HAFCO WOODMASTER

Edition : 2.0
Date: (02/26)

Instruction Manual

TABLE SAW
ST-254

Order Code: (W486)

MACHINE DETAILS

MACHINE.	TABLE SAW
MODEL NO.	ST-254
SERIAL NO.	
DATE OF MANF.	

IMPORTED BY

AUSTRALIA

HARE&FORBES MACHINERYHOUSE

www.machineryhouse.com.au

NEW ZEALAND

MACHINERYHOUSE

www.machineryhouse.co.nz

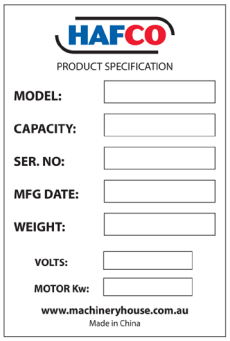
NOTE:
This manual is only for your reference. At the time of the compiling of this manual every effort to be exact with the instructions, specifications, drawings, and photographs of the machine was taken. Owing to the continuous improvement of the HAFCO WOODMASTER machine, changes may be made at any 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

⚠WARNING	*Indicates a potentially hazardous situation causing injury or death*
⚠CAUTION	*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)

FIG.1



CONTENTS:

1.1 SPECIFICATIONS

Order Code	W486
Model	**ST-254**
Blade Diameter (mm)	ø254
Blade Bore Size (mm)	25.4
Blade Speed (rpm)	2840
Table Size (W x D) (mm)	560 x 800
Table Size With Extensions (mm)	1170 x 800
Table Height (mm)	845
Max. Depth Of Cut at 90° (mm)	75
Max. Depth Of Cut at 45° (mm)	60
Tilt Arbor (deg)	0 ~ 45°
Rip Capacity (mm)	950
Motor Power (kW /hp)	2.2 / 3
Voltage / Amperage (V / amp)	240 / 10
Floor Space Required (W x D x H) (mm)	1350 x 1160 x 1100
Nett Weight (kg)	190.5

1.2 INCLUDED ACCESSORIES

- Heavy Duty Rip Fence
- Mitre Guide
- Material Push Stick

WARNING!

Before operating any machine, take time to read and understand all safety signs and symbols. If not understood seek explanation from your supervisor or an experienced operator.

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	Extension Left Wing	H	Blade Tilt Hand Wheel
B	Mitre Gauge	I	Blade Height Lock
C	Blade Guard	J	Blade Height Hand Wheel
D	Fence	K	Blade Tilt Scale
E	Extension Right Wing	L	ON/OFF Switch
F	Rear Fence Rail	M	Blade Tilt Lock
G	Front Fence Rail	N	Cabinet

2. IMPORTANT INFORMATION

2.1 GENERAL 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.

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.

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.

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.

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.

WARNING!

Machines are safeguarded to protect the operator from injury or death with the placement of guards. Machines must not be operated with the guards removed or damaged.

2.2 SPECIFIC SAFETY FOR TABLE 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.


Hearing protection must be worn


Sturdy footwear must be worn at all times in work areas


Close fitting/protective clothing must be worn


Rings and jewellery must not be worn.

PRE-OPERATIONAL SAFETY CHECKS

- ✓ Locate and ensure you are familiar with all machine operations and controls.
- ✓ Ensure all guards are fitted, secure and functional. Do not operate if guards are missing or faulty.
- ✓ Ensure the saw is properly secured to a work table by bolts/clamps at approximately hip height.
- ✓ Ensure the saw is operated on an RCD protected circuit.
- ✓ Check workspaces and walkways to ensure no slip/trip hazards are present.
- ✓ Keep table and work area clear of all tools, off-cut timber and sawdust.
- ✓ Start the dust extraction unit before using the machine.

OPERATIONAL SAFETY CHECKS

- ✓ Ensure all adjustments are secure before making a cut.
- ✓ Use clamps to secure and support the workpiece to a stable platform. Do not use a length stop on the free scrap end of a clamped workpiece.
- ✓ Before turning on the saw, perform a dry run of the cutting operation to ensure no problems will occur when the cut is made.
- ✓ Avoid reaching over the saw line. Do not cross arms when cutting.
- ✓ When pulling the saw down with your right hand, keep the left hand, especially the thumb, well clear of the line of cut.
- ✓ If workpiece is bowed or warped, clamp it with the bow facing toward the fence.
- ✓ After finishing the cut, release the switch, hold the saw arm down and wait for blade to stop before removing work or off-cut piece.
- ✓ Before making any adjustments, disconnect the plug from the power source and bring the machine to a complete standstill.

DON'T

- × Do not use faulty equipment. Immediately report suspect equipment.
- × Do not exceed the maximum cut for the machine.
- × Do not cut more than one workpiece at a time.
- × Do not start the saw with the blade touching the workpiece. Allow the blade to reach full speed first.
- × Do not cut branches, dowel, or wood with embedded nails or screws.
- × Do not rip solid timber along the grain.
- × Do not cut ferrous or non-ferrous material.

POTENTIAL HAZARDS AND INJURIES

- ❒ Saw may grab and 'kick-back' toward operator.
- ❒ Contact with rotating blade.
- ❒ Eye injuries
- ❒ Flying chips and airborne dust.
- ❒ Noise.

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

Nominal Voltage.....240V
Cycle.....50 Hz
Phase.....Single Phase
Power Supply Circuit..... 10 Amps
Full Load Current..... 9.5 Amps

(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.

4.5 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.

The HAFCO ST254 saw bench comes supplied in 2 cartons

1 of 2 contains main saw bench assembly and 2 of 2 contains parts for rip fence.

Open both boxes and inspect for any damage etc before assembly.

Main Carton # 1

1. Carefully remove the 2 x cast tables and then loose parts packed inside machine and around it.

NOTE: 2 x small pieces of key steel wrapped in brown paper with the 2 hand wheels. Put these aside so as not to lose them they will be needed later

2. Break off all four sides of the main carton and remove out of the way. Hammer over any sharp nails left in the base of carton.
3. Find the 4 Legs marked A, B, C, D and the rear panel “E” with the dust extraction cut out. Locate the dust extraction pot and fit it to the panel “E” with the bolts and nuts provided.

NOTE: The orientation of the port should leave it with the 30mm port pointing upwards when machine is right side up later. (Fig. 4.1)

4. Tighten all nuts.
5. Find 20 x M8x16 long mm Bolts nuts and double washers. Fit the legs to the upside down machine, noting the corresponding letters A,B,C,D on the legs fit to the corresponding letters on the machine and that the orientation of the legs are fitted so the tapped holes in the legs point up when fitted on the upside down machine. Fit legs using a washered bolt through the legs and secure with washer and nut (Secure the nuts finger tight only)


Fig. 4.1

6. Fit the Rear panel “E” with the dust extraction chute fitted to the rear of the machine on the side marked “E”. Use the washered bolts through the sides to the panel/legs and secure with washer and nut (Secure the nuts finger tight only)
7. Locate the hose and the two hose clamps. Slip the clamps over the hose and first fit one end to the outlet of the saw blade box. Ensure the hose is pushed on correctly then tighten the clamp.
8. Fit the other end to the inside of the dust extractor port and slide on clamp and tighten.
9. Now fit the other 3 side panels using washered bolts through the sides to the panel/legs and secure with washer and nut (Secure the nuts finger tight only)

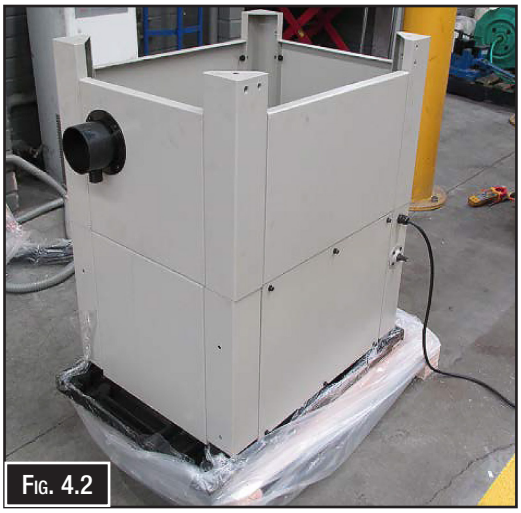


Fig. 4.2

10. While aligning the side panels in the legs tighten all sets of bolt/nuts around the base then tighten the 4 bolt/nut sets holding the base to the machine. (Fig. 4.2) When all are tight the machine can now be lifted upright. At least two people should be used to do this.

4.5 ASSEMBLY Cont.

TILT AND RAISE AND LOWER HAND WHEELS

Fit the Tilt and the Raise and Lower hand wheels onto the shafts of the machine

1. Find the two small pieces of key steel wrapped in brown paper with the 2 hand wheels.
2. Fit the key steel into the slot in the shafts then slide the hand wheel over the shaft. (Fig. 4.3)
3. Tighten 2 x Screw tightly onto flats on shafts.

Fig. 4.3

FITTING EXTENSION TABLES TO MAIN TABLE.

Note the machine can now be set up in one of two configurations.

Fig. 4.4

SET UP # 1

With an extension table on each side of the machine.

NB: as above, the tape fitted to the fence rail as delivered is split in two, having the ability to use the fence on the left and right of the blade . (Fig. 4.4)

If set up like this the Support Leg is not needed but can be used if you want (Pick a side!)

SET UP #2

With both extension tables on the Right hand side and the support leg supplied used to prop it up. (Fig. 4.5)

If set up like this, the original measurement tape gets taken off the front fence rail and the new one put on.

This set up is also used when fitting optional sliding table # W487

Fig. 4.5

ASSEMBLY CAST EXTENSION TABLES

Select one of the Extension tables (they are identical)

Find the 4off M8 x 25mm long Bolts and flat washers and 4 x M8 x 30mm long bolts washers and nuts supplied.

Ensure the front edge of the extension table is correctly orientated. The front edge of the Extension tables are Chamfered. This matches the front edge of the main table that is also chamfered.

4.5 ASSEMBLY Cont.

ASSEMBLY CAST EXTENSION TABLES Cont.

1. Stand the back end of the table on the floor on the right hand side of the main table, then lift it up and putting one of the M8 x 25mm washered bolts through the top hole, screw the bolt into the front tapped hole in the main table until almost home.
2. Carefully lift up the bottom edge of the table and swing up, aligning the top faces, fit another bolt and washer and then the middle two.
3. Slightly tighten the front and rear bolts. Now with a soft hammer, line up the front edge and rear edges of the cast table with the main table. This is needed to ensure Fence rail can be attached easily and accurately

With the soft hammer you can level up the tops of both main table and extension table as needed.

4. If there is a slight lump or drop in the middle of the joining top edges, this can be reduced by removing two off end bolts and working from one end to the other, lift or lower table to line up top faces as you go tightening the attachment bolts ensuring the front and rear ends are still in line with the main table
5. When done tighten all 4 bolts.

FOR SET UP # 1

Repeat the above with the second Cast Extension table on the left side of the main table using the M8 x 30mm long bolts and washers

FOR SET UP # 2

Repeat the above with the second Cast Extension table bolted to the side of the first cast extension with the 4off M8 x 30mm long bolts nuts and double washers supplied to bolt Second table onto the first one,

So both tables are now on the Right hand side of the main table.

Then fit the support leg supplied to the 2 middle taped holes on the outer edge of the second cast extension table.

FENCE ASSEMBLY

Find the 10 off M8 SQUARE Head bolts washers and nuts

1. Fit the M8 x Square head bolts in front and back holes (5 each) with the Square head of the bolt on the outside and the washer and nut in under table lip.
2. Slide on the front and back rails, introducing the square head of the bolt into the Tee slot of the extruded rails. (Fig. 4.6)

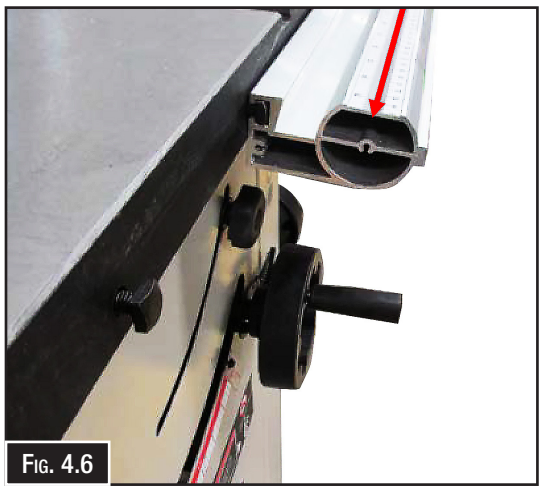


Fig. 4.6

FOR SET UP #1: Align each rail approximately central on the machine then finger tighten up both rails end bolts only (2 of, each rail)

FOR SET UP #2: Align each rail so it is in from the left edge of the main cast table about 8 to 10mm Ensuring machine is not plugged in.
Wind blade fully up ## Caution of sharp teeth on blade!! ##

FENCE ASSEMBLY Cont.

Find the Rip fence assembly and remove the fence extension side plate and put it aside with both bolts only (2 of, each rail) (A in Fig. 4.7)

FOR SET UP # 1 Front rail as supplied with 2 tapes on 0-64 on the left and 0-62 on the right

1. From the right hand side, slide the fence on to the front and rear rails.
2. Zero the sight line over the “0” of the right hand tape.
3. While holding the fence square on the front rail, slide the front rail across with fence held on the Zero mark until the fence touches the blade. (B in Fig. 4.8)
4. Check the fence sight line is still over “0”, nip up the end bolts of the front rail while at the same time lifting rail up each end. (To ensure clearance between fence and table surface)
5. Recheck the Zero line while the fence is touching blade, then tighten the two end nuts.
6. Line up rear fence rail and while lifting that up, tighten the two end nuts.

FOR SET UP # 2 Remove the existing measurement tapes 0-64 on the left and 0-62 on the right of the front fence rail as these are only needed for set up #1.

The tape can be carefully lifted with a sharp blade and peeled off. Residue glue on rail can be removed with kerosene and a small scraper.

The new Tape left to Right reading 0-98 now has to be fitted in the correct position.

1. From the right hand side, slide the fence on to the front and rear rails and then slide the fence all the way across to be touching the blade lightly. Lock the fence down.
2. Feed the tape (with backing paper still on!) under the fence and “Zero the sight line over the “0” of the tape.
3. With a black marker put a mark on the tape and front rail as shown, checking the Zero line is still over the “0” of the tape. (Fig. 4.9
4. Pull the tape out and remove the Fence. Clean the front rail with a dry cloth in the slot the tape will be going being careful not to remove the black mark just put on.

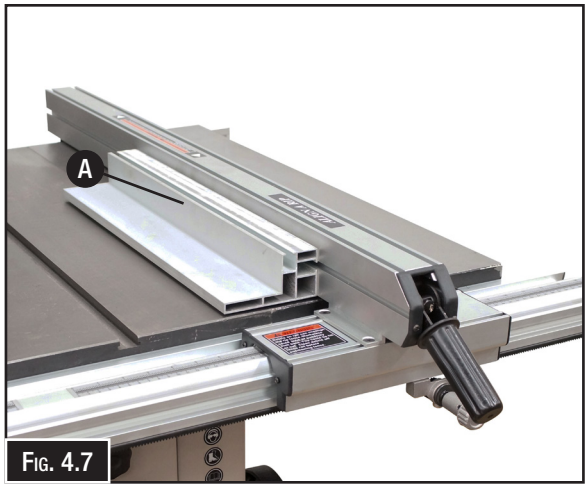


Fig. 4.7

Fig. 4.8

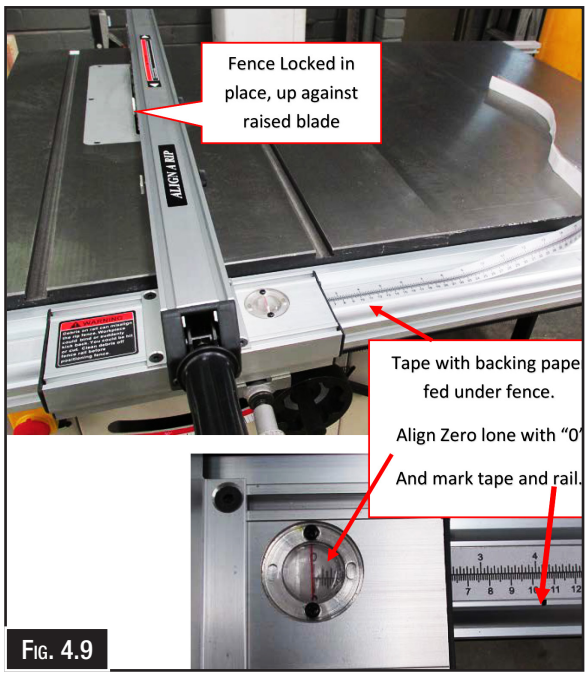


Fig. 4.9

FENCE ASSEMBLY Cont.

5. Start peeling the backing tape off the new tape and position the tape on the rail, lining up the black marker lines as you go, then if all OK, peel the rest of the backing paper off as you put the rest of the tape into the groove. Press the tape down firmly along its length. (Fig. 4.10)


Fig. 4.10

Checking Fence Setup

1. Move the fence in line with the mitre slot in the table and check that it is parallel with the slot.
2. If needed, loosen the 4 x screws holding the fence to the rail and square it up, tightening the 4 screws when finished. (Fig. 4.11)
3. With the fence touching the blade recheck the "0" on the sight line of the fence is correct! Rest front rail if needed


Fig. 4.11

Fitting The Fine Adjuster

1. Lower the blade all the way down under table surface.
2. Slide the fence assembly off the rails and turn upside down
3. Mount the Micro-Adjuster" to the rip fence front bracket on the right hand side (when up the correct way) .
4. Refit the Fence onto the rails.

NOTE: The Micro–Adjuster is used by pushing in the spring loaded knob and then turning it. This engages the gear on the rack running along the bottom of the fence rail. It may need adjusting to allow the gear to come better into mesh with the rack, or it may be too tight.

To adjust this if needed, the shaft of the gear is in an adjustable black cam bush. (Fig. 4.12)

1. Loosen the screw under the bush with an Allen key and turn the black bush to move the shaft/ gear up or down as needed. Tighten screw when set as required.

NOTE: If the gear is still too tight on the rack an extra washer can be fitted between the mounting bracket and rip fence to drop the gear down further.

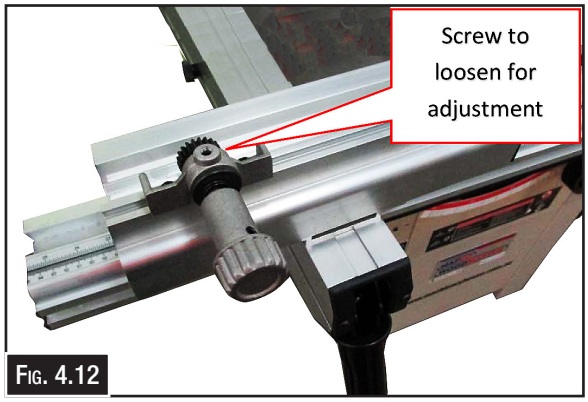


Fig. 4.12

2. Fit the 4 x plastic end caps with the self-tapping screws supplied, then check for any protruding plastic and file flush if needed so it doesn't catch when the fence is slid to the further most ends of the rails.
3. Fit the fence "side extension" back on.

Assembly Riving Knife And Blade Guard

Ensuring the machine is not plugged in.

1. Wind blade fully up and undo and remove the 5 screws holding table insert in and remove insert.
2. Undo the 2 x bolts on the front of the riving knife holder behind the blade just enough to allow the slot in the riving knife to go over the center bolts in the assembly push the riving knife towards the blade and tighten the bolts of the front bracket,

NOTE: the mounting plate for the riving knife has been factory set. Do not adjust the 4 bolts.

3. Refit the table insert and lower the blade checking the knife does not foul the table insert.

Fit The Blade Guard Onto The Riving Knife

The attachment bolt in the knife slides down into the "L" shaped slot.

1. When all the way down slide it back into the "L"
2. Wind the blade down then fit the 30mm Dust hose from the blade guard to the rear dust chute Hole in place with the 2 x 30mm hose clamps supplied. (Fig. 4.11)

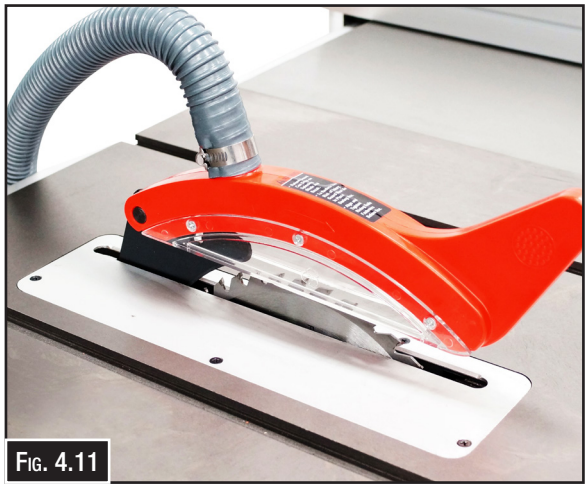


Fig. 4.11

3. Fit the small mitre fence.
4. Connect the machine to a Suitable Dust Collector

The Hafco/Woodmaster ST-254 Saw Bench is now ready to use.

WARNING!

Make sure the spreader or riving knife is aligned with the blade. A misaligned spreader or riving knife can cause the workpiece to catch or bind, increasing the chance of kickback.

5. OPERATION

This machine may perform many types of operations that are beyond the scope of this manual. Many of these operations may be dangerous or deadly if performed incorrectly.

The instructions in this section are written with the understanding that the operator has the necessary knowledge and skills to operate this machine. If at any time you are experiencing difficulties performing any operation, stop using the machine!

If you are an inexperienced operator, we strongly recommend that you read books, trade articles, or seek training from an experienced operator before performing any unfamiliar operations. **Above all, your safety should come first!**

5.1 OPERATION OVERVIEW

This overview purpose is to provide a novice machine operator with a basic understanding of how the machine is used during operation, so that if the machine controls or components are mentioned later in this manual, it will be easy to understand. The overview is not intended to be an instructional guide but is only generic in nature. To learn more about the specific operation, read this entire manual and seek additional training from an experienced machine operator. Another source of information may be found in video's on websites or by reading trade magazines.

Typical operation is as follows

1. Examine the workpiece to make sure it is suitable for cutting.
2. If necessary adjust the blade tilt to the desired angle of the cut.
3. Adjust the blade height so that it is approximately 6mm higher than the thickness of the work piece.
4. Set the fence to the required width of cut, and then lock it in place.
5. Check the out-feed side of the machine, that it has proper support and make sure the workpiece can safely pass all the way pass the blade without interference.
6. Put on safety glasses, respirator, and hearing protection, and locates the push sticks if needed.
7. Start the dust collector, then the saw.
8. Feed the workpiece through the blade while maintaining a firm pressure on the workpiece against the table and fence, and keeping hands and fingers out of the cutting area.
9. Stop the machine immediately after the cut is complete.

5.2 CHECKING THE WORK PIECE

Some work pieces may be safe to cut but may require modification before it is safe to cut.

Before cutting, inspect all workpieces for the following:

- **Material Type:** This machine is intended for cutting natural and man-made wood products, laminate-covered wood products, and some plastics. Cutting drywall creates extremely fine dust and may reduce the life of the bearings.

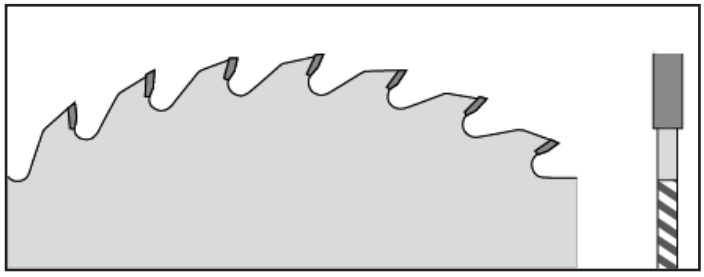
  This machine is NOT designed to cut metal, glass, stone, tile, etc. cutting these materials with a table saw may lead to injury.

- **Foreign Objects:** Nails, staples, dirt, rocks and other foreign objects are often embedded in wood. While cutting, these objects can become dislodged and be a danger to the operator or people nearby. They can also cause kickback, or cause the blade to break and fly apart. Always visually inspect your workpiece for these items. If they can't be removed, DO NOT cut the workpiece.
- **Excessive Warping:** Timber with excessive cupping, bowing, or twisting is dangerous to cut as it is unstable and unpredictable when being cut. DO NOT use workpieces with these characteristics!
- **Minor Warping:** Timber with slight cupping can be safely supported if the cupped side is facing down on the table or the fence. Timber supported on the bowed side will rock during a cut and could cause kickback or severe injury.

5.3 BLADE SELECTION

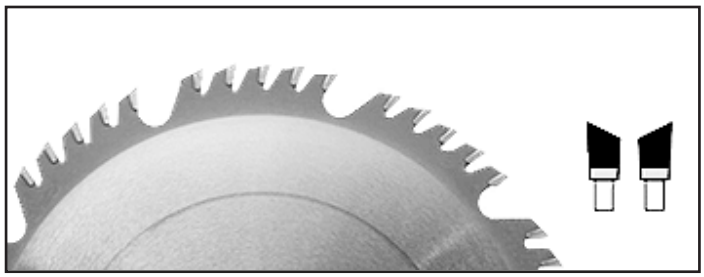
When choosing a main blade, make sure the blade size meets the requirements listed below.

Always follow the saw blade manufacturer's recommendations to ensure safe and efficient operation of your table saw.



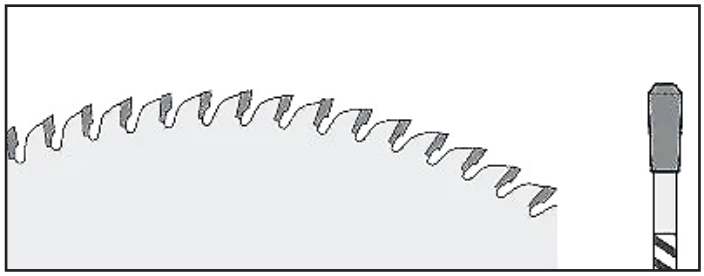
Ripping Blade Features:

- Best for cutting with the grain
- 20-40 teeth
- Flat-top ground tooth profile
- Large gullets for large chip removal.



Combination Blade Features:

- Designed to cut both with and across grain
- 40-50 teeth
- Alternate top bevel and flat, or alternate top bevel and raker tooth profile
- Teeth are arranged in groups
- Gullets are small and shallow (similar to a cross-cut blade), then large and deep (similar to a ripping blade.



Laminate blade features:

- Best for cutting plywood or veneer
- 40-80 teeth
- Triple chip tooth profile
- Very shallow gullet

5.4 CONTROLS

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.

NOTE: DO NOT start the machine until all of the setup instructions have been performed. Operating a machine that is not setup may result in malfunction or unexpected results that can lead to serious injury, death or damage to the machine or property.

ON/OFF Switch

The switch is fitted with a yellow door with a RED button in the centre of it.

Release by pressing against the catch (Fig.5.1) to reveal the green ON and red OFF buttons.

In an emergency the red button on the yellow door can be pressed and and the machine will stop and the machine cannot be started until the catch is released and the buttons exposed.

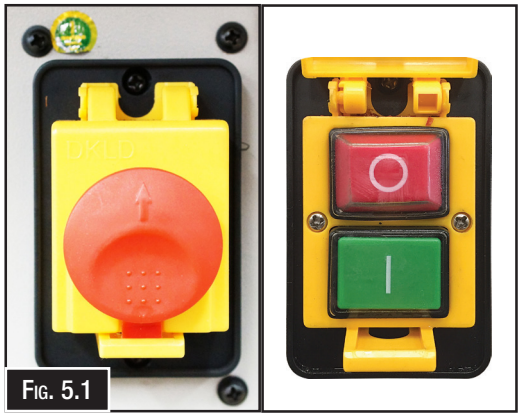


Fig. 5.1

5.4 CONTROLS Cont.

A. **Tilt Lock Knob:** Needs to be released before attempting to tilt the saw blade and tightened when the tilt has been set.

B. **Height Handle:** Is used for rise and fall of the saw blade.

C. **Height Handle Lock:** This lock handle is spring loaded and must be pushed down before the saw blade height handle can be adjusted.

D. **Tilt Lock Scale:** Displays the amount of angle the blade has been tilted.

E. **Tilt Adjustment Handle:** Is used to tilt the saw blade after the Tilt Lock has been released.

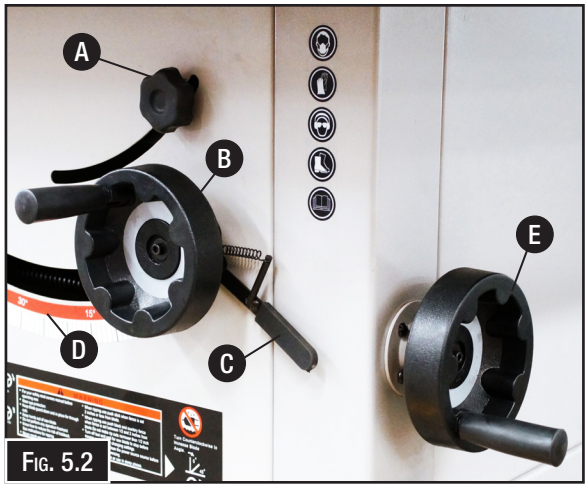


FIG. 5.2

5.5 CHANGING THE BLADE

1. DISCONNECT THE MACHINE FROM THE POWER SUPPLY
2. Raise the saw blade to it's highest point and remove the saw blade guard.
3. Remove the 5 screws that secure the table insert, and remove the table insert. (Fig. 5.3)
4. Using the spanner and the tommy bar provided, put the spanner onto the flats on the nut. Turn the saw until the tommy bar hole is visible. (Fig. 5.4)
5. Insert the tommy bar into the hole and turn the saw to allow it to rest against the front edge of the saw slot. The tommy bar hole is in the inside spindle shoulder.
6. Loosen the left hand thread saw blade nut. Remove the saw nut, then remove the flange plate and the saw blade.
7. Fit the new blade, ensure that the teeth are pointing towards the front of the machine. Put the saw blade flange onto the shaft and twist on the nut and tighten.
8. Refit the table insert and the blade guard.

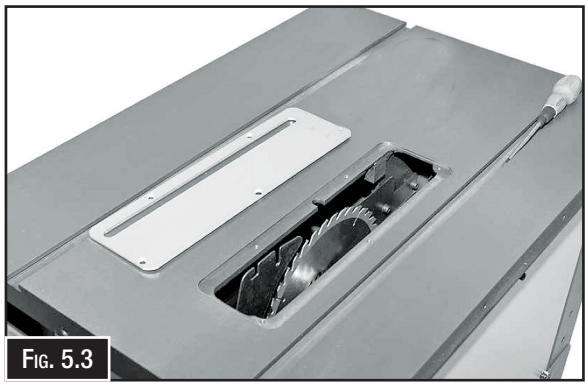


FIG. 5.3

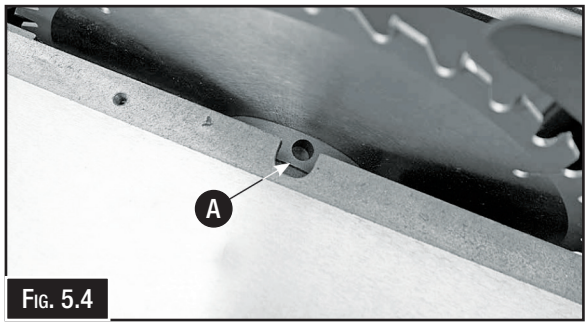


FIG. 5.4

WARNING!

Saw blades are sharp. Keep fingers away from the cutter edge. Take care when handling saw blades. Blades can cause deep cuts and serious injury.

6. MAINTENANCE

⚠ WARNING ***Before maintaining or cleaning the machine, turn off the circuit breaker, or disconnect the machine from the power supply. Post a sign to inform other workers that the machine is under maintenance.***

For optimum performance from the machine, it is important that the machine is well cleaned and maintain. Follow the maintenance schedule listed in the following section and refer to any specific instructions given.

6.1 SCHEDULE

Daily Check

- Loose mounting bolts.
- Worn or damaged wires.
- Check/adjust lubrication.
- Any other unsafe condition

Cleaning

Cleaning the machine is relatively easy. Wipe down all unpainted and machined surfaces daily to keep them rust free and in top condition. This includes any surface that is vulnerable to rust if left unprotected. Use ISO 68 machine oil or any other quality metal lubricant.

Periodically, remove the saw gullet and clean out the saw box and the extraction hosing. Remove any resin build up in the saw box, using a proprietary resin cleaner.

Remove the upper side panels and clean the threaded drive shafts of the rise and fall and tilt mechanisms. At the same time check the belt drive, i.e. the belt is not ‘glazing’ with resin build up, likewise with the pulley wheels. Check the belt tension. If the belt is becoming slack, loosen the motor hold down bolts and drive the motor backward with its adjusting bolt.

Check the saw blade regularly for chipped, missing, damaged teeth etc. and remove any resin build up from the blade, riving knife etc.

WARNING!

Make sure the machine is turned OFF and the cord is disconnected from the power source before installing/removing and servicing any component of the machine.

6.2 BELT ADJUSTMENT

The drive belt stretches slightly as the saw is used. Most of the belt stretching will happen during the first days of use, but it may continue with further use. If you notice that the saw is losing power in the middle of a cut, the belt may be slipping, and will need to be tensioned. If, upon inspection, you find that the belt is cracked, frayed, or shows other signs of excessive wear, replace it.

At the same time you check the belt drive, Remove the upper side panels and clean the threaded drive shafts of the rise and fall and tilt mechanisms. Check the belt is not 'glazing' with resin build up, likewise with the pulley wheels.

TO CHECK THE BELT TENSION.

1. DISCONNECT THE MACHINE FROM THE POWER SUPPLY
2. Set the blade tilt to zero.
3. If the belt (A) has become slack, Loosen the motor hold down bolts (B) and move the motor backward with its adjusting bolt (C). (See Fig. 6.1)
4. Check the saw blade tension is correct by pushing the belt between the pulleys. The belt when pushed should deflect approximately 6mm (Fig. 6.2)
5. If the belt is frayed or badly worn, then replace the belt.

6.3 REPLACING THE BELT.

1. DISCONNECT MACHINE FROM POWER!
2. Remove motor cover from side of machine.
3. Set blade to 0° on tilt scale, then raise or lower blade to approximately 50mm above the table.
4. Loosen blade tension hex bolt, shown in Figure 6.1.
5. Use blade height hand wheel to raise the motor and loosen belt, then remove belt.
6. Install new belt onto the pulleys. Lower motor until it begins to pull blade down with it, then re-tighten the blade tension hex bolt.
7. Re-install motor cove

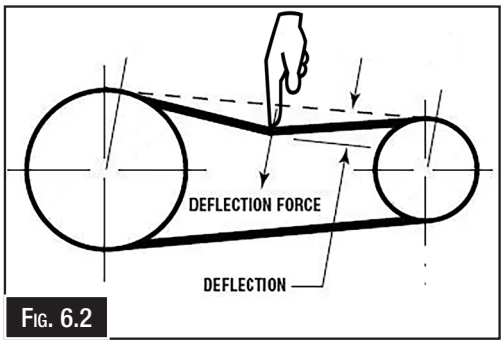


Fig. 6.2

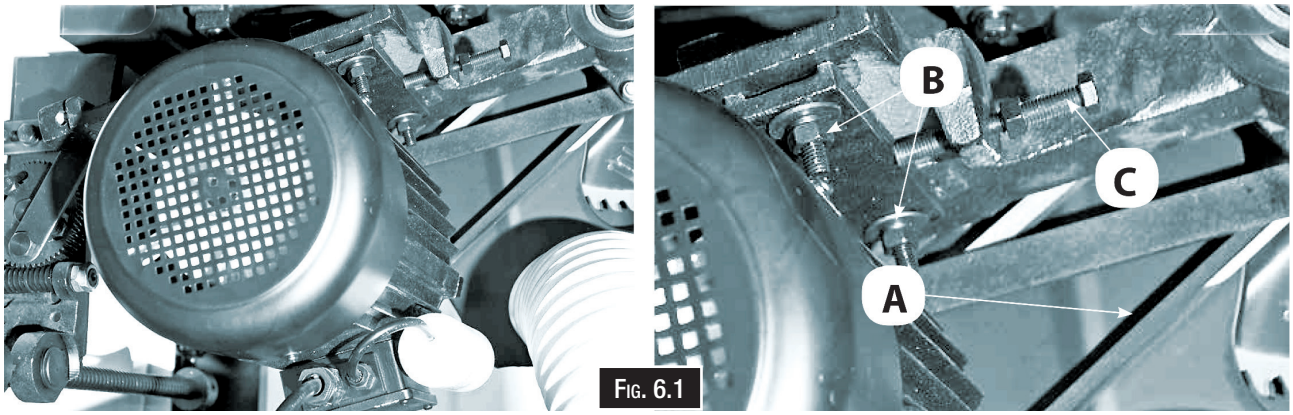


Fig. 6.1

5.3 TROUBLESHOOTING

Review the troubleshooting and procedures in this section if a problem develops with your machine. If you need replacement parts then follow the procedure in the beginning of the spare parts section or if additional help with a procedure is required, then contact your distributor.

Note: Make sure you have the model of the machine, serial number,and manufacture date before calling.

Symptoms	Possible Cause	Possible Solution
Saw does not start.	1. Motor cord or wall cord is not plugged in. 2. Circuit fuse is blown. 3. Circuit breaker is tripped. 4. Cord or switch is damaged.	1. Plug in motor cord or wall cord. 2. Replace circuit fuse. 3. Reset circuit breaker. 4. Have the cord or switch replaced at your nearest Service Center.
Saw is noisy when running.	1. Motor needs attention.	1. Have the motor checked at your nearest Service Center.
Motor is slow or weak	1. Voltage from source is low. 2. Windings are burned out or open. 3. Start switch is defective. 4. Circuit is overloaded with appliances, lights, or other motors.	1. Request a voltage check from the power company. 2. Have the motor checked at your nearest Service Center. 3. Have the switch replaced. 4. Do not use other appliances or motors on the same circuit when using the saw.
Motor overheats.	1. Starter switch is defective. 2. Voltage from source is low. 3. Dull blade. 4. Fuses / circuit breakers are wrong size or defective. 5. Feeding workpiece too rapidly.	1. Have the switch replaced. 2. Request a voltage check from the power company. 3. Replace the blade. 4. Replace fuses or circuit breakers. 5. Feed workpiece into blade slower.
Fuses or circuit breakers open frequently	1. Motor is overloaded. 2. Fuses / circuit breakers are wrong size or defective. 3. Dull blade. 4. Start switch is defective.	1. Feed work more slowly. 2. Replace fuses or circuit breakers. 3. Replace the blade. 4. Have the switch replaced.
Saw vibrates excessively	1. Blade is warped. 2. Belt is damaged. 3. Saw is not mounted securely. 4. Work surface is uneven.	1. Replace the blade. 2. Replace the belt. 3. Tighten all hardware. 4. Reposition on a flat surface. Adjust the leveling feet on legs
Start switch does not operate.	1. Switch contacts are burned out. 2. Capacitor is defective 3. Connections are loose or damaged.	1 Have the switch replaced and request a voltage check from the power company. 2. Have the capacitor replaced. 3. Have the wiring checked and repaired
Hand wheels are hard to tum.	1. Sawdust has collected on the mechanism inside saw.	1. Clean and lubricate the mechanism
Blade does not lower when turning height hand wheel.	1. Blade lock handle is not fully released	1. Fully release the blade lock handle.
Cut binds, bums or stalls motor when ripping.	1. Blade or teeth are dull. 2. Board is warped. 3. Rip fence is not parallel to the blade.	1. Sharpen or replace the blade. 2. Replace the board. 3. See Aligning the Rip Fence in the Assembly section.
Saw blade does not cut true at 90° or 45° positions.	1. Indicators are not properly adjusted. 2. Positive stops 'inside base are not accurate.	1. Speak to your service centre. 2. Speak to your service centre.
Rip fence does not move smoothly	1. Rip fence is not mounted correctly. 2. Rails are dirty or sticky.	1. Remove and reposition the rip fence. See Aligning Rip Fence and Front Rail in the Assembly section. 2. Clean and wax the rails.
Wood edges away from rip fence when ripping.	1 Rip fence is misaligned.	1 See the Assembly section for Checking Rip Fence and Blade Alignment and Aligning Rip Fence and Front Rail procedures.

TABLE SAW
ST-254

Order Code: (W486)

Edition : 2.0
Date: (02/26)

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.

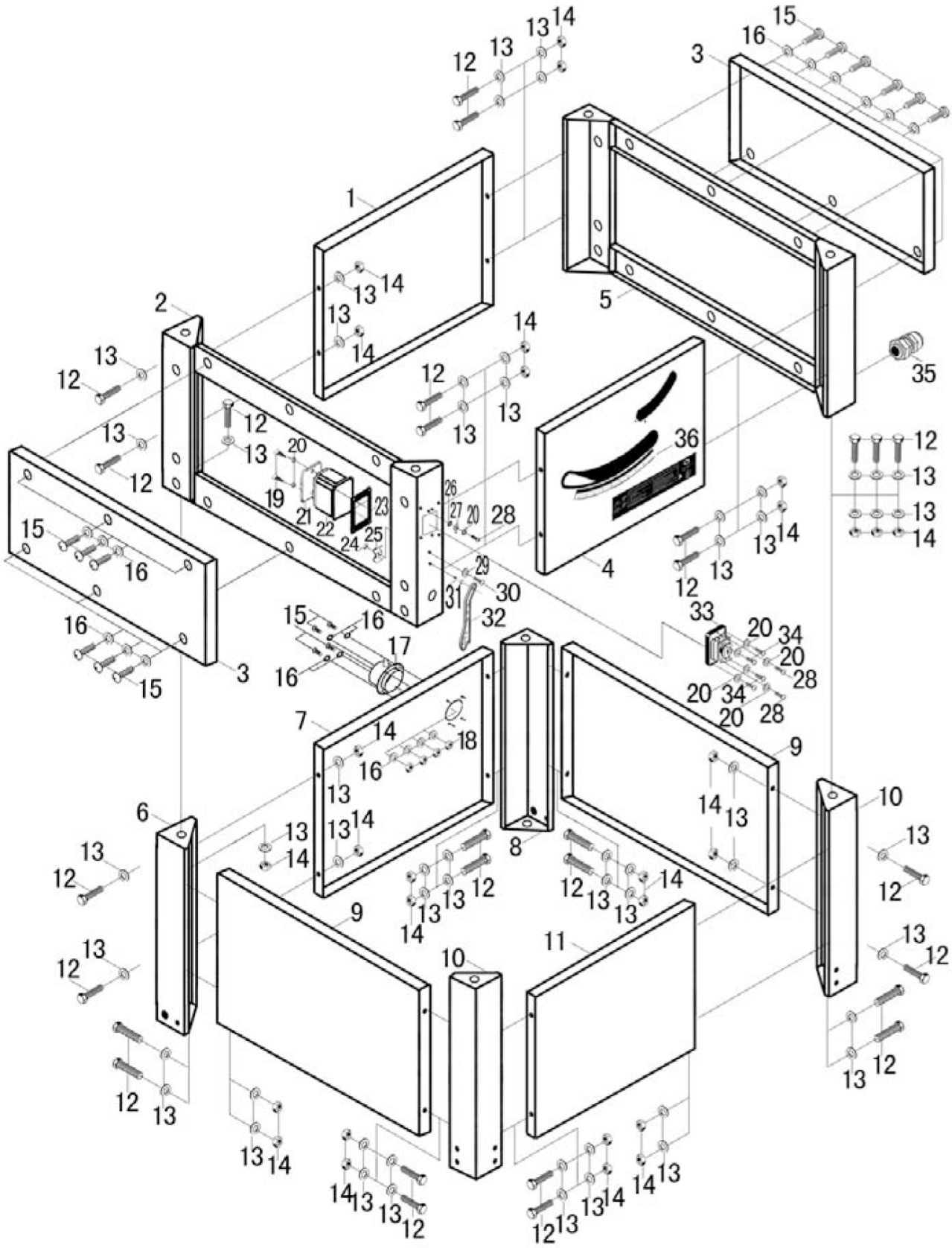
NOTE: SOME PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

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.

SPARE PARTS DIAGRAM A



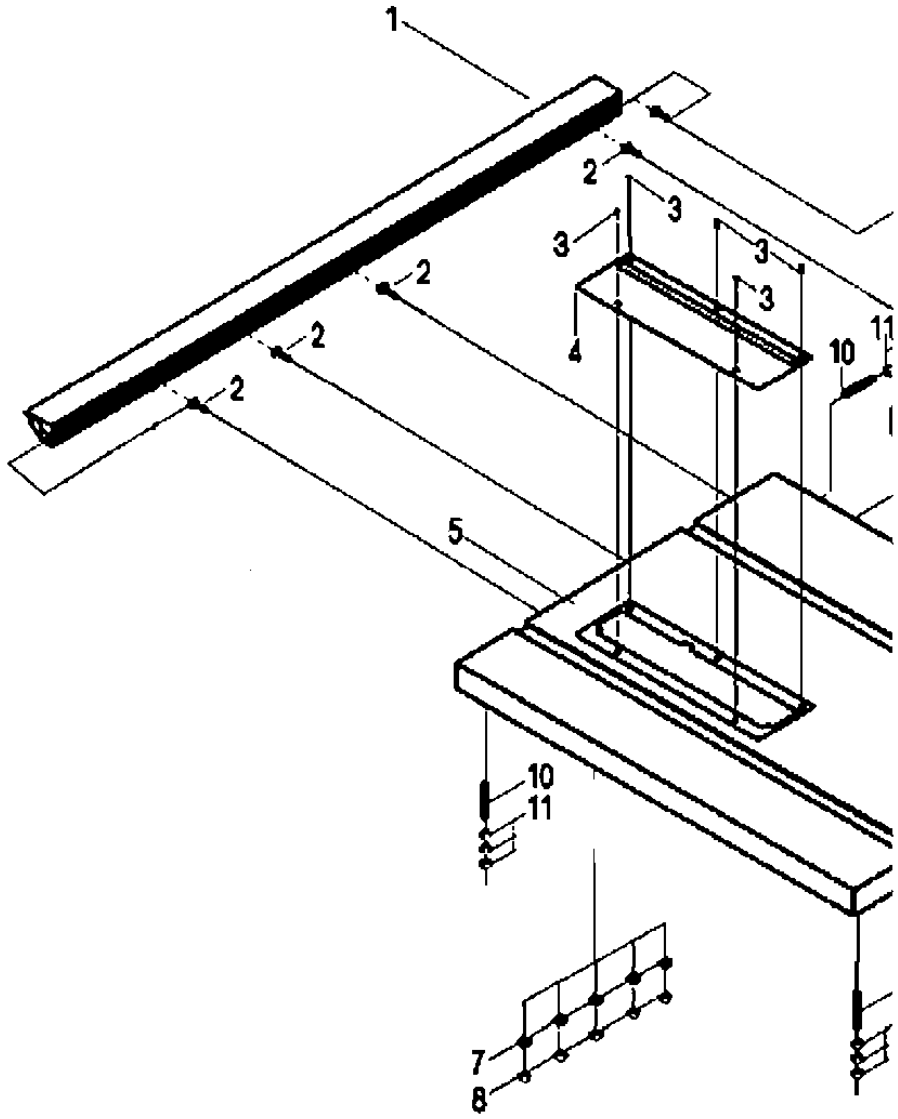
SPARE PARTS LIST - A

ITEM	DESCRIPTION	QTY
A1	Front Panel	1
A2	Left Frame	1
A3	Side Panel	2
A4	Rear Panel	1
A5	Right Frame	1
A6	Left Leg	1
A7	Front Side Board	1
A8	Right Leg	1
A9	Right and Left Side Board	2
A10	Rear leg	2
A11	Rear Side Board	1
A12	Hex head Bolt M8 x 20	28
A13	Washer M8	56
A14	Hex. Nut M8	28
A15	Cross Recessed Pan head Screw M6 x 22	16
A16	Washer M6	20
A17	Tie-in	1
A18	Hex. Nut M6	4
A19	Pan Head Tapping Screw ST4 x 12	2
A20	Washer M4	9
A21	Switch Bottom Board	1
A22	Switch House	1
A23	Rubber Washer of Switch House	1
A24	Hex. Nut M5	1
A25	Wire Strain	1
A26	External Teeth Lock Washer	1
A27	Earth Plate	1
A28	Cross Recessed Pan head Screw M4 x 10	3
A29	Washer M5	1
A30	Cross Recessed Pan head Screw M5 x 20	1
A31	Nail	1
A32	Push Stick	1
A33	Switch	1
A34	Cross Recessed Pan head Screw M4 x 16	4
A35	Cable Gland	1
A36	Label	1

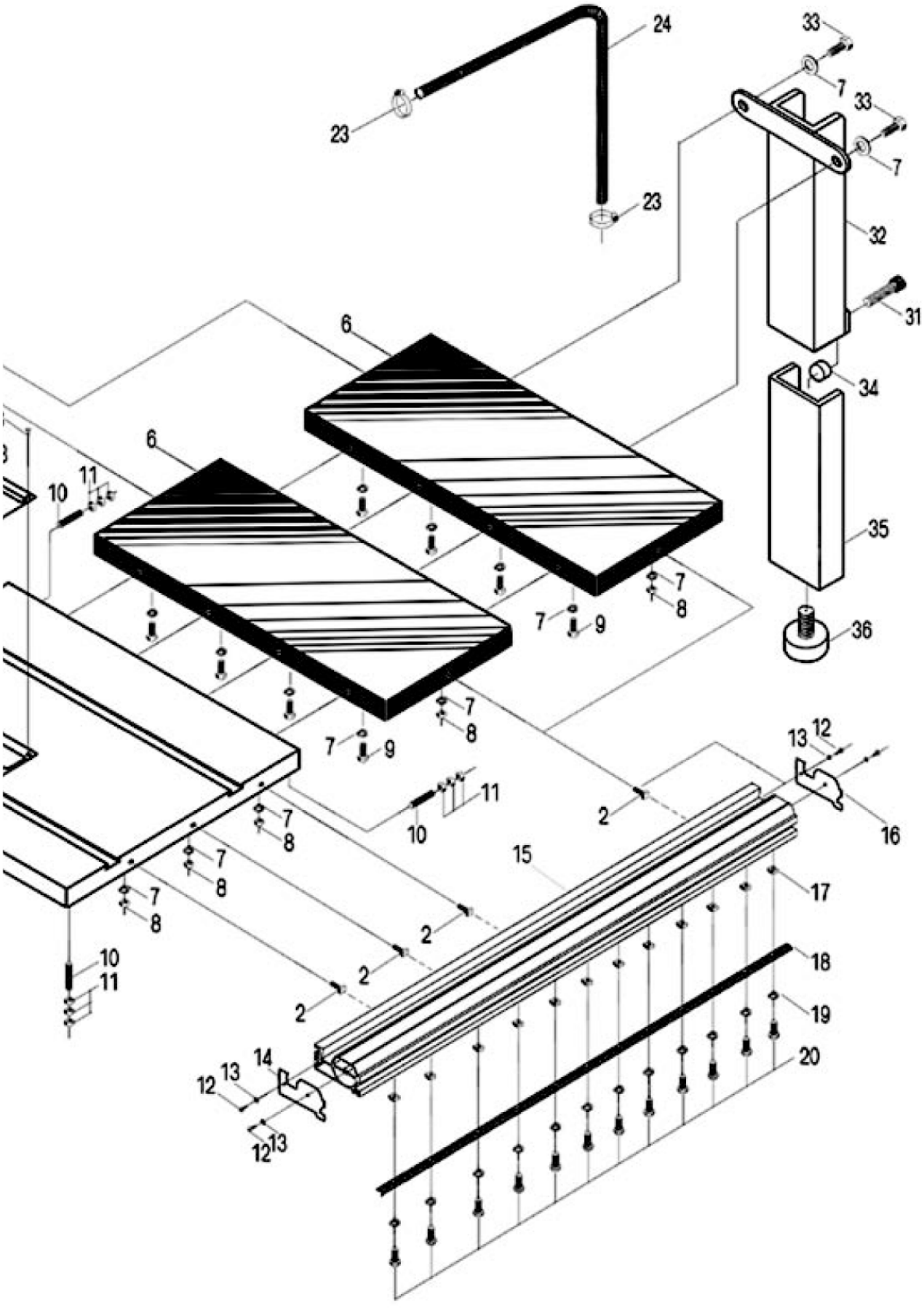
NOTE: SOME INDIVIDUAL PARTS MAY ONLY BE AVAILABLE AS AN ASSEMBLY

SPARE PARTS LIST - B

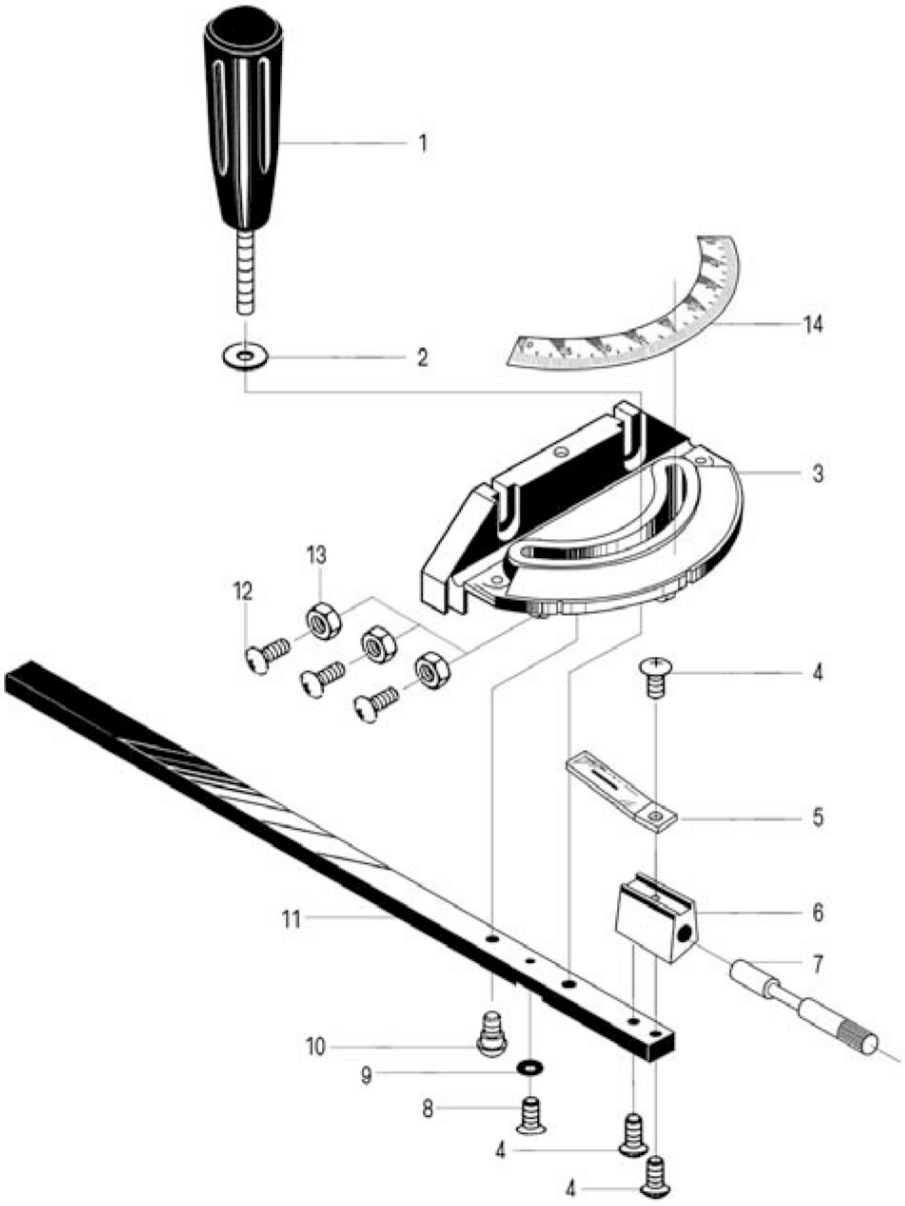
ITEM	DESCRIPTION	QTY	ITEM	DESCRIPTION	QTY.
B1	Rear Rail	1	B23	Neck Chain	2
B2	Stop Bolt M8 x 25	10	B24	Dust Collection Tube	1
B3	Cross Recessed Countersunk Head Screw M5 x 6	5			
B4	Insert	1	B31	Hex Socket Head cap Screw M8 x 25	1
B5	Work Table	1	B32	Upper Stand leg	1
B6	Extension Table	2	B33	Hex Head Bolt M8 x 25	2
B7	Washer M8	28	B34	Washer Block	1
B8	Hex. Nut M8	10	B35	Lower Stand Leg	1
B9	Hex Head Bolt M8 x 22	8	B36	Foot Bolt	1
B10	Slotted Set Screw With Flat Point M10 x 80	4			
B11	Hex Nut M10	12			
B12	Cross Recessed Pan head Tapping Screw ST4 x 12	4			
B13	Washer M4	4			
B14	Left End Cap For Front Rail	1			
B15	Front Rail	1			
B16	Right End Cap For Front Rail	1			
B17	Square Nut M5	12			
B18	Rack	4			
B19	External Tooth Washer M5	12			
B20	Cross Recessed Pan Head Screw M5 x 6	12			



SPARE PARTS DIAGRAM - B CONT.



SPARE PARTS DIAGRAM - C



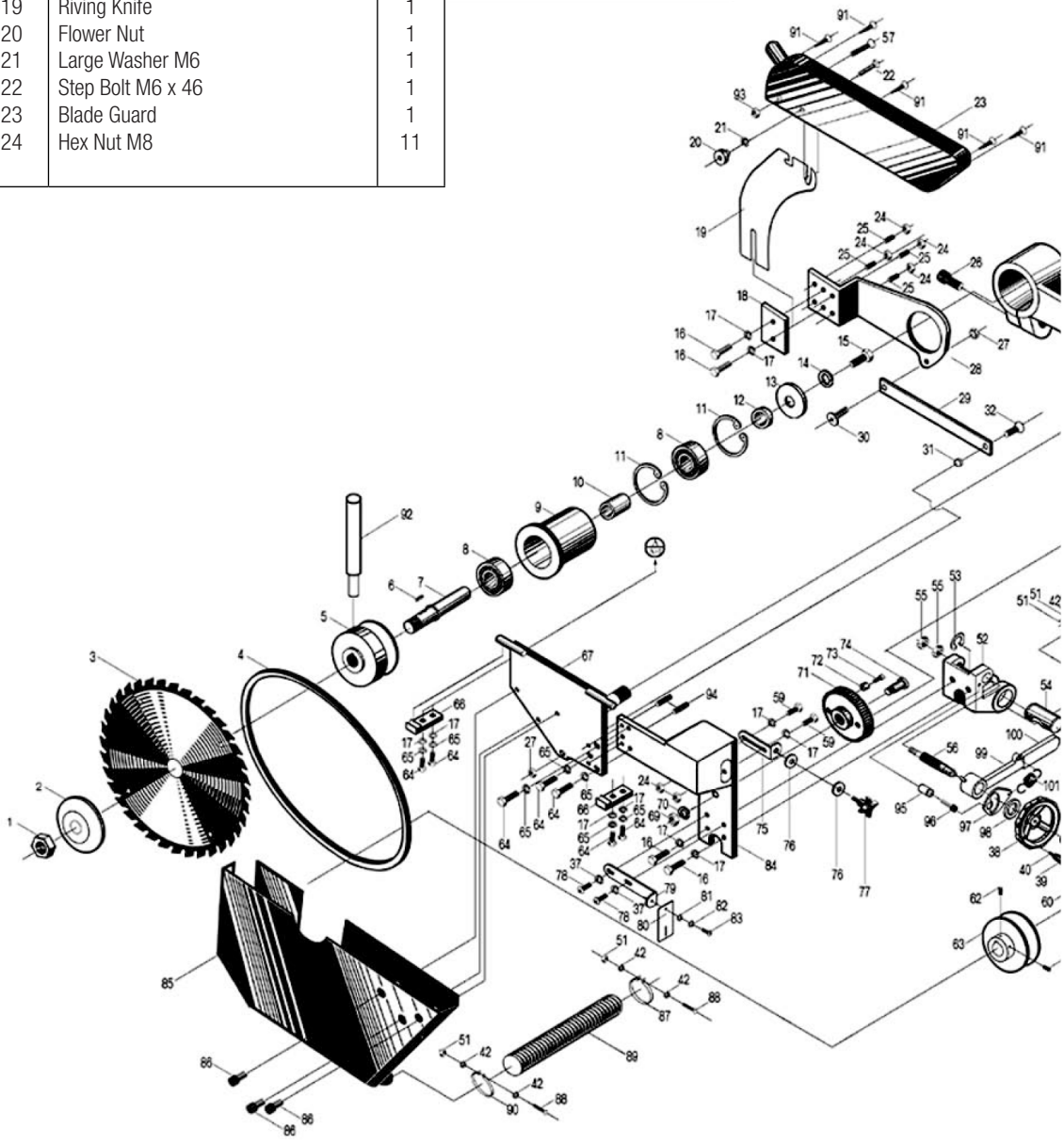
SPARE PARTS LIST - C

ITEM	DESCRIPTION	QTY
C1	Lock Handle For Mitre Gauge	1
C2	Washer M8	1
C3	Mitre Gauge	1
C4	Cross Recess Pan Head Screw M5 x 10	3
C5	Mitre Gauge Pointer	1
C6	Mitre gauge Block	1
C7	Stop Pin	1
C8	Cross Recess Countersunk Head Screw M5 x 8	1
C9	Guide Board Washer	1
C10	Shoulder Screw	1
C11	Guide Board	1
C12	Cross Recess Pan Head Screw M4 x 8	3
C13	Hex Head Nut M4	3

SPARE PARTS LIST - D

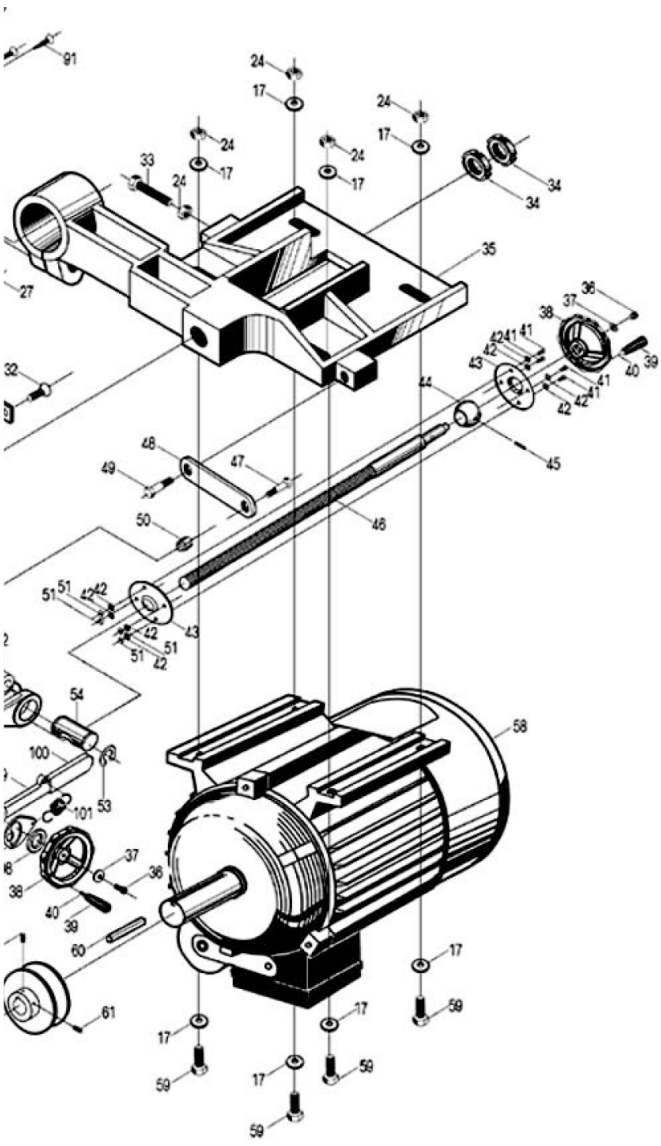
ITEM	DESCRIPTION	QTY
D1	Blade Nut M16 (Left hand)	1
D2	Outer Blade Washer	1
D3	Blade	1
D4	A-Belt	1
D5	Pulley	1
D6	Key (A-Type)	1
D7	Arbour Shaft	1
D8	Bearing 80203	2
D9	Arbour Shaft Sleeve	1
D10	Arbour Shaft Bush	1
D11	Circlips for Hole D=40	2
D12	Arbour Shaft End Bush	1
D13	Press Wheel	1
D14	Single Coil Spring Washer M6	1
D15	Hex Head Bolt M6 x 16	1
D16	Hex Head Bolt M8 x 20	4
D17	Flat Washer M8	18
D18	Press Board For Riving Knife	1
D19	Riving Knife	1
D20	Flower Nut	1
D21	Large Washer M6	1
D22	Step Bolt M6 x 46	1
D23	Blade Guard	1
D24	Hex Nut M8	11

ITEM	DESCRIPTION	QTY
D25	Hex Skt Set Screw with Flat Point M8 x 25	2
D26	Hex Skt Head Cap Screw M10 x 20	1
D27	Locking Nut With Plastic Insert M8	2
D28	Riving Knife Bracket	1
D29	Connecting Rod	1
D30	Cross Recessed Countersunk Head Screw M8 x 20	1
D31	Bush	1
D32	Cross Recessed Countersunk Head Screw M8 x 30	1
D33	Hex Head Bolt M8 X 65	1
D34	Locking Nut For Motor base	2
D35	Motor base	1
D36	Hex Socket head Cap Screw M5 x 12	2
D37	Large Washer M5	4
D38	Hand Wheel	2
D39	Handle	2
D40	Handle Bolt	2
D41	Cross Recessed Pan Head Screw M6 x 16	4



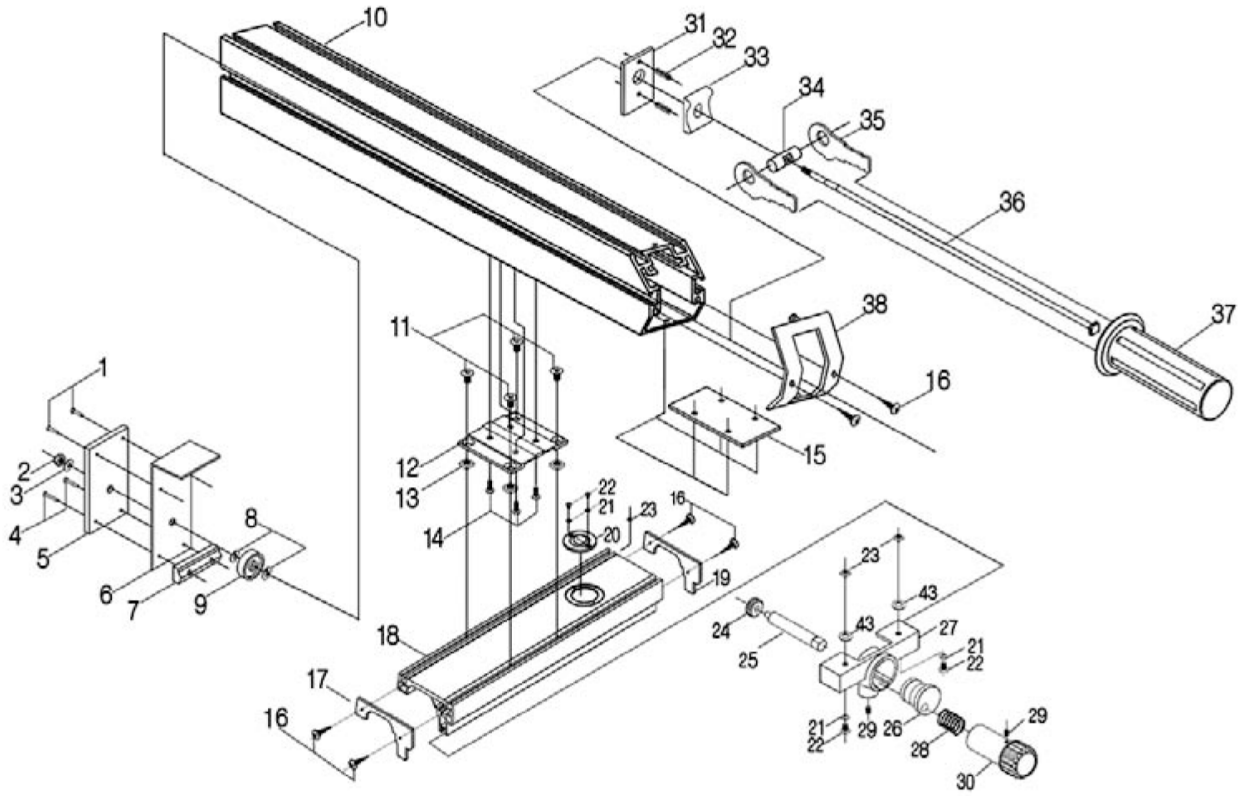
SPARE PARTS LIST - D CONT.

ITEM	DESCRIPTION	QTY
D42	Flat Washer M6	12
D43	Ball Bracket	2
D44	Thread Rod Ball	1
D45	Spring Dowel 4 x 28	1
D46	Adjusting Thread Rod	1
D47	Worm Wheel Connecting Rod Nail A	1
D48	Worm Wheel Connecting Rod	1
D49	Worm Wheel Connecting Rod Nail B	1
D50	Connecting Rod Bush	1
D51	Hex Nut M6	6
D52	Adjusting Frame	1
D53	Circlips for Shaft D=24	2
D54	Knuckle	1
D55	Thin Nut M12	2
D56	Height Adjusting Rod	1
D57	Cross Recessed Countersunk Head Screw M5 x 32	1
D58	Motor	1
D59	Hex Head Bolt M8 x 40	6
D60	Key 8x7x50	1



ITEM	DESCRIPTION	QTY
D61	Hex Skt Set Screw W/Flat Point M6 x 9	1
D62	Hex Skt Set Screw W/Flat Point M6 x 6	1
D63	Motor Wheel	1
D64	Hex Skt Cap Screw M8 x 24	7
D65	Single Coil Lock washer M8	7
D66	Rotation Press Block	2
D67	Adjusting Cradle	1
D69	Hex Nut M12	1
D70	Single Coil Lock washer M12	1
D71	Worm Wheel	1
D72	Eccentric Sleeve	1
D73	Hex Skt Cap Screw M8 x 30	1
D74	Worm Wheel Shaft Nail	1
D75	Locking Block	1
D76	Large Washer M8	2
D77	Flower Bolt	1
D78	Cross Recessed Pan Head Screw M5 x 12	2
D79	Pointer Bracket	1
D80	Pointer	1
D81	Flat Washer M4	1
D82	Single Coil Lock washer M4	1
D83	Cross Recessed Pan Head Screw M4 x 10	1
D84	Adjusting Worm Wheel Bracket	1
D85	Dust Collection Cover	1
D86	Hex Skt Cap Screw M6 x 18	3
D87	Neck Chain	1
D88	Hex Head Bolt M6 x 25	2
D89	Dust Collection Tube	1
D90	Elliptical Neck Chain	1
D91	Cross Recessed Countersunk Screw ST4 x 26	5
D92	Tommy Bar	1
D93	Hex Nut M5	1
D94	Elastic Lock	2
D95	Lock Nail Bush	1
D96	Hex Skt Cap Screw M6 x 25	1
D97	Active Board	1
D98	Active Board Block	1
D99	Lock Handle	1
D100	Handle Sleeve	1
D101	Lock Handle Spring	1

SPARE PARTS DIAGRAM - E



SPARE PARTS LIST - E

ITEM	DESCRIPTION	QTY
E1	Round Head Rivet W/Small Head Ø3 x 7	2
E2	Hex Nut M8	1
E3	Washer M8	1
E4	Round Head Rivet W/Small Head Ø3 x 13	2
E5	Lock Plate	1
E6	Lock Spring	1
E7	Lock Block	12
E8	Spring Ring D6	1
E9	Roller Wheel	1
E10	Rip Fence	4
E11	Cross Recessed Countersunk Hd Screw M6 x 12	1
E12	Fence Plate	4
E13	Square Nut M6	3
E14	Cross Recessed Pan Head Screw M6 x 16	1
E15	Board Instead of Nut	1
E16	Cross Recessed Countersunk Hd Screw ST4 x 12	6
E17	Left End Cap For Scale Indicator Housing	1
E18	Scale Indicator Housing	1
E19	Right End Cap For Scale Indicator Housing	1
E20	Scale Indicator	1

ITEM	DESCRIPTION	QTY
E21	Washer M5	4
E22	Cross Recessed Pan Head Screw M5 x 10	4
E23	Square Nut M5	3
E24	Small Gear	1
E25	Gear Rod	1
E26	Eccentric Wheel	1
E27	Gear Rod Frame	1
E28	Spring For Gear Rod	1
E29	Hex Skt Set Screw W/Flat Point M6 x 5	2
E30	Rip Fence Handle	1
E31	Rear Board	1
E32	Pin Ø5 x 16	2
E34	Lock Eccentric Rod	1
E35	Lock Eccentric	1
E36	Rip Fence Lock Rod	2
E37	Rip Fence handle	1
E38	Rip fence Cover	1
E43	Washer M4	2

OPTIONAL ACCESSORIES

1500mm Sliding Table - ST-254T
Order Code: W487

NOTES:

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.

IMPORTED BY

HARE&FORBES MACHINERYHOUSE

Australian Distributor

Hare & Forbes Machineryhouse
Sydney - Melbourne
Adelaide - Brisbane - Perth

Ph: 1300 202 200
www.machineryhouse.com.au

MACHINERYHOUSE

New Zealand Distributor

Machineryhouse
Auckland
Christchurch

Ph: 0800 142 326
www.machineryhouse.co.nz