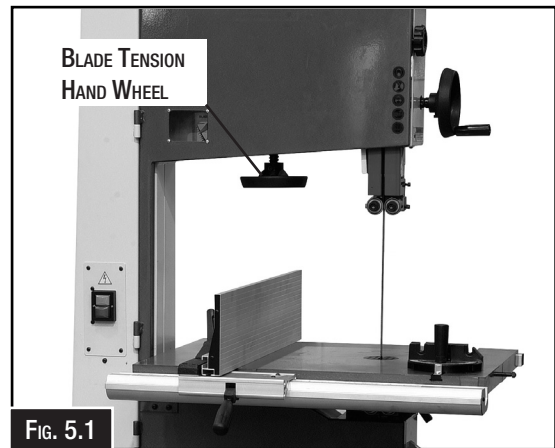


Fig. 5.1

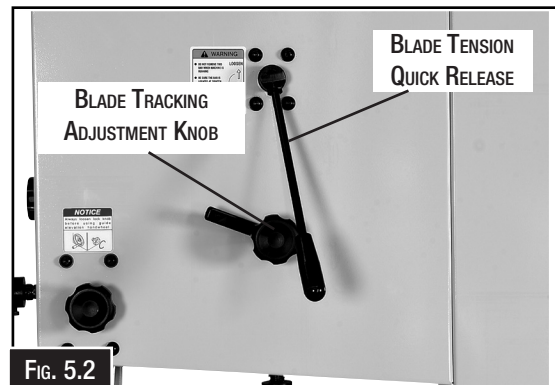


Fig. 5.2

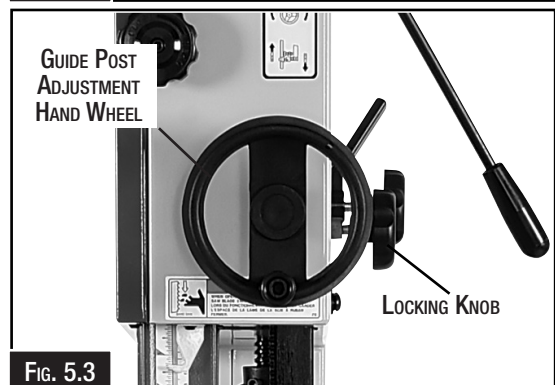


Fig. 5.3

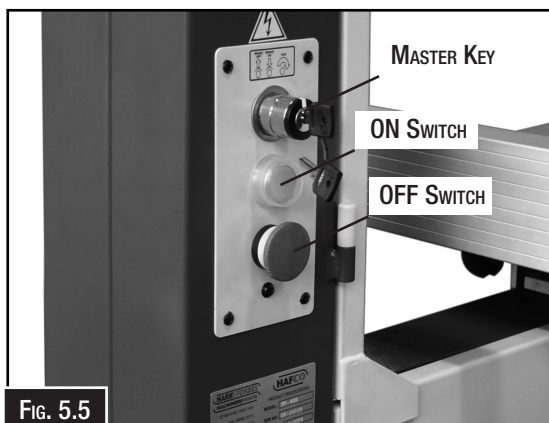


Fig. 5.5

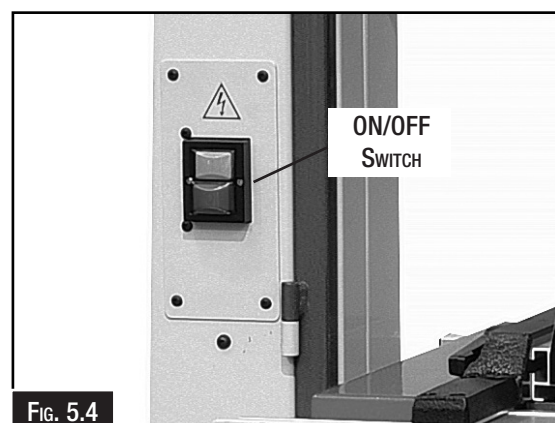


Fig. 5.4

5.1 BASIC CONTROLS Cont.

Mitre Gauge Lock Handle: Locks the mitre gauge at the current setting. (Fig. 5.6)

Fence Lock Lever: Locks the fence at its current position. (Fig. 5.6)

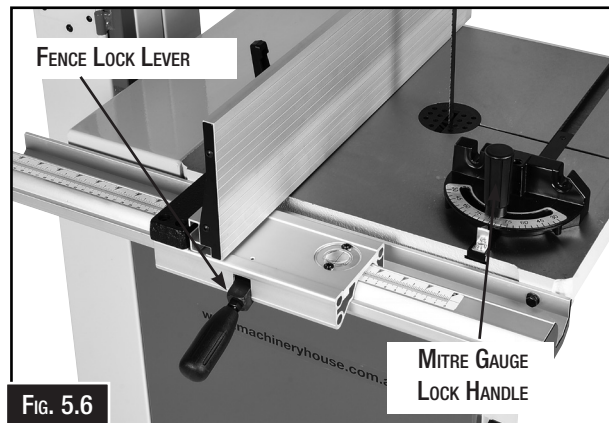


FIG. 5.6

5.2 ADJUSTING THE SPEED

The band saws listed in this manual are fitted with a pulley system that allows for two speeds to be available for the operation. Below are the details for adjusting the speeds.

To change the speed

1. DISCONNECT MACHINE FROM THE POWER SUPPLY
2. With a hex key, loosen the motor positing clamp on the back of the machine. (Fig. 5.7)
3. Open the bottom door on the machine to gain access to the belt drive. (Fig. 5.8)
4. Move the V-belt from one set of pulleys to the other set.
5. Re-Clamp the motor, making sure that the V-belt has been tensioned correctly.

NOTE: A common speed for the band saw is about one 300 meters per minute. Wood can effectively be cut at much higher speeds, but you should keep it slower because it's safer.



FIG. 5.7

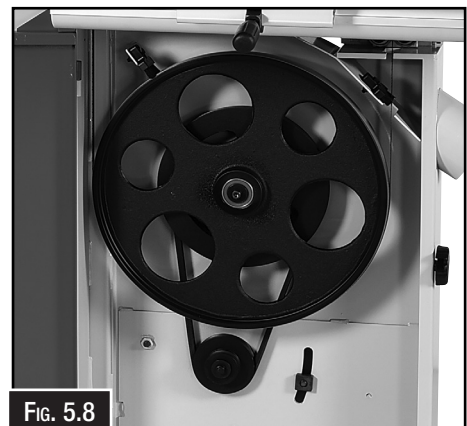


FIG. 5.8

5.3 TILTING THE TABLE

WARNING: Always be sure that the machine is switched off and unplugged before any adjustment is commenced.

Loosen the locking handle and adjust the table to the desired angle using the adjuster knob. (Fig. 5.9)

Use the angle indicator scale to find the desired angle. The scale is only used as a guide. For very accurate angle use a protractor against the blade.

Re-tighten the locking handle to secure the table.

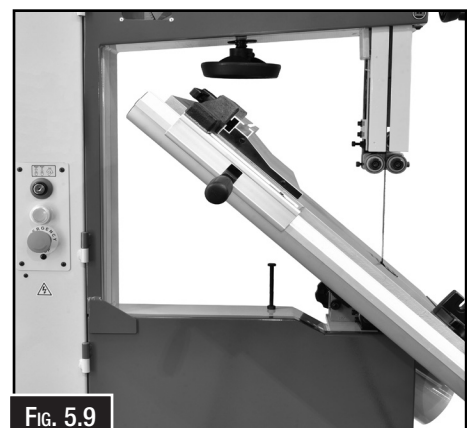


FIG. 5.9

5.4 BLADE INFORMATION

Selecting the right blade requires a knowledge of the various blade characteristics mentioned below, the type of material you plan to cut, and the type of cut you are going to perform.

Blade Length

The blade length is measured by the circumference. Blade lengths are usually unique to the brand of your band saw and the distance between wheels. The chart below displays the blade length for the model and available blades.

NOTE: “Available Blades” lists the stocked blades but other sizes and blade teeth are available from most local saw blade manufacturers

MODEL	BLADE LENGTH	AVAILABLE BLADES.
BP-480CE	3630 x19 x 0.80MM	6 TPI SKU: W434A 3 TPI SKU: W434B

Blade Width

Measured from the back of the blade to the tip of the blade tooth (the widest point), blade width is often the first consideration given to blade selection. Blade width dictates the largest and smallest curve that can be cut, as well as how accurately it can cut a straight line.

Curve Cutting:

View the chart in Fig. 5.10 to determine the correct blade width for curve cutting. Determine the smallest radius curve that will be cut on the work piece and use the corresponding blade width. (Fig. 5.10)

Straight Cutting:

Use the largest width blade available. (See specifications on Page 4 for the maximum width for the model)

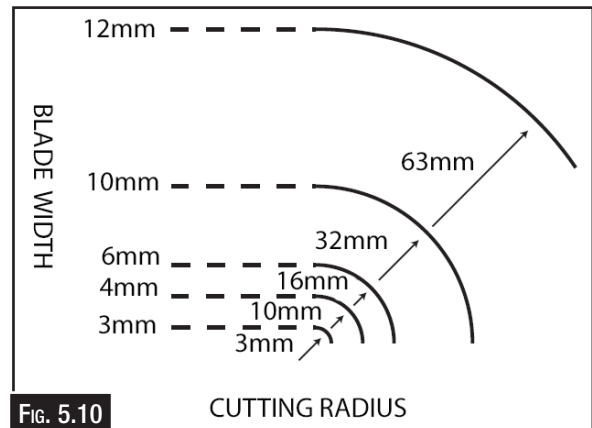


FIG. 5.10

Tooth Style

When selecting blades, another option to consider is the shape, gullet size, teeth set and teeth angle—otherwise known as “Tooth Style.” As shown Fig.5.11

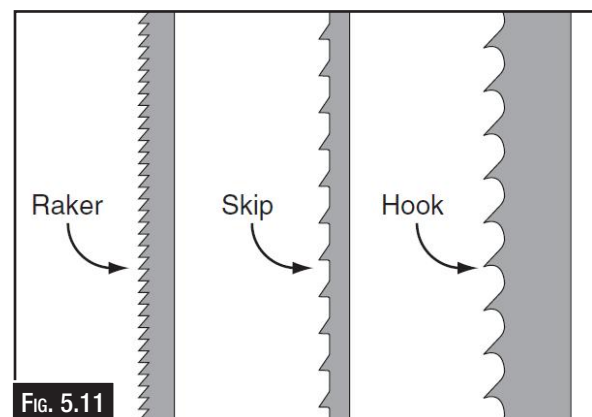


FIG. 5.11

Raker: Considered to be the standard because the tooth size and shape are the same as the tooth gullet.

Skip: This style is similar to a raker blade but is missing every other tooth. Skip toothed blades have a larger gullet, and cut faster.

Hook: This teeth type have a positive angle (downward) allows them to dig into the material. The gullets are usually rounded for easier waste removal. Excellent for the tough demands and ripping thick material.



WARNING.

Blades are very sharp. If not careful serious injury can result from touching the blades with bare hands. Leather work gloves should be worn when handling these blades.

5.5 CHANGING THE BLADE

To remove the blade:

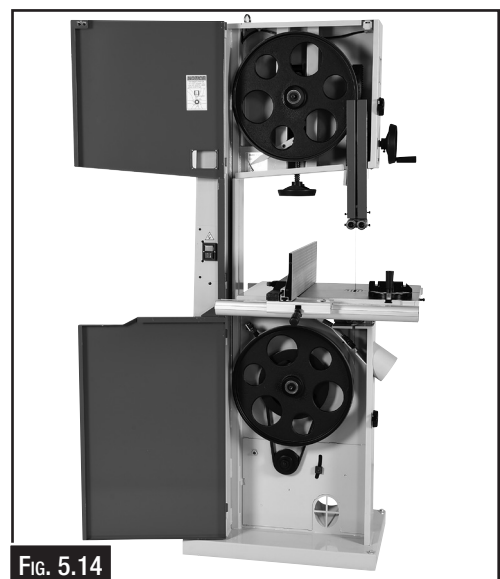
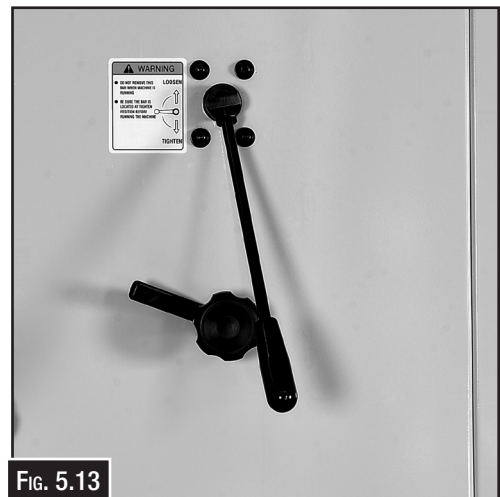
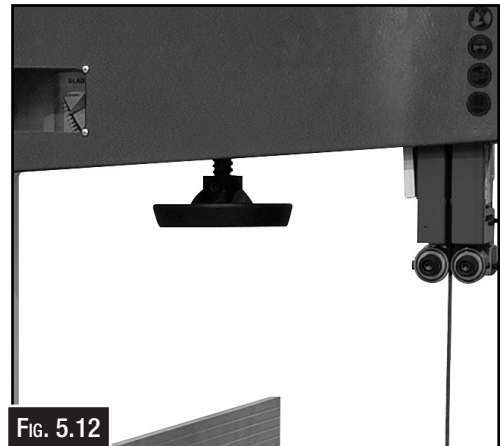
1. DISCONNECT POWER FROM THE BAND SAW
2. Release the blade tension by turning the blade tension hand wheel (Fig. 5.12) or turn the quick release lever to the left.(Fig. 5.13)
3. Remove the table insert and the table pin. Adjust the upper and lower guide bearings as far away as possible from the blade.
4. Open the upper and lower wheel covers, (Fig. 5.14) Put on leather gloves and slide the blade off both wheels.
5. Rotate the blade 90° and slide it through the slot in the table.
6. Take the new blade and slide it through the table slot, ensuring that the teeth are pointing down toward the table.

NOTE: If the teeth will not point downward in any orientation, the blade is inside-out. Put on leather gloves, and remove the blade, and twist it right side-out.

7. Slip the blade through the guides, and mount it on the upper and lower wheels.
8. Tighten the blade tension quick release.
9. Apply tension to the blade by turning the tension control knob. Rotate the upper wheel slowly by hand as tension is applied to allow the blade to centre itself on the wheel. Adjust tracking if needed.
10. Adjust tension as described Page 15.
11. Adjust the upper/lower guide bearings and the support bearings.
12. Close the wheel covers.
13. Replace the table insert and table pin, being sure not to use excessive force when inserting the table pin.



CAUTION All saw blades are dangerous and may cause personal injury. To reduce the risk of being injured, wear leather gloves when handling saw blades.



5.6 ADJUSTING SUPPORT BEARINGS

The support bearings are positioned behind the blade for support during cutting operations. Proper adjustment of the support bearings is an important part of making accurate cuts. The procedure is as follows.

1. Make sure that the blade is tracking properly and that it is correctly tensioned.
2. **DISCONNECT BAND SAW FROM POWER!**
3. Familiarize yourself with the support bearing controls shown in Fig. 5.16
- A. Locks the bearing support roller in place after it has been moved back or forward.
- B. Locks the complete Blade Guide assembly. When unlocked the whole assembly can be moved forward or back when out of adjustment.
4. Loosen the socket head cap screw on the support bearing adjustment shaft. (A in Fig.5.15)
5. Adjust the support bearing 0.5mm away from the back of the blade, as illustrated in Fig. 5.16
6. Repeat Steps 4–6 for the lower support bearings.

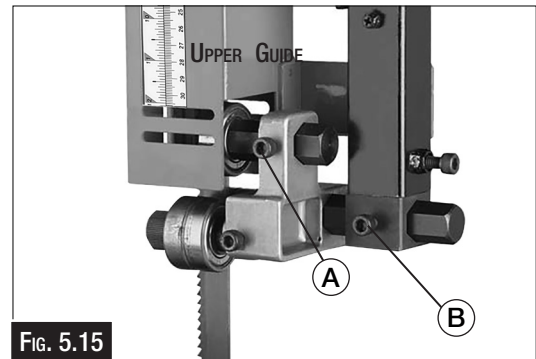


FIG. 5.15

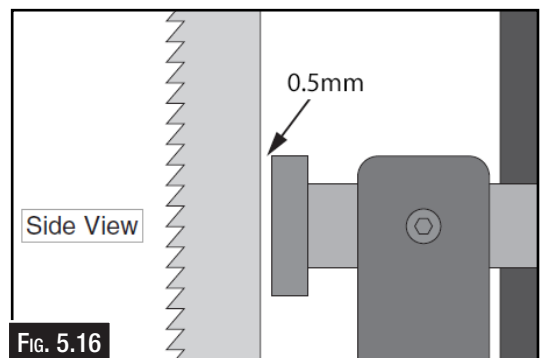


FIG. 5.16

5.7 BLADE GUIDE ADJUSTMENTS

The blade guides consist of an upper and lower set of ball bearings that provide side-to-side support to help keep the blade straight while cutting. The blade guides are designed to be adjusted side-to-side.

1. Make sure that the blade is tracking properly and that it is correctly tensioned.
 2. **DISCONNECT BAND SAW FROM POWER!**
 3. Familiarize yourself with the blade guide controls shown in Fig. 5.17.
 - C. The Socket head cap screws lock the side rollers in place after they have been moved towards or away from the side of the blade.
 - D. Rotate the cam that moves the roller in or out.
 4. Undo the socket head cap screw of the blade guide bearings. (C in Fig. 5.18)
 5. Using a feeler gauge rotate the bearings until 0.1mm away from the blade.
 6. Tighten the cap screw to lock the blade guide bearings in position. (D in Fig. 5.18)
- Repeat Step 4-6 for the lower guides.

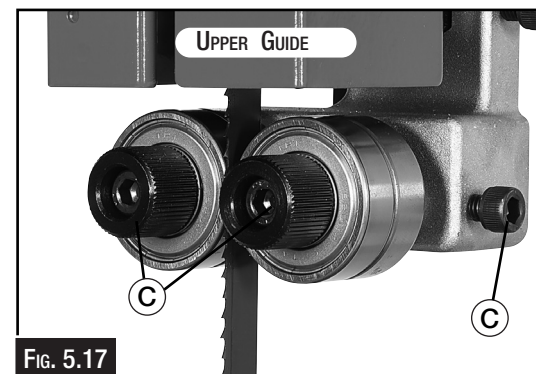


FIG. 5.17

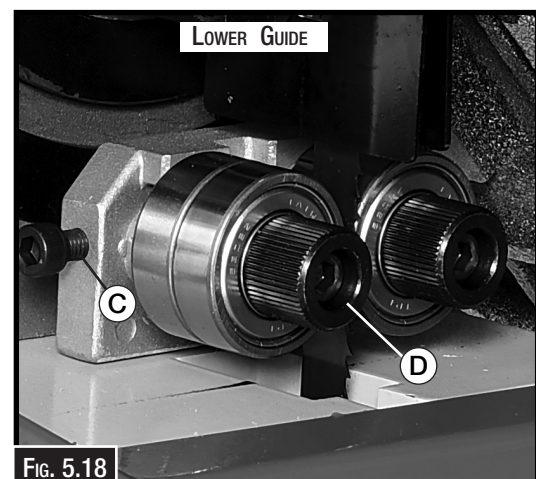


FIG. 5.18

6. MAINTENANCE

Review the troubleshooting and procedures in this section to fix or adjust your machine if a problem develops. If you need replacement parts or you are unsure of your repair skills, then contact your local distributor or service provider.

NOTE: HAFCO WOODMASTER advise that extension leads should not be used permanently, but recommend that the plug be placed directly into a wall socket.

6.1 TROUBLESHOOTING

Symptom	Possible Cause	Possible Solution
Machine does not start or a breaker trips.	<ol style="list-style-type: none"> 1. Plug/receptacle is at fault or wired incorrectly. 2. Motor connection wired incorrectly. 3. Power supply is at fault/switched OFF. 4. Motor ON/OFF switch is at fault. 5. Wiring is open/has high resistance. 6. Start capacitor is at fault. 7. Motor is at fault. 	<ol style="list-style-type: none"> 1. Test for good contact or correct the wiring. 2. Correct motor wiring connections 3. Have a qualified electrician check the voltage at the meter box, and that connections are not faulty. 4. Replace faulty ON/OFF switch. 5. Check for broken wires or corroded connections, and repair/replace as necessary. 6. Test/replace if faulty. 7. Repair/replace.
Machine stalls or is underpowered	<ol style="list-style-type: none"> 1. Wrong workpiece material (wood). 2. Processing speed too fast for task. 3. Low power supply voltage. 4. Run capacitor is at fault. 5. V-belt slipping. 6. Blade is slipping on wheels. 7. Motor bearings are at fault. 8. Motor has overheated. 9. Motor is at fault. 	<ol style="list-style-type: none"> 1. Use wood with correct moisture content, without glues, and little pitch/resins. 2. Decrease processing speed. 3. Ensure all hot lines have correct voltage on all phase. 4. Repair/replace. 5. Replace bad V-belt, align pulleys, and re-tension 6. Adjust blade tracking and tension. 7. Test by rotating shaft; rotational grinding/ loose shaft requires bearing replacement. 8. Clean off motor, let cool, and reduce work load. 9. Repair/replace.
Machine has vibration or noisy operation when running.	<ol style="list-style-type: none"> 1. Motor or component is loose. 2. V-belt worn or loose. 3. Motor fan is rubbing on fan cover. 4. Pulley is loose. 5. Machine is incorrectly mounted or sits unevenly on the floor. 6. Motor bearings are at fault. 7. Blade weld is at fault or teeth are broken. 8. Worn arbor bearings. 9. Wheels not aligned correctly. 10. Tyres incorrectly installed. 11. Bent or worn out blade. 12. Wheels out of balance. 	<ol style="list-style-type: none"> 1. Inspect/replace stripped or damaged bolts/nuts, and re-tighten with thread locking fluid. 2. Inspect/replace belt . 3. Replace dented fan cover 4. Realign/replace shaft, pulley, set screw, and key as required. 5. Adjust the feet on the bottom of the stand; relocate machine. 6. Test by rotating shaft and replace bearing if required 7. Replace blade 8. Check/replace arbor bearings. 9. Adjust wheel alignment (Page 22) 10. Re-install tires. 11. Replace blade. 12. Replace wheels.

Symptom	Possible Cause	Possible Solution
Machine slows when operating	1. Applying too much pressure to workpiece. 2. Blade is dull.	1. Feed workpiece slower and in a smooth motion 2. Replace blade
Ticking sound when the saw is running.	1. Blade weld contacting support bearing. 2. Blade weld may be failing	1. Use file or stone to smooth and round the back of the blade. 2. Inspect and replace blade if necessary
Blade touching table insert.	1. Excessive side pressure when cutting. 2. Table improperly adjusted	1. Reduce side pressure. 2. Adjust table
Vibration when cutting.	1. Loose or damaged blade.	1. Tighten or replace blade
Burn marks on the edge of the cut.	1. Too much side pressure when feeding workpiece. 2. Blade too wide for size of radius being cut	1. Feed workpiece straight into the blade. 2. Install a smaller width blade/increase blade tension.
Rough or poor quality cuts.	1. Blade lead.	1. Blade lead is commonly caused by too fast feed rate, a dull blade, or improper tension

6.2 WHEEL ALIGNMENT

Wheel alignment is one of the most important issues to ensure the best performance from your band saw. Over time vibration, and wandering blades cause tyre wear. This can be considerably reduced when the wheels are properly aligned. The procedure is as follows.

1. Remove the fence and table, then open both the wheel covers.
2. Make sure the guide blocks and rear support bearings have been moved away from the blade, then tighten your blade to the tension that it will be used during operation.
3. Place the straight edges against both wheels in the positions shown in Fig. 6.1
4. The hub on the bottom wheel allows you to adjust the lower wheel in the desired direction. By loosening the lock nuts and turning all the grub screws clockwise in equal amounts, pushes the wheel forward. Turning all the grub screws counter clockwise moves the wheel towards the back of the machine. When the grub screws are adjusted individually, each grub screw controls the direction that the wheel tilts. (Fig. 6.2)
5. When finished with the adjustment the locked nuts must be tightened.

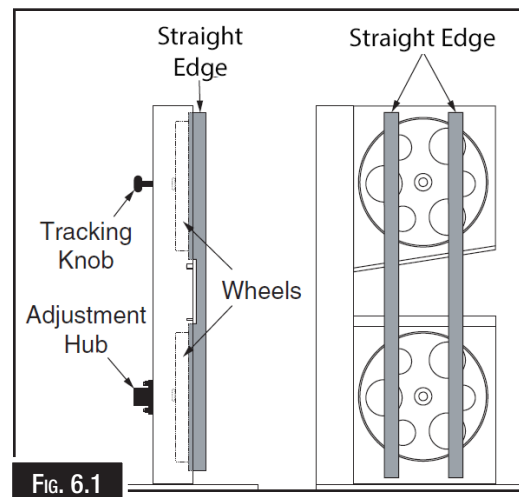


FIG. 6.1

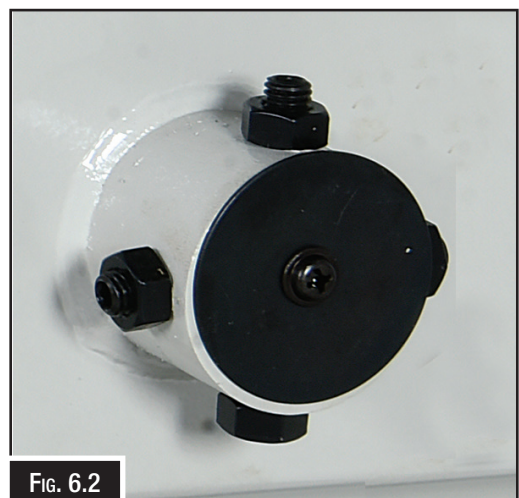


FIG. 6.2

WOOD BAND SAW

BP-480 CE

Order Code: (W4346)

Edition : 2.0
Date: (08/25)

The following section covers the spare parts diagrams and lists that were current at the time this manual was originally printed. Due to continuous improvements of the machine, changes may be made at anytime without notification.

HOW TO ORDER SPARE PARTS

1. Have your machines model number, serial number & date of manufacture on hand, these can be found on the specification plate mounted on the machine
2. A scanned copy of your parts list/diagram with required spare part/s identified.

NOTE: SOME PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

3. Go to www.machineryhouse.com.au/contactus and fill out the inquiry form attaching a copy of scanned parts list.



WARNING!

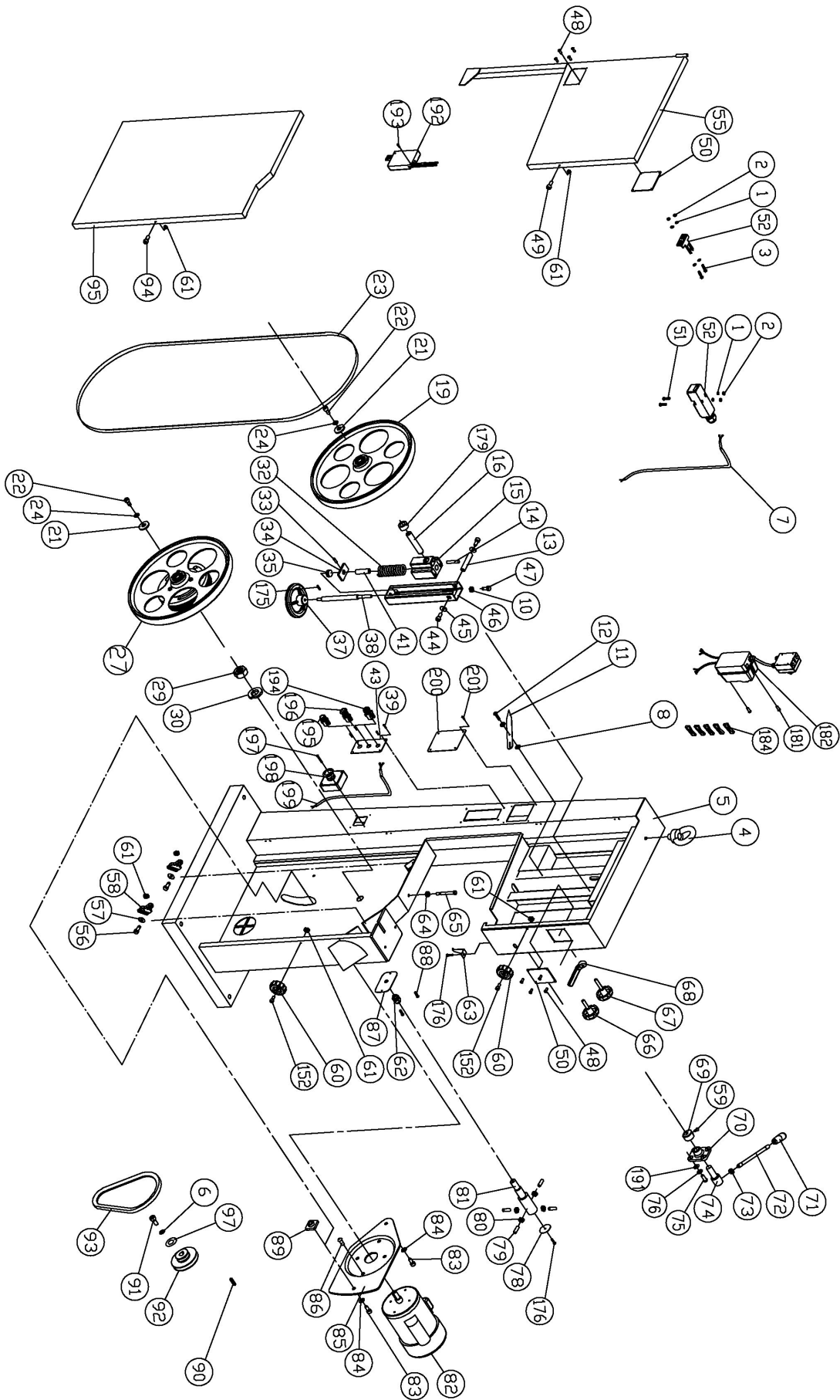
*Electricity is dangerous and could cause death
All electrical work must be carried out by a qualified electrician.*



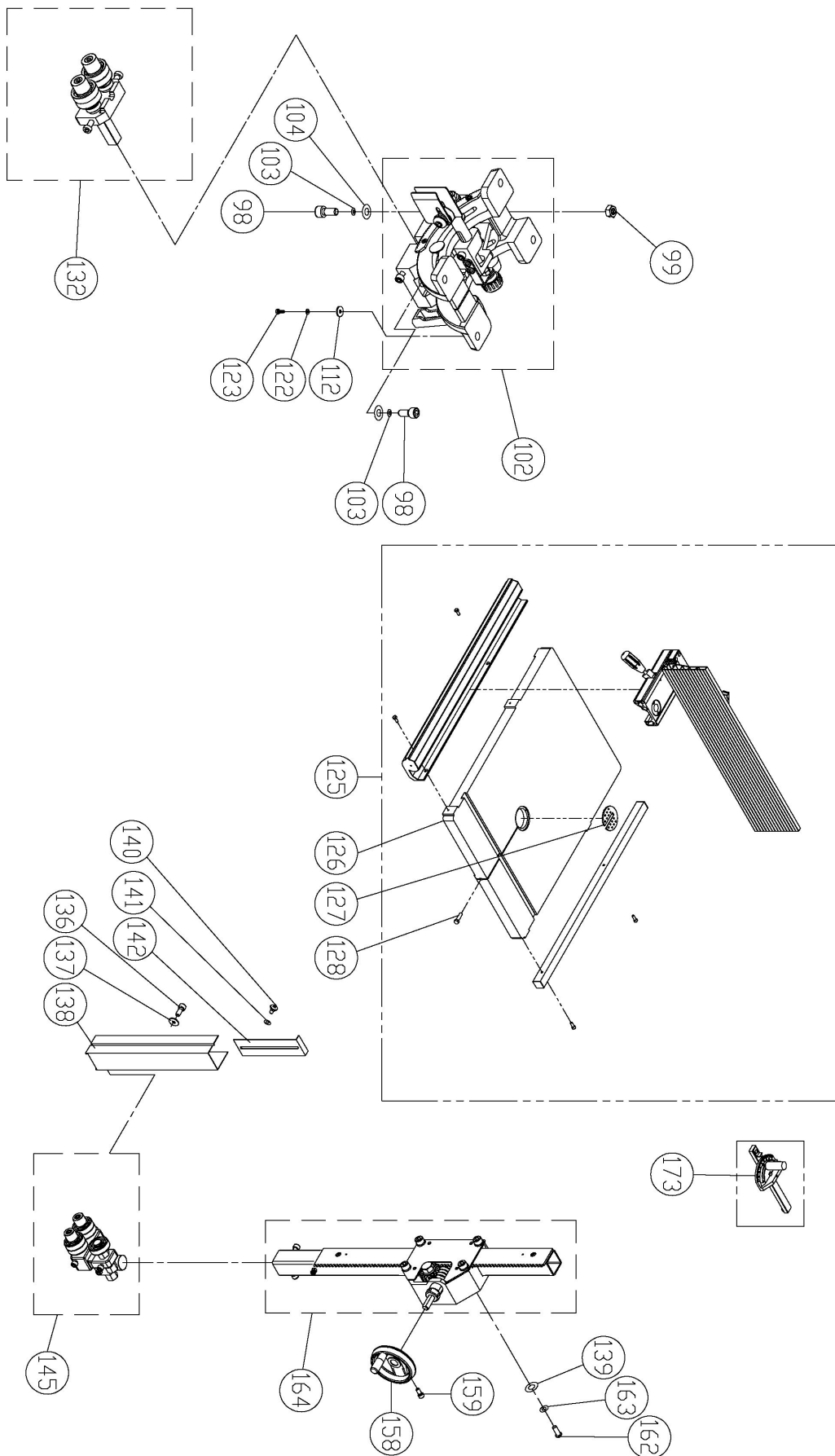
CAUTION!

It is impossible to cover all possible hazards Every workshop environment is different. These are designed as a guide to be used to compliment training and as a reminder to users prior to equipment use. Always consider safety first, as it applies to the individual working conditions.

PARTS DIAGRAM 1/2



PARTS DIAGRAM 2/2



PARTS LIST

Item	Fig. No.	Description	Size	Qty
1	WF040808	FLAT WASHER	M4xØ8	6
2	NH040700	NUT	M4	4
3	SP040200	PAN HEAD SCREW	M4x8	2
4	995101	RING	M10	1
5	136125	MACHINE BODY		1
6	WS080000	SPRING WASHER	M8	1
7	IC135040	SWITCH CORD		1
8	WF061310	FLAT WASHER	M6xØ13	2
10	NH061000	NUT	M6	1
11	135040	POINTER		1
12	135073	STEP SCREW		1
13	135012	UPPER SHAFT		1
14	PS053600	SPRING PIN	Ø5x36	1
15	135017	UPPER WHEEL SHAFT HINGE		1
16	135066	UPPER WHEEL SHAFT		1
19	AB136024T-PU	UPPER WHEEL	Ø19"	1
21	WF083030	FLAT WASHER	M8xØ30	2
22	SR089400	HEX SOCKET BOLT	M8x16	2
23	136010	SAW BLADE 3632x19x.5mm	6PTI	1
24	WS080000	SPRING WASHER	M8	2
27	AB136022T-PU	LOWER WHEEL	Ø19"	1
29	NH633801	NUT	1"-14 UNF	1
30	WS630000	SPRING WASHER	1"	1
32	135032	SPRING		1
33	PS031600	PIN	Ø3x16	1
34	135042	LOCATE BLOCK		1
35	994301	BEARING	51201	1
37	135002	HANDLE WHEEL		1
38	136007	ADJUSTING BOLT		1
39	SF050200	PAN HEAD BOLT W/FLANGE	M5x10	4
41	135067	BUSHING		1
43	136369U	SWITCH PLATE		1
44	SR089400	HEX SOCKET BOLT	M8x16	2
45	WF083030	FLAT WASHER	M8xØ30	2
46	135016	UPPER WHEEL SLIDING BRACKET		1
47	SR061000	HEX SOCKET BOLT	M6x50	1
48	BR000041	RIVET	Ø3.2x6	8
49	SR060200	HEX SOCKET BOLT	M6x10	1
50	135004	LIMPID PIECE		2
51	SF040700	PAN HEAD BOLT W/FLANGE	M4x35	2
52	136457	DOOR LATCH SWITCH (ASM)	AZD-S11	1
55	136122U	UPPER WHEEL COVER		1
56	SH060500	HEX HEAD BOLT	M6x25	2
57	WF061310	FLAT WASHER	M6xØ13	2
58	135051	BRUSH		2
59	SR060500	HEX SOCKET BOLT	M6x25	1
60	135041	KNOB		2
61	NL061000	NYLON NUT	M6	6
62	136013	STRAIN RELIEF		1
63	135011	HEIGHT POINTER		1
64	NH081300	NUT	M8	1
65	SH081800	HEX HEAD BOLT	M8x90	1
66	135022	KNOB SCREW		1
67	135020	KNOB SCREW		1
68	135028	LOCATE HANDLE	M10	1

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

SPARE PARTS LIST - CONT.

Item	Fig. No.	Description	Size	Qty
69	135030	CAM		1
70	135038	LOCATE BLOCK		1
71	620021	KNOB		1
72	620020	LEVER ROD		1
73	NH121900	NUT	M12	1
74	135036	SHAFT		1
75	SJ080400	HEX SOCKET BUTTON HEAD SCREW	M8x20	4
76	WS080000	SPRING WASHER	M8	4
78	135013	COVER		1
79	SS080400	SET SCREW	M8x20	4
80	NH081300	NUT	M8	4
81	135005	LOWER WHEEL SHAFT		1
82	ABMH135020F	MOTOR	1.5KW (3A) 3PH 50HZ 415V	1
83	SR100500	HEX HEAD BOLT	M10x25	2
84	WS100000	SPRING WASHER	M10	2
85	135064	MOTOR BRACKET		1
86	SJ080400	HEX SOCKET BUTTON HEAD SCREW	M8x20	4
87	136475	PLATE		1
88	SF050200	PAN HEAD BOLT W/FLANGE	M5x10	2
89	135065	LOCATE BLOCK		1
90	KS050535	KEY	5x5x35	1
91	SH080402	HEX HEAD BOLT	M8x20(L.H)	1
92	135008T	MOTOR PULLEY		1
93	LA420000	V-BELT	A42	1
94	SR060200	HEX SOCKET BOLT	M6x10	1
95	136123U	LOWER WHEEL COVER		1
97	WF083030	FLAT WASHER	M8x30	1
98	SR100700	HEX SOCKET BOLT	M10x35	2
99	NH101700	NUT	M10	1
102	AB135250-A	TRUNNION SUPPORT BRACKET(ASM)		1
103	OWS100000	SPRING WASHER	M10	2
104	WF102325	FLAT WASHER	M10xØ23	2
112	WF081820	FLAT WASHER	M8xØ18	4
122	WS080000	SPRING WASHER	M8	4
123	SH080500	HEX HEAD BOLT	M8x25	4
125	AB198022-B	NEW FENCE SET		1
126	136027	NEW TABLE	19"X26-7/8"	1
127	135010	TABLE INSERT		1
128	130045	TABLE PIN (HANDLE)		1
132	AB135095A	LOWER BLADE GUIDE SUPPORT		1
136	SR050200	HEX SOCKET BOLT	M5x10	2
137	WF051210	FLAT WASHER	M5xØ12	2
138	135034	PROTECT COVER (ASM)		1
140	135073	STEP SCREW		1
141	135054	FIBER WASHER	Ø13x6x1.2	1
142	135037	SLIDING PLATE		1
145	AB135092	UPPER BLADE GUIDE SUPPORT		1
152	SR060400	HEX SOCKET BOLT	M6x20	2
158	135006	HANDLE WHEEL		1
159	SR060400	HEX SOCKET BOLT	M6x20	1
162	SJ080400	HEX SOCKET BUTTON HEAD SCREW	M8x20	4
163	WS080000	SPRING WASHER	M8	4
164	AB135050	GUIDE BRACKET (ASM)		1
173	AB198101	MITER GAUGE ASS'Y		1
175	SS069300	SET BOLT	M6x10	1

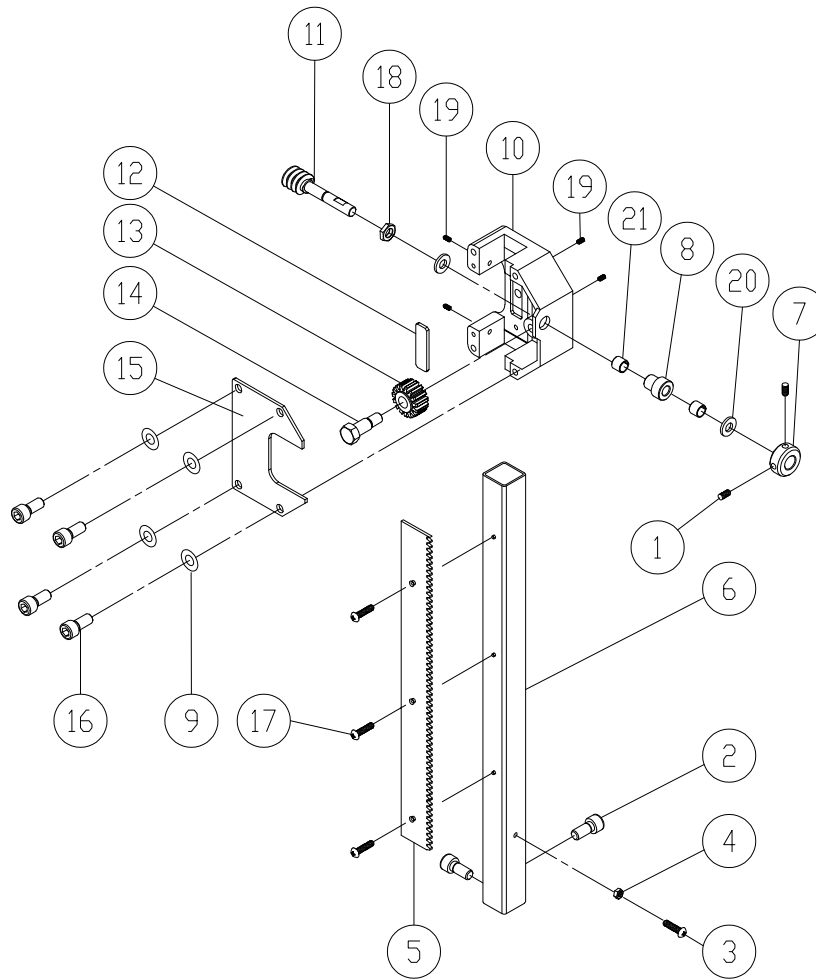
NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

SPARE PARTS LIST - CONT.

Item	Fig. No.	Description	Size	Qty
176	SF050200	PAN HEAD BOLT W/FLANGE	M5x10	2
179	612112	BUSHING		1
181	SF050200	PAN HEAD BOLT W/FLANGE	M5x10	2
182	ABID320711-E	MAGNETIC SWITCH	1.5KW/3PH/50HZ/415V+2A	1
184	136019	WIRE CONECTOR	224-201	3
185	SF059300	PAN HEAD BOLT W/FLANGE	M5x12	1
186	SH069340	HEX HEAD BOLT	M6x12	1
190	WF081818	FLAT WASHER	M8xØ18	4
191	WF081820	FLAT WASHER	M8xØ18	4
192	136374	FIRM ELECTRONIC IC	DC90V	1
193	ST039200	TAPPING SCREW	M3.5x8	1
194	136372	MULTIFINGER SWITCH		1
195	QY994855	FLAT DUTTON SWITCH	R2 PNF-1A-G	1
196	994808	EMERGENCY DUTTON SWITCH	R2PNR4-1B-R	1
197	ST039804	TAPPING SCREW	M3.5 X 38 (A,B)	4
198	136631	EMERGENCY STOP SWITCH		1
199	VA10021002Y00E20	EMERGENCY STOP CORD		1
200	136124A	COVER		1
201	ST040200	TAPPING SCREW	M4 X 0.7 X 10	6

NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

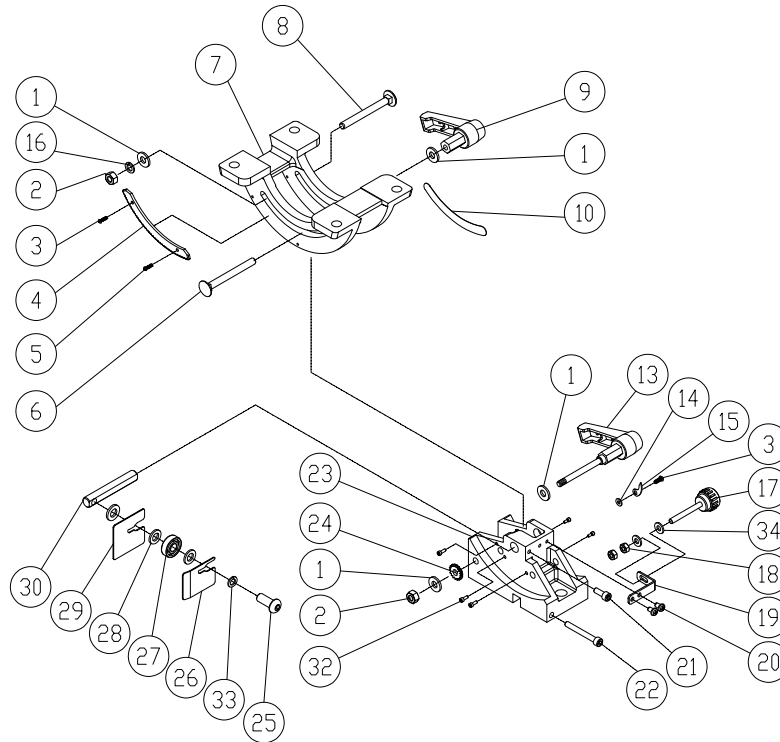
PART NO. AB135050 GUIDE BRACKET (ASM)



Item	Fig. No.	Description	Size	Qty
1	SS050100	SET BOLT	M5 X 5	2
2	SR069400	HEX SOCKET BOLT	M6 X 16	2
3	SP040200	PAD HEAD BOLT	M4 X 10	1
4	NH040700	NUT	M4	1
5	135029	RACK		1
6	135047	UPPER GUIDE HOSE		1
7	135015	LOCATE BUSHING		1
8	136453	BUSHING		1
9	WS080000	SPRING WASHER	M8	4
10	135050	GUIDE BRACKET		1
11	135033	WORM CYLINDER		1
12	135062	FIXED PLATE		1
13	135049	GEAR		1
14	016320	FIXED BOLT		1
15	135046	COVER		1
16	SR089400	HEX SOCKET BOLT	M8 X 16	4
17	SN049200	COUNTERSUNK BOLT	M4 X 8	3
18	136473	NUT	M16 X P15	1
19	990306	SET BOLT	M7 X 10	4
20	200069	FIBER WASHER		2
21	BD101201	BUSHING BEARING	DU 10 X 12	2

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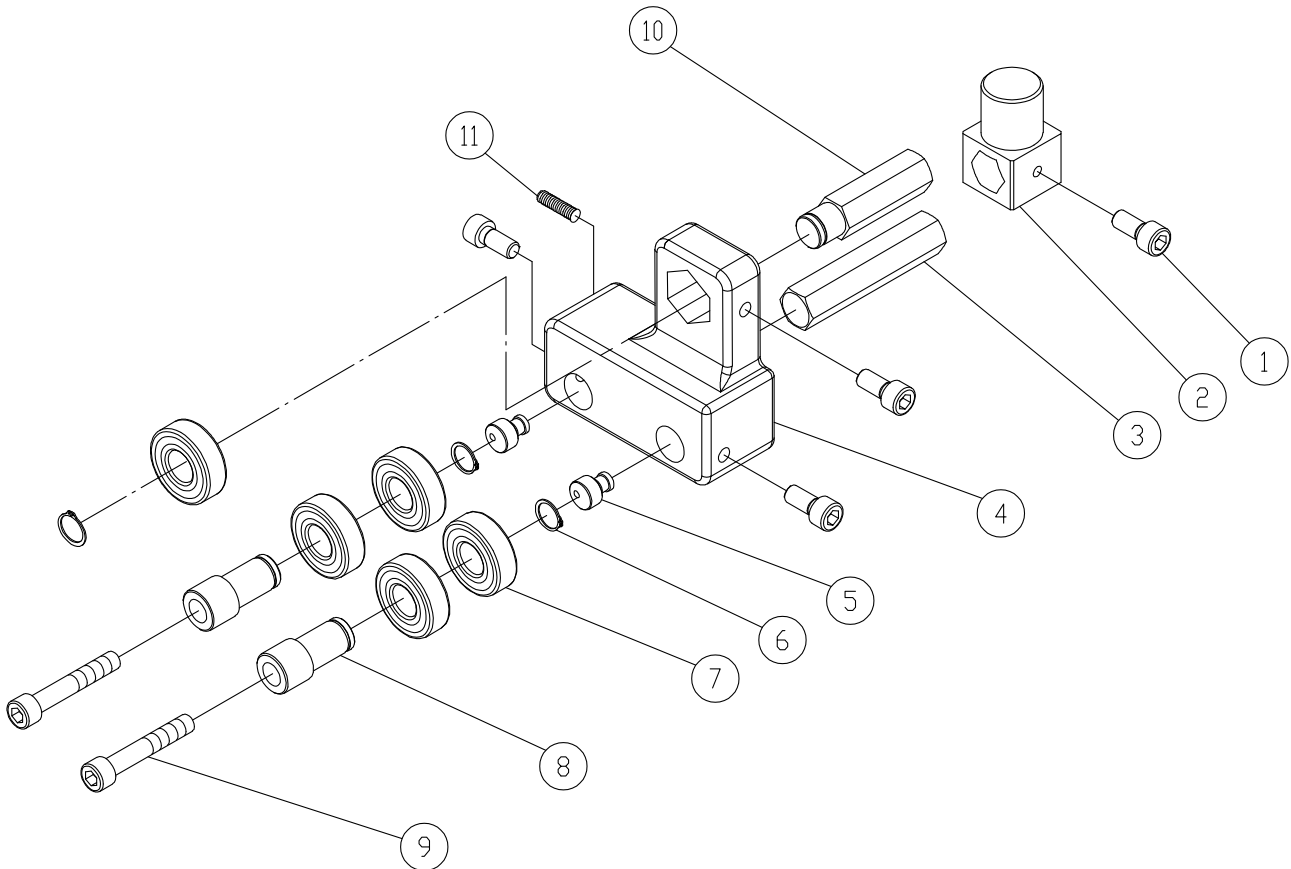
PART NO. AB135250 TRUNNION SUPPORT BRACKET (AMS)



Item	Fig. No.	Description	Size	Qty
1	WF081820	FLAT WASHER	M8 X 18 X 2	4
2	NL081300	NYLON NUT	M8	2
3	SP049100	PAN HEAD BOLT	M4 X 6	2
4	135052	GEAR PLATE		1
5	SN049100	COUNTERSUNK BOLT	M4 X 6	1
6	SC081700	CARRIAGE BOLT	M8 X 85	1
7	135251	TRUNNION BLOCK		1
8	SC081600	CARRIAGE BOLT	M8 X 80	1
9	135044	HANDLE		1
10	LM001182	ANGLE LABEL		1
13	135069	DISAFFILIATE RAPIDLY		1
14	WF040808	FLAT WASHER	M4 X Ø8	1
15	135078	POINTER		1
16	WS080000	SPRING WASHER	M8	1
17	135254	ADJUST BOLT	M6	1
18	NH061000	NUT	M6	2
19	135253	ADJUST PLATE		1
20	SP059200	PAN HEAD BOLT WITH FLANGE	M5 X 8	2
21	SR069400	HEX SOCKET BOLT	M6 X 16	1
22	SR061000	HEX SOCKET BOLT	M6 X 50	1
23	135250	TRUNNION SUPPORT BRACKET		1
24	135061	SMALL GEAR		1
25	SJ100600	HEX SOCKET BUTTON HEAD SCREW		1
26	135123	RIGHT COVER		1
27	BB600002	BALL BEARING	6000ZZ	1
28	WF102020	FLAT WASHER	M10 X Ø20	3
29	135122	LEFT COVER		1
30	135252	ADJUST BLOCK		1
32	SR059130	HEX SOCKET BOLT	M5 X 6	6
33	WS1000000	SPRING WASHER	M10	1
34	WF061310	FLAT WASHER	M6 X Ø13	2

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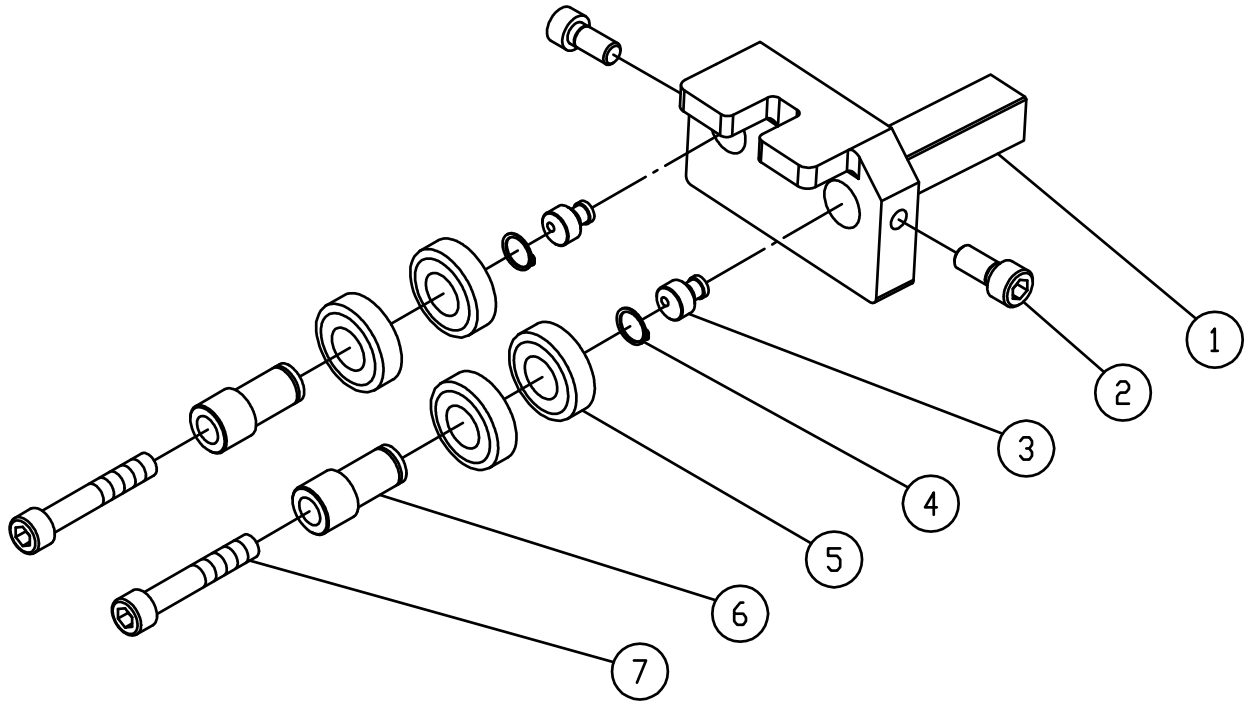
PART NO. AB135092 UPPER BLADE GUIDE SUPPORT (ASM)



Item	Fig. No.	Description	Size	Qty
1	SR069400	HEX SOCKET BOLT	M6 X 16	4
2	135057	UPPER GUIDE SUPPORT BLOCK		1
3	135053	ADJUST BAR		1
4	135091	UPPER BLADE GUIDE SUPPORT		1
5	135124	BIAS SHAFT		2
6	RS150000	RING	S15	3
7	BB620202A	BALL BEARING	6202ZZ	5
8	136445	HANDLE BUSHING		2
9	SR060703	HEX SOCKET BOLT	M6 X 35	2
10	135060	UPPER SPACING SLEEVE		1
11	SS060200	SET BOLT	M6 X 10	1

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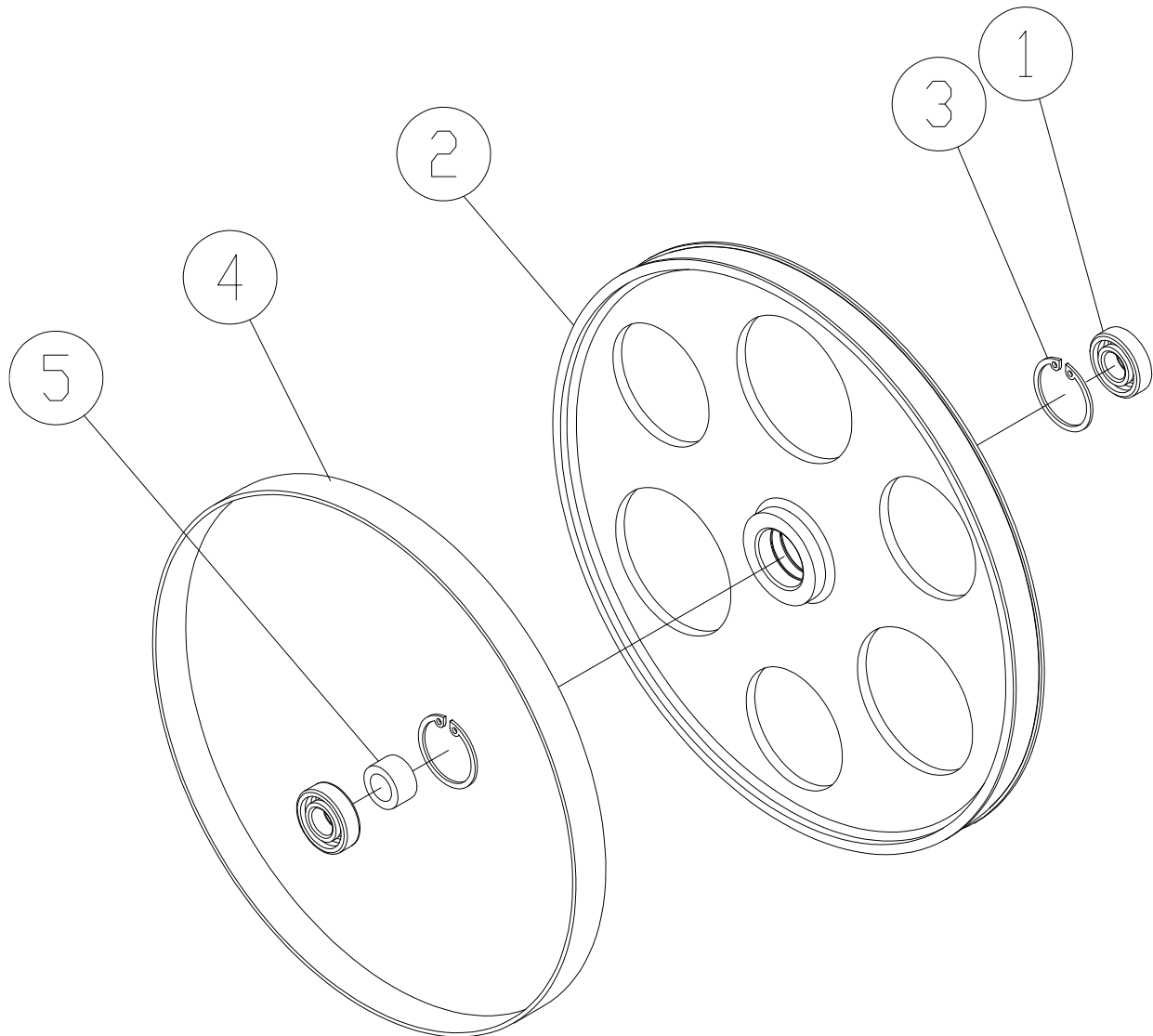
PART NO. AB135095A LOWER BLADE GUIDE SUPPORT (ASM)



Item	Fig. No.	Description	Size	Qty
1	135125	LOWER BLADE GUIDE SUPPORT		1
2	SSR069300	HEX SOCKET BOLT	M6 X 16	2
3	135124	BIAS SHAFT		2
4	RS150000	RETAINING RING	S15	2
5	BB620202A	BALL BEARING	6202ZZ	4
6	136445	HANDLE BUSHING		2
7	SR060700	HEX SOCKET BOLT	M6 X 35	2

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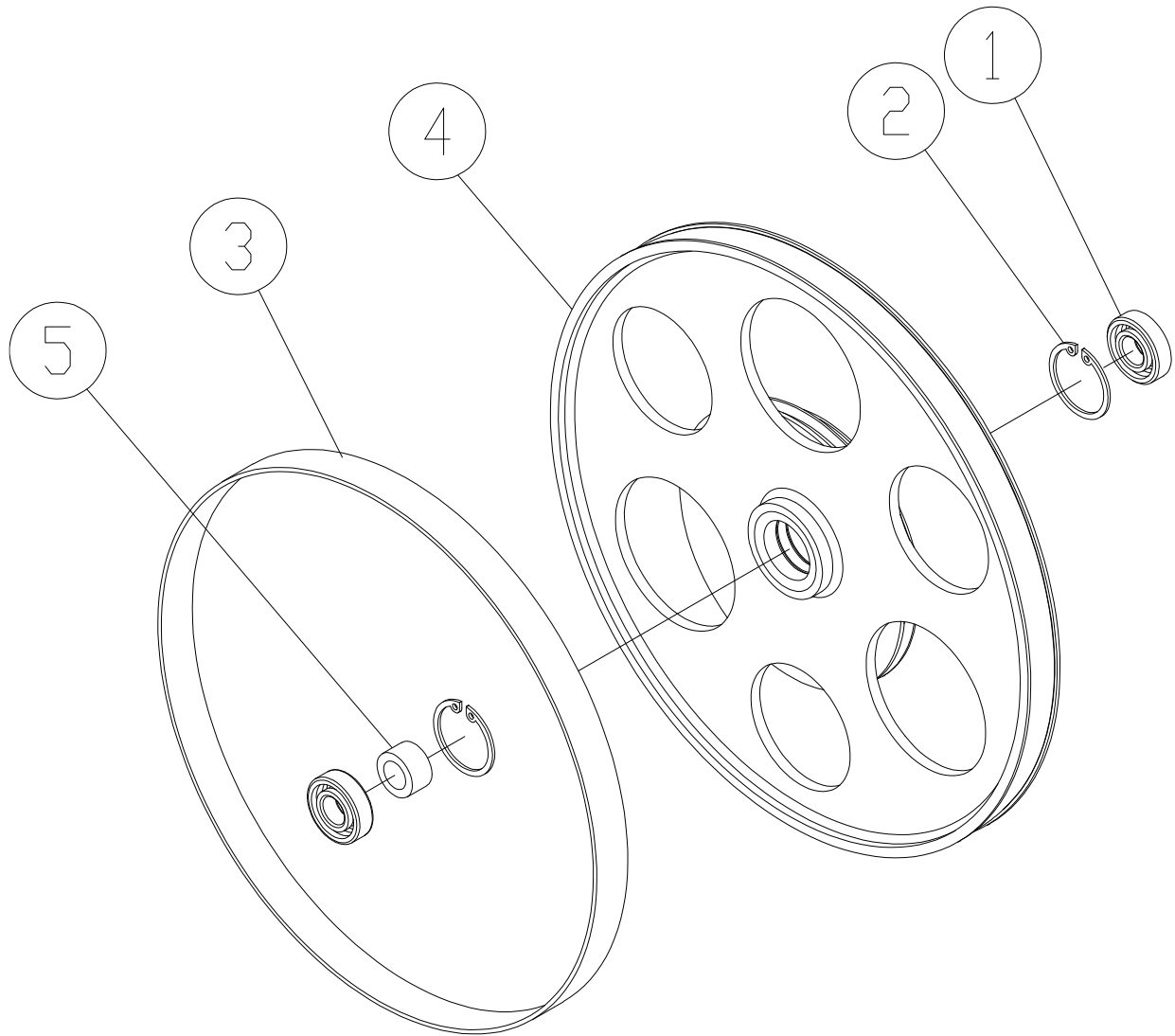
PART NO. AB136024T-PU UPPER WHEEL (ASM)



Item	Fig. No.	Description	Size	Qty
1	BB620403	BALL BEARING	6204LLU	2
2	136024T	UPPER WHEEL		1
3	RR470000	RETAINING RING	R47	2
4	136065	TYRE		1
5	135039	BUSHING		1

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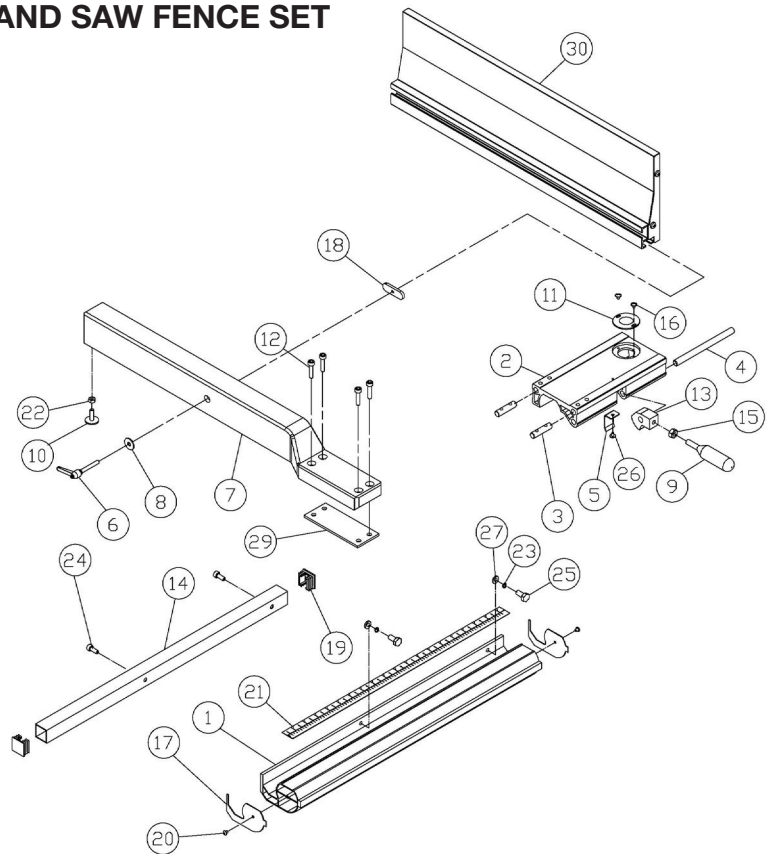
PART NO: AB136022T-PU LOWER WHEEL (ASM)



Item	Fig. No.	Description	Size	Qty
1	BB620403	BALL BEARING	6204LLU	2
2	RR470000	RETAINING RING	R47	2
3	136065	TYRE		1
4	AB136023T	LOWER WHEEL ASM		1
5	135039	BUSHING		1

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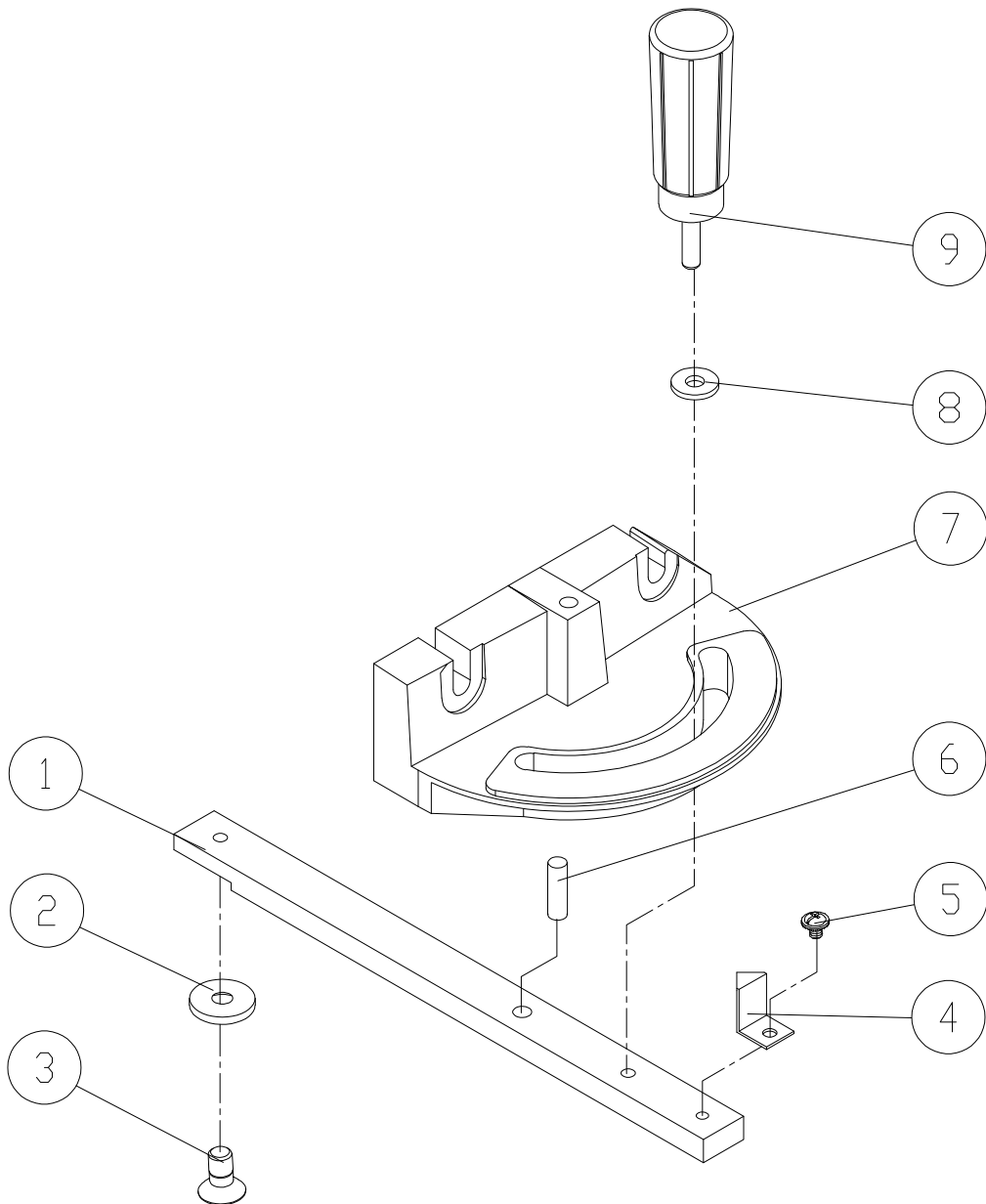
PART NO. AB198022-B 19 INCH BAND SAW FENCE SET



Item	Fig. No.	Description	Size	Qty
1	198022	FIXED BASE	710	1
2	198002	ADJUST BASE		1
3	198003	FIXED SHAFT		2
4	198005	SHAFT		1
5	198006	SPRING WASHER		1
6	198074	LOCK KNOB	M8 X 44	1
7	198078	SUPPORT TUBE	640	1
8	WF082320	FLAT WASHER	M8 X Ø23	1
9	198013	HANDLE		1
10	198012	ADJUST SCREW		1
11	198007	CONVEX		1
12	SR060500	HEX SOCKET BOLT	M6 X 25	4
13	198004	FIXED LUMP		1
14	198023	SQUARE TUBE	710	1
15	NH081300	NUT	M8	1
16	SF049100	PAN HEAD BOLT W/ FLANGE	M4 X 6	2
17	198014	GUARD PIECE		2
18	200527	MOVING PLATE		1
19	198016	PLUGGED		2
20	ST039300	TAPPING SCREW	M3.5 X 12	2
21	LM001035	SCALE		1
22	NH061000	NUT	M6	1
23	WS060000	SPRING WASHER	M6	2
24	SR069400	HEX SOCKET BOLT	M6 X 16	2
25	SH060400	HEX HEAD BOLT	M6 X 20	2
26	SF049200	PAN HEAD BOLT W/ FLANGE	M4 X 8	1
27	WF061310	FLAT WASHER	M6 X 13	2
29	198008	BRACKET	T=3	1
30	AC198083	FENCE (AL)	640	1

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PART NO. AB198101 MITRE GAUGE ASSEMBLY

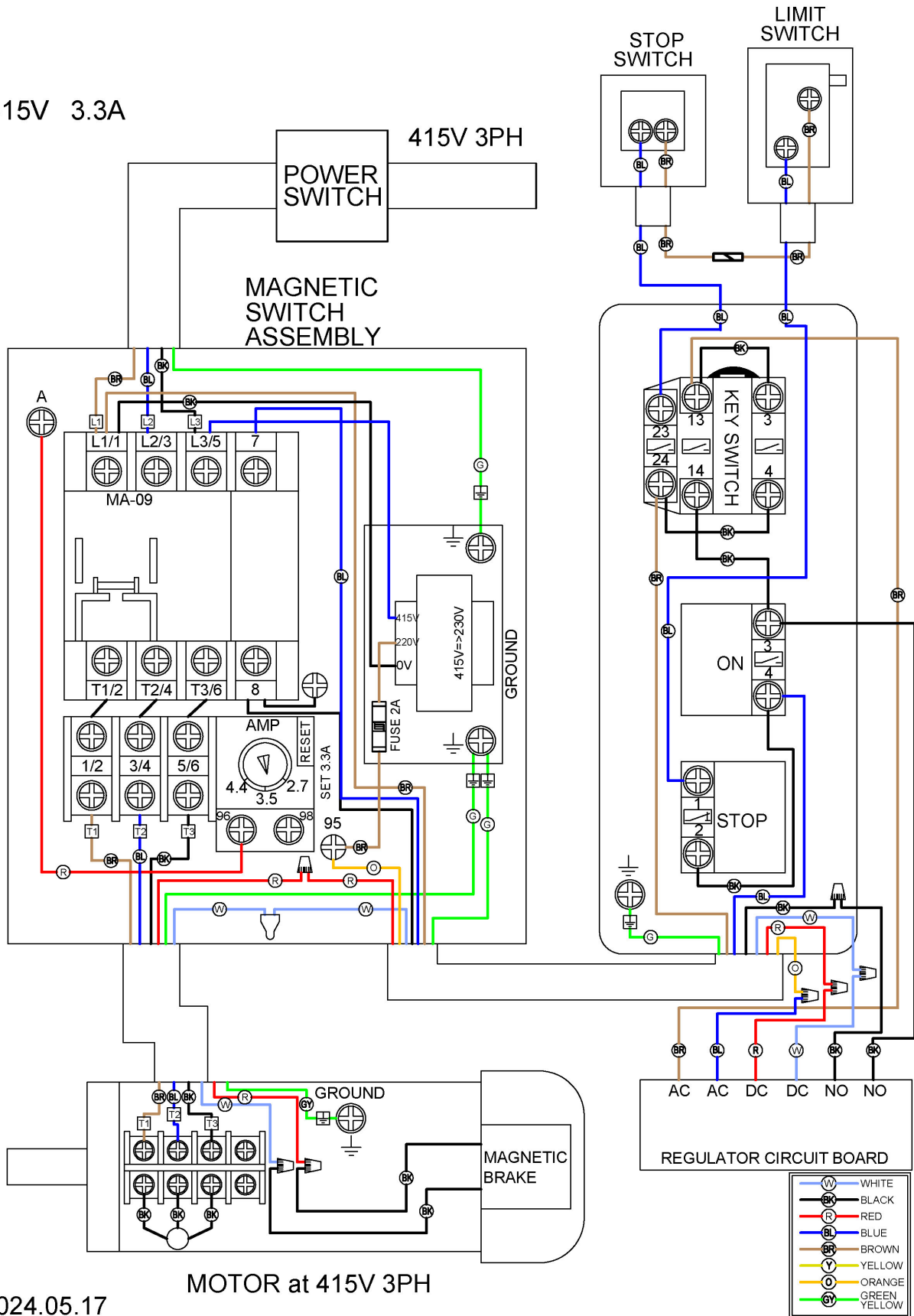


Item	Fig. No.	Description	Size	Qty
1	198101	GUIDE BAR		1
2	198102	GUIDE PIECE		1
3	SN069200	COUNTER SUNK BOLT	M6 X 6	1
4	198103	POINTER		1
5	SF059200	PAN HEAD BOLT W/FLANGE	M5 X 8	1
6	198107	STEEL PIN	Ø6.5 X 10	1
7	198106	MITRE GAUGE BODY		1
8	198104	NYLON WASHER		1
9	198105	HANDLE		1

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415V MODEL - ELECTRICAL DIAGRAM

415V 3.3A





ENVIRONMENT PROTECTION

Recycle unwanted materials instead of disposing of them as waste. All tools, accessories and packaging should be sorted, taken to a recycling centre and disposed of in a manner which is compatible with the environment. When the product becomes completely unserviceable and requires disposal, drain any fluids (if applicable) into approved containers and dispose of the product and fluids according to local regulations.

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