

# HAFCO METALMASTER



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## Instruction Manual

# MANUAL BENCH TOP GUILLOTINE SG-650H

Order Code: (S655)

**MACHINE DETAILS**

<b>MACHINE.</b>	Manual Bench Top Guillotine
<b>MODEL NO.</b>	SG-650H
<b>SERIAL NO.</b>	
<b>DATE OF MANF.</b>	

IMPORTED BY

AUSTRALIA



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NEW ZEALAND



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**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 Metalmaster 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



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**WARNING!**

*The machine is the sole responsibility of the owner for its safe use. This responsibility includes but is not limited to proper installation in a safe environment, personnel training, proper inspection and maintenance, manual availability and comprehension. The manufacturer will not be held liable for injury or property damage from negligence, improper training, machine modifications or misuse.*

## 1.1 SPECIFICATIONS

Order Code	S655
<b>MODEL</b>	<b>SG-650H</b>
Shearing Capacity - Mild Steel at Full Width (mm)	1.0
Shearing Capacity - Mild Steel at Half Width (mm)	1.2
Shearing Length (mm)	650
Front Stop Scale Range (mm)	241
Rear Stop Scale Range (mm)	533
Floor Space (L x W x H) (mm)	780 x 480 x 500
Nett Weight (kg)	130



### Features:

- 1.0mm Maximum Cutting Thickness
- Steel Body Construction
- Two-Sided Upper and Lower Blades
- Adjustable Gibs for Upper Blade Assembly
- Adjustable Protractor Stop
- Heavy-Duty Ball-Bearing Hinge Points

## 1.2 PACKING LIST

Machine.....	x 1
Work Stop Adjustment Assembly.....	x 1
Cap Screws M8-1.25 x 15.....	x 3
Work Stop Support Rods .....	x 2
Cutting Lever .....	x 1



 <b>WARNING!</b>	
<b>PINCH POINTS</b> 	<b><i>This machine has places that are pinch points and could cause injury to the operator or any person around this type of equipment</i></b>

### 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 Guard
B	Cutting Handle
C	Cam Shaft Lever
D	90° Guide
E	Work Stop Rod
F	Work Stop Adjustment Assembly

G	Rear Work Stop
H	Bed
I	Hold Down Bar
J	Upper Blade
K	Adjustable Angle Guide

## 2. SAFETY

### 2.1 GENERAL METALWORKING MACHINE SAFETY

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.



- ✓ Always wear safety glasses or goggles.
- ✓ Wear appropriate safety footwear.
- ✓ Wear respiratory protection where required.
- ✓ Gloves should never be worn while operating the machine, and only worn when handling the work piece.
- ✓ Wear hearing protection in areas > 85 dBA. If you have trouble hearing someone speak from one metre (three feet) away, the noise level from the machine may be hazardous.
- ✓ DISCONNECT THE MACHINE FROM POWER when making adjustments or servicing.
- ✓ Check and adjust all safety devices before each job.
- ✓ Ensure that guards are in position and in good working condition before operating.
- ✓ Ensure that all stationary equipment is anchored securely to the floor.
- ✓ Ensure all machines have a start/stop button within easy reach of the operator.
- ✓ Each machine should have only one operator at a time. However, everyone should know how to stop the machine in an emergency.

## 2.1 GENERAL METALWORKING MACHINE SAFETY CONT.

- ✓ Ensure that keys and adjusting wrenches have been removed from the machine before turning on the power. Appropriate storage for tooling should be provided.
- ✓ Ensure that all cutting tools and blades are clean and sharp. They should be able to cut freely without being forced.
- ✓ Stop the machine before measuring, cleaning or making any adjustments.
- ✓ Wait until the machine has stopped running to clear cuttings with a vacuum, brush or rake.
- ✓ Keep hands away from the cutting head and all moving parts.
- ✓ Avoid awkward operations and hand positions. A sudden slip could cause the hand to move into the cutting tool or blade.
- ✓ Return all portable tooling to their proper storage place after use.
- ✓ Clean all tools after use.
- ✓ Keep work area clean. Floors should be level and have a non-slip surface.
- ✓ Use good lighting so that the work piece, cutting blades, and machine controls can be seen clearly. Position any shade lighting sources so that they do not cause any glare or reflections.
- ✓ Ensure there is enough room around the machine to do the job safely.
- ✓ Obtain first aid immediately for all injuries.
- ✓ Understand that the health and fire hazards can vary from material to material. Make sure all appropriate precautions are taken.
- ✓ Clean machines and the surrounding area when the operation is finished.
- ✓ Use proper lock out procedures when servicing or cleaning the machines or power tools.

### DO NOT

- × Do not distract an operator. Horseplay can lead to injuries and should be strictly prohibited.
- × Do not wear loose clothing, gloves, neckties, rings, bracelets or other jewelery that can become entangled in moving parts. Confine long hair.
- × Do not handle cuttings by hand because they are very sharp. Do not free a stalled cutter without turning the power off first. Do not clean hands with cutting fluids.
- × Do not use rags or wear gloves near moving parts of machines.
- × Do not use compressed air to blow debris from machines or to clean dirt from clothes.
- × Do not force the machine. It will do the job safer and better at the rate for which it was designed.



### **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.*

## 2.1 GENERAL METALWORKING MACHINE SAFETY Cont.

**HAZARDS ASSOCIATED WITH MACHINES** include, but are not limited to:

- Being struck by ejected parts of the machinery.
- Being struck by material ejected from the machinery.
- Contact or entanglement with the machinery.
- Contact or entanglement with any material in motion.

**Health Hazards** (other than physical injury caused by moving parts)

- Chemicals hazards that can irritate, burn, or pass through the skin.
- Airborne items that can be inhaled, such as oil mist, metal fumes, solvents, and dust.
- Heat, noise, and vibration.
- Ionizing or non-ionizing radiation. (X-ray, lasers, etc.)
- Biological contamination and waste.
- Soft tissue injuries (for example, to the hands, arms, shoulders, back or neck) resulting from repetitive motion, awkward posture, extended lifting, and pressure grip.

**Other Hazards**

- Slips and falls from and around machinery during maintenance.
- Unstable equipment that is not secured against falling over.
- Safe access to/from machines. (access, egress)
- Fire or explosion.
- Pressure injection injuries from the release of fluids and gases under high pressure.
- Electrical Hazards, such as electrocution from faulty or ungrounded electrical components.
- Environment in which the machine is used. (in a machine shop, or on a work site)



### **WARNING!**

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### **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 METAL CUTTING GUILLOTINES

**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 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.
- ✓ Check workspaces and walkways to ensure no slip/trip hazards are present.
- ✓ Ensure working parts are well lubricated and free of rust and dirt.
- ✓ Ensure the area around the machine is adequately lit.
- ✓ Be aware of other people in the area. Ensure the area is clear before using equipment.
- ✓ Ensure cutting table is clear of scrap and tools.

### OPERATIONAL SAFETY CHECKS

- ✓ Only one person may operate this machine at any one time.
- ✓ Use correct lifting procedures when handling large sheets of material.
- ✓ Take care during the initial feeding of the workpiece into the machine.
- ✓ The workpiece should always be held sufficiently far back from the edge being fed into the guillotine.
- ✓ Ensure fingers and limbs are clear before operating the guillotine.
- ✓ Hold material firmly to prevent inaccurate cutting due to creep.
- ✓ When cutting, ensure your feet are positioned to avoid unintentional contact with the foot operated lever.

### HOUSEKEEPING

- ✓ Place all off-cuts in the storage rack or waste bin.
- ✓ Leave the work area in a safe, clean and tidy state.

### DON'T

- ✗ Do not faulty equipment. Immediately report suspect machinery.
- ✗ Never attempt to cut rod, strap or wire.
- ✗ Do not attempt to cut material beyond the capacity of the machine.

### POTENTIAL HAZARDS

- Sharp edges and burrs.
- Crush and pinch points.
- Manual handling injuries

### 3 SET-UP

#### 3.1 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.

#### 3.2 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.

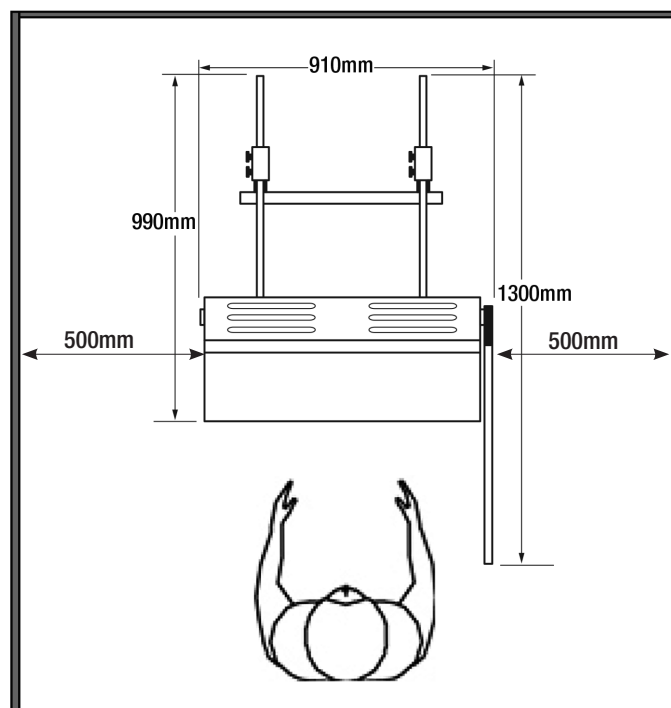
It is advised to avoid chlorine based solvents, such as acetone or brake parts cleaner, as they will damage painted surfaces and strip metal should they come in contact. Always follow the manufacturer's instructions when using any type of cleaning product.

#### 3.3 SITE PREPARATION

When selecting the site for the machine, consider the largest size of work-piece 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 a bench or stand to prevent tipping or shifting. It also reduces vibration that may occur during operation.

#### WORK SAFETY AREA



### 3.4 LIFTING INSTRUCTIONS

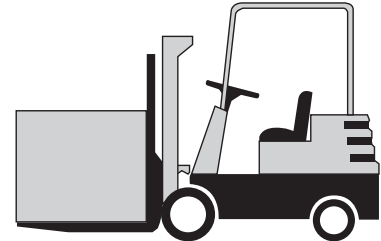
On the day that the machine arrives, make sure that a forklift or lifting device, with sufficient capacity is available to unload the machine from the vehicle. Ensure access to the chosen site is clear and that doors and ceilings are sufficiently high and wide enough to receive the machine.



#### **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.*



#### **WARNING!**

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

### 3.5 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.

#### Mounting The Machine

The machine may be supplied with rubber pads to help prevent movement on a bench. Rubber mats placed between the machine and the bench can also stop the transmission of vibration. For best results, however, it is recommended the machine be bolted to the work surface or a stand. (fasteners not included).

1. Align mounting holes on machine with pre-drilled holes in the bench or stand.
2. Insert bolts through the holes, and tighten using flat and spring washers and nuts. (Fig. 3.1)

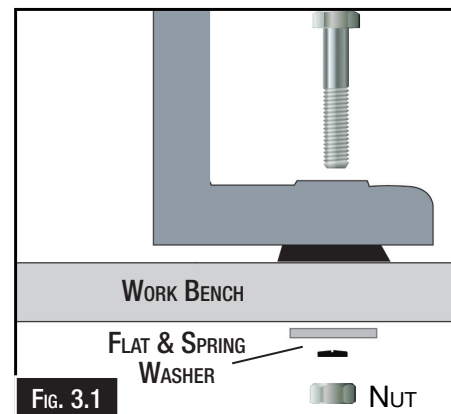


Fig. 3.1

Assembly of the Model SG-650H consists of attaching the work stop support rods, work stop adjustment assembly, and the cutting lever.

#### To assemble shear:

1. Slide the support rod into each bracket with the measurement scale facing up. (Fig. 3.2)
2. Remove the blade guard and the upper cover.
3. Secure each support rod with a M8-1.25 x 15 cap screw. (Fig. 3.3)

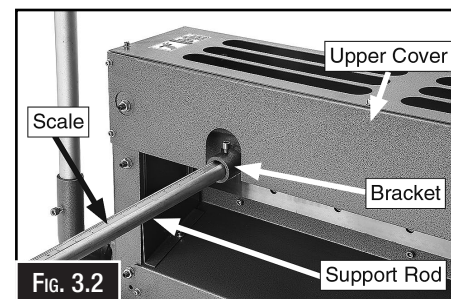


Fig. 3.2

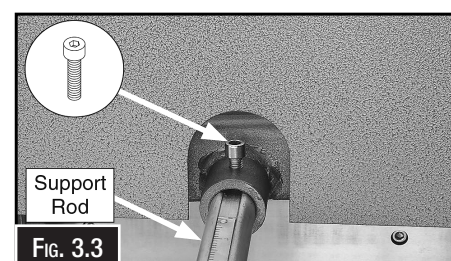
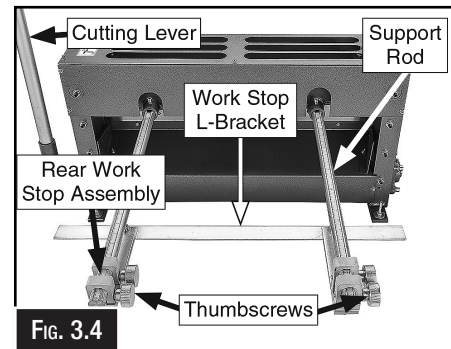


Fig. 3.3

### 3.5 ASSEMBLY Cont.

4. Slide the work stop adjustment assembly onto the support rods, (Fig. 3.4) with the flat side of the L-bracket closest to the shear.
5. Tighten the four knurled thumbscrews.
6. Attach the cutting lever and secure with the preinstalled set screw M8-1.25 x 10 long.



## 4. 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!**

### 4.1 OPERATION OVERVIEW

This overview purpose is to provide a novice machine operator with a basic understanding of how the machine is used during operation, and 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 and 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.

To complete a normal operation:

1. Examine the work piece to make sure it is suitable for cutting.
2. Adjust the rear work stop for the length of cut required.
3. Dress appropriately by putting on safety glasses, leather boots, and leather gloves.
4. Place the work piece on the bed and up against the side of the work stop.
5. Slide the workpiece under the blades and against the rear work stop.
6. Using a good body stance, firmly pull down on the cutting lever to make the cut.
7. Lift the cutting lever up and remove the work piece or repeats Steps 5–6 to make additional cuts



### **WARNING!**

*Take care when operating this machine. Crush Points can occur when operating this machine. Crush points can cause severe injury to the operator. All care must be taken.*

## 4.2 CONTROLS

The purpose of this control overview is to provide the machine operator with a basic understanding of 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 operations 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.**

1. **Adjustable Angle Guide:** Adjusts from 0° to 180° for making angled cuts. (Fig. 4.1)
2. **Upper Blade:** Moves to shear the workpiece against the lower blade during cutting operations. Both the upper and lower blades are interchangeable and reversible.
3. **Hold-Down Bar:** Spring-loaded bar holds the work piece in position during cutting operation as the cutting lever is pulled down.
4. **90° Guide:** Helps the operator square the work piece with the blades.
5. **Cutting Lever:** Controls movement of the upper blade for cutting.
6. **Work Stop Adjustment Assembly:** Moves the rear work stop in or out at a specific distance from the lower blade. Allows the operator to set up the shear for multiple cuts of the same length. (Fig. 4.2)
7. **Lower Blade:** Fixed to the frame. The upper and lower blades are interchangeable and reversible.
8. **Rear Work Stop:** Used for making repetitive cuts.
9. **Support Rods:** Supports the adjustable work stop assembly and the rear work stop and provides a measurement reference from the blade to the work stop.

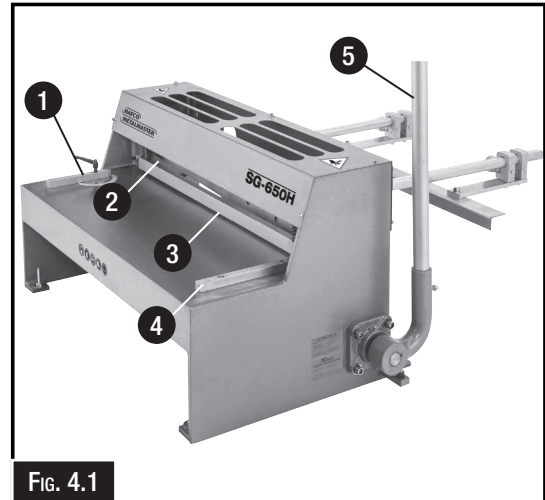


Fig. 4.1

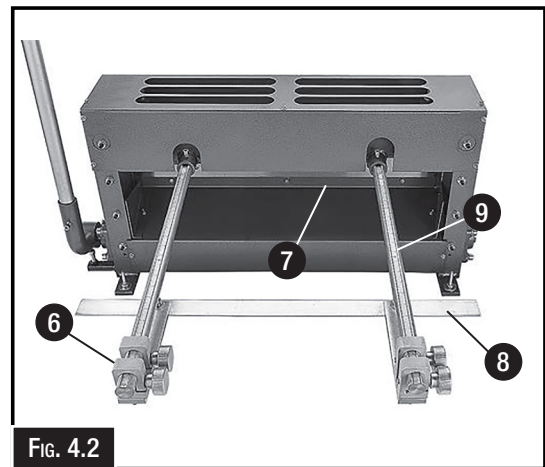


Fig. 4.2

## 4.3 USING THE ANGLE CUTTING GUIDE

Use the angle cutting guide as a side work stop to cut a workpiece at an angle other than 90°.

**To Set The Angle Guide:**

1. Calculate angle of cut and mark on workpiece.
2. Loosen the locking lever on the angle cutting guide, and use the scale to set the angle to match the required cut, then tighten the locking lever. (Fig. 4.3)
3. Align the work piece with the angle cutting guide with the position cut mark beneath the blade to verify cut angle.
4. Pull the cutting lever to cut the work piece

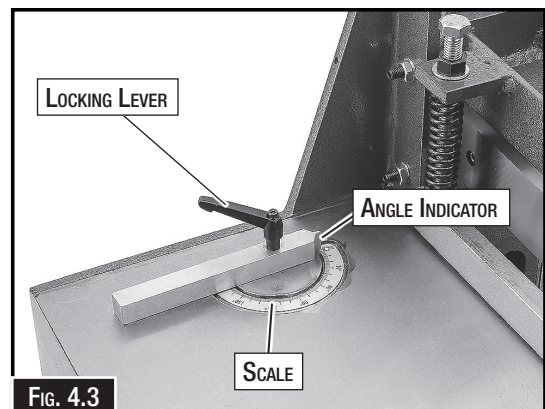


Fig. 4.3

#### 4.4 ADJUSTING THE HOLD-DOWN BAR

The hold-down bar is used to secure the workpiece on the bed before the blades shear the work piece. The hold-down bar height is adjustable. This is achieved on the SG-650H through the two adjustment hex bolts and hex nuts. (Fig. 4.4)

##### To Adjust The Hold-Down Bar:

1. Remove blade guard.
2. With the blade raised, loosen the hex nut, then rotate the hold-down tension hex bolt to raise or lower the hold-down bar to adjust the clearance.
3. Measure the clearance between the hold-down bar and the bed to ensure it is even side to side. Adjust as necessary.
4. When the clearance is even, tighten the hex nut and re-install blade guard.

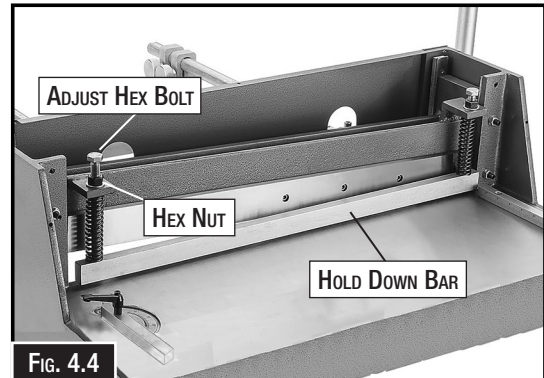


FIG. 4.4

#### 4.5 ADJUSTING THE REAR WORK STOP

The rear work stop is used when making repetitive cuts. The adjustable assemblies allow for precise positioning of the work stop.

##### To Set The Rear Work Stop:

1. Slide the work stop adjustment assembly evenly along the support rods so the rear work stop's leading edge is at the approximate required distance from the cutting edges of blades (Fig 4.5).

**Note: Move the work stop assembly evenly on both sides to keep it parallel with the blades. Use the scales on the top of the support rods for approximate positioning. Use a ruler or tape measure for precise positioning.**

2. To keep the rear work stop assemblies secured in the desired position, tighten the thumbscrews. (Fig. 4.5)
3. Measure the distance between the cutting edge of the bed and the leading edge of work stop. Compare with the scale measurement on each support rod.
4. If measurement does not match the scale, loosen the cap screws securing support rods and adjust each one until the measurements match. (Fig. 4.6)
5. Re-tighten the cap screws to secure the support rods.
6. Once the scales on the support rods have been set, the rear work stop only needs to be positioned relative to the dimensions on the support rod scales.

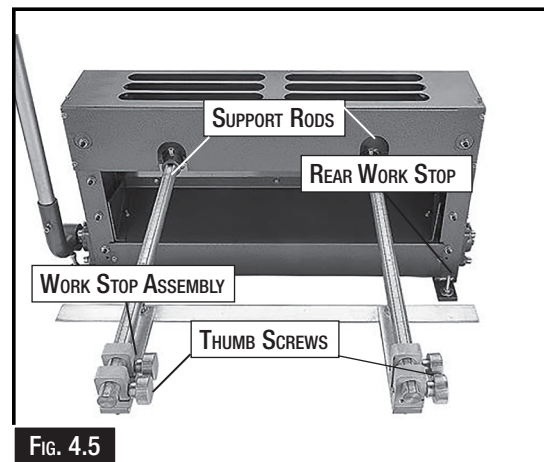


FIG. 4.5

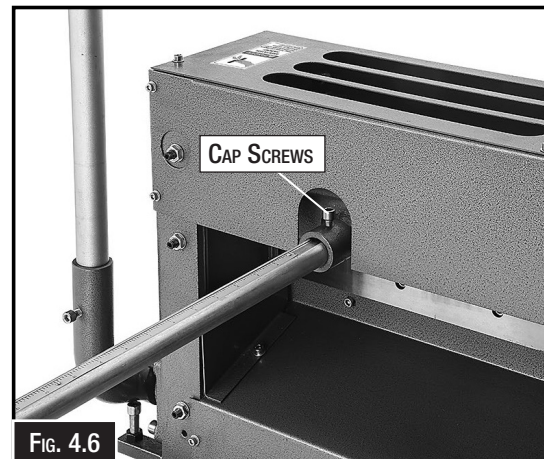


FIG. 4.6

## 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 maintained. Follow the maintenance schedule listed in the following section and refer to any specific instructions given.

### 5.1 SCHEDULE

#### Daily Check

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

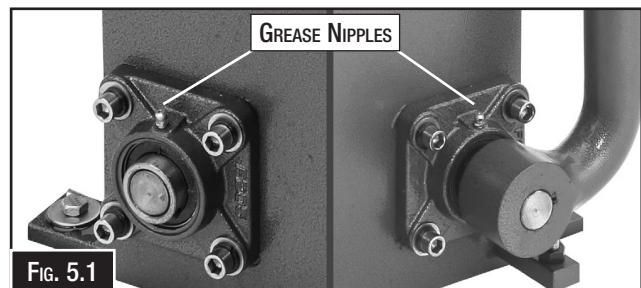
#### Cleaning

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.

### 5.2 LUBRICATION

#### Grease Nipples

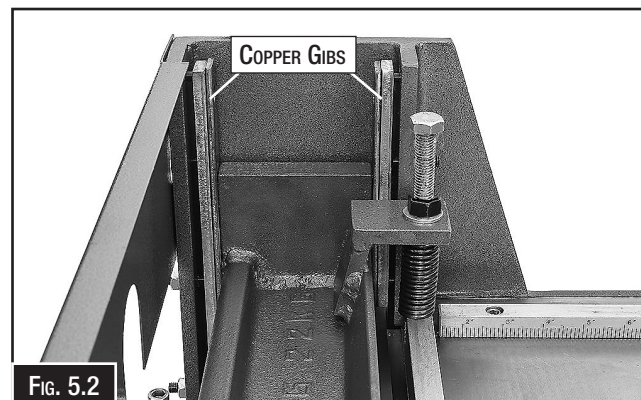
Clean the grease fittings to prevent any contamination. Fit the nozzle of the grease gun over the grease nipple and add one pump of grease every 12 months. (Fig. 5.1)



#### Copper Gibs

Each end of the upper blade frame slides between two copper gibs. Lubricate the sliding surfaces of the copper gibs with a light film of ISO 68 oil or equivalent, weekly. (Fig. 5.2)

Fully lower the blade. With hex wrench, remove the blade cover. Lubricate the exposed areas of copper gibs. Raise and lower the cutting lever several times to spread the lubricant. Replace the blade cover.



### 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.**

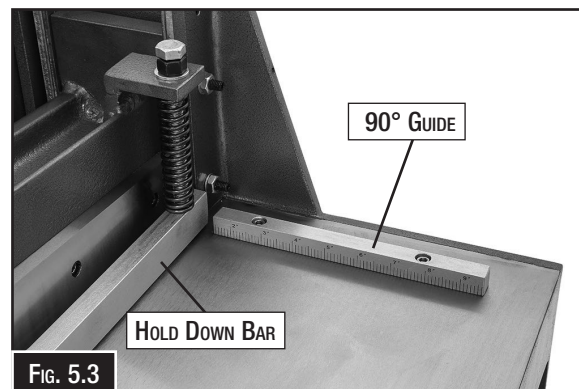
SYMPTOMS	POSSIBLE CAUSE	POSSIBLE SOLUTION
Shear will not cut workpiece.	<ol style="list-style-type: none"> <li>1. Workpiece thickness exceeds shear capacity.</li> <li>2. Blades worn or damaged.</li> <li>3. Blade gap not correct.</li> <li>4. Not enough pressure applied to cutting lever.</li> </ol>	<ol style="list-style-type: none"> <li>1. Only use workpiece material that is within shear capacity (Pages 4).</li> <li>2. Sharpen or replace the blades (Page 25).</li> <li>3. Properly adjust the blade gap (Page 24).</li> <li>4. Safely increase pressure on the cutting lever.</li> </ol>
Cuts are not square.	<ol style="list-style-type: none"> <li>1. 90° guide not square with blades.</li> <li>2. Rear work stop not parallel to blades.</li> <li>3. Hold-down bar not properly securing workpiece during cut.</li> <li>4. Blade gap not correct.</li> </ol>	<ol style="list-style-type: none"> <li>1. Adjust 90° guide square with blades (Page 18).</li> <li>2. Properly adjust rear work stop parallel to blades (Page 17).</li> <li>3. Adjust hold-down bar for even pressure on workpiece (Page 6).</li> <li>4. Properly adjust blade gap (Page 24).</li> </ol>
Poor quality of cuts (ripping or tearing).	<ol style="list-style-type: none"> <li>1. Blade gap not correct.</li> <li>2. Blades worn or damaged.</li> <li>3. Gibs too loose.</li> </ol>	<ol style="list-style-type: none"> <li>1. Properly adjust blade gap (Page 24).</li> <li>2. Sharpen/replace blades (Page 25).</li> <li>3. Properly adjust gibs (Page 27).</li> </ol>
Arm difficult to use	<ol style="list-style-type: none"> <li>1. Blade gap not correct.</li> <li>2. Cutting lever movement difficult.</li> <li>3. Gibs too tight.</li> </ol>	<ol style="list-style-type: none"> <li>1. Properly adjust blade gap (Page 24).</li> <li>2. Lubricate pillow bearings (Page 22) and copper gibs (Page 22).</li> <li>3. Properly adjust gibs (Page 27).</li> </ol>

### 5.4 ADJUSTING THE 90° GUIDE

The 90° guide helps the operator square the workpiece with the blades. To work properly, it must be square with the blades.

To square 90° guide with upper blade:

1. Loosen (2) cap screws securing 90° guide. (Fig. 5.3)
2. Use cutting lever to fully lower blade.
3. Place square against hold-down bar and 90° guide.
4. Keeping square even against hold-down bar, adjust the 90° guide so it is even against square, then re-tighten the cap screws on the 90° guide to secure the setting.
5. Lift the cutting lever to return blade to the up position



## 5.5 ADJUSTING THE BLADE GAP

The gap between the upper and lower blades as they pass each other, must remain even along the length of the blades to produce clean cuts. Initially, this adjustment has been made at the factory, however, over time and with normal wear, you may need to re-adjust the blade gap.

If the blade gap is too wide, the workpiece will not cut correctly and show signs of bending, ripping, or tearing. If the blade gap is too narrow, the upper blade will have difficulty lowering past the lower blade and the cutting edges may become damaged.

### Checking The Blade Gap:

Use the shear to cut a piece of paper along the full length of the blades. All cuts should be sharp without bending or tearing the paper.

If the blades do not cut the paper cleanly on one end of the shear, the upper blade needs to be adjusted on that end.

If the blades do not cut the paper cleanly along the entire length of the blades, both ends of the upper blade need to be adjusted.

### Adjusting Upper Blade

The blade gap is controlled by four set screws and hex nuts on the front and rear of each side of the upper blade base.

#### To adjust upper blade:

1. Remove blade guard.
2. Loosen the hex nuts on the set screws identified for adjustment. (Fig. 5.4)
3. Use feeler gauge to adjust blade gap to 0.05mm:

To move blade toward front, rotate rear set screws clockwise and front set screws counterclockwise.

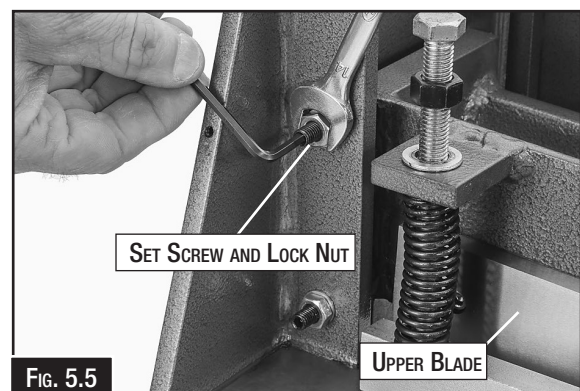
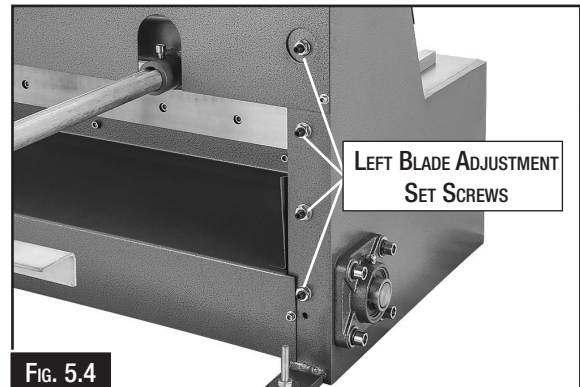
To move blade toward back, rotate rear set screws counterclockwise and front set screws clockwise.

4. Repeat previous Checking Blade Gap procedure to test adjustments.

If blade gap is correct, hold each set screw in position and tighten the hex nut.

If blade gap is not correct, repeat Steps 2–4 until the cut is even.

5. Re-install blade guard when complete.



### **WARNING!**

*Take care when operating this machine. Crush Points can occur when operating this machine. Crush points can cause severe injury to the operator. All care must be taken.*

## 5.6 REPLACING BLADES

Both upper and lower blades are identical and have two cutting edges, so that if one cutting edge becomes dull, you can reverse the blade and use the fresh, sharp cutting edge. Both blades can be resharpened as an alternative to replacing.

If both cutting edges are dull, re-sharpen the blades on a surface grinder and make sure they stay flat along their entire length. If the blade becomes too thin and the cap screws that secure it extend beyond the opposite side of the cutting edge, you will need to replace it.

### To Remove or Install Upper Blade:

1. Remove blade guard
2. Loosen hex nut, then loosen hex bolt to release spring tension on the hold-down bar (Fig. 5.6)
3. Unscrew hex bolt from hold-down bar, then remove spring, flat washer, and hold-down bar.
4. With blade fully raised, place wood block under open side of upper blade to prevent it from dropping in Step 5.
5. Remove the 7 cap screw and the blade. Have another person wearing heavy leather work gloves hold blade during removal. (Fig. 5.7)
6. Clean the blade with mineral spirits, then apply a thin coat of quality metal protectant before installing the blade.

### To Remove And Re-Install Lower Blade:

1. Loosen cap screws securing support rods to rear work stop assembly. Remove assembly.
2. Remove the 2 outer cap screws from lower cover, and the 3 cap screws from upper cover.
3. Loosen the 7 cap screws securing the lower blade to frame. (Fig. 5.8)
4. Have another person wearing heavy leather work gloves support the blade and remove it.
5. Clean the blade with mineral spirits, then apply thin coat of quality metal protectant before installing the blade.
6. Reverse Steps 1–3 to re-install blade.
7. Check and adjust blade gap, follow the procedure 5.4 Adjusting the Blade Gap on Page 17.

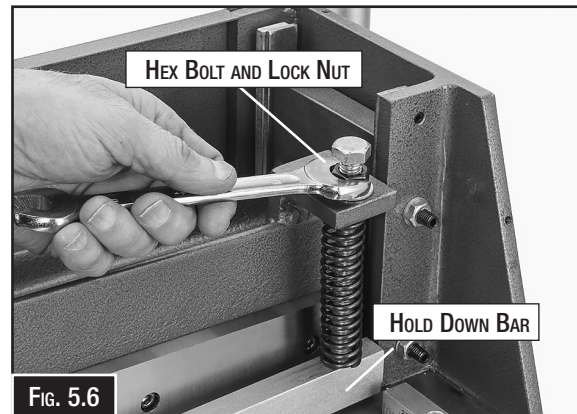


FIG. 5.6



FIG. 5.7

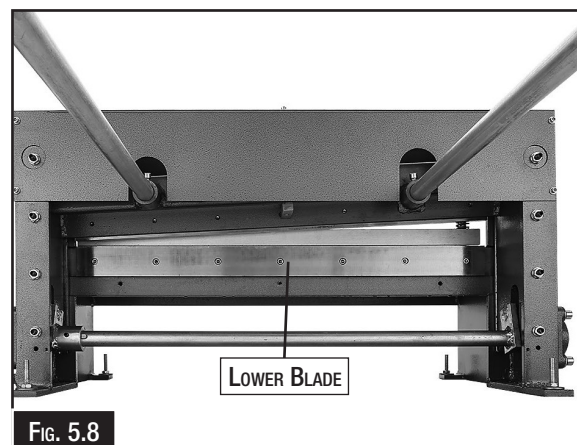


FIG. 5.8



## WARNING

*Blades are sharp. Protect hands by wearing leather gloves to prevent injury.*

## 5.7 ADJUSTING THE GIBS

There are two copper gibs on each end of the upper blade base (Fig. 5.9). They are made of copper so the plates wear instead of the upper blade base. Each copper gib screws into a steel plate and is adjusted with four set screws and hex nuts. The set screws maintain pressure between the copper gibs and upper blade base to keep the movement tight and precise.

If the gibs are too loose, the quality of the cuts will suffer because the movement will be sloppy when the cutting lever is pulled down. If the gibs are too tight, it will be difficult to lower the upper blade, and the cutting edges of the blades may become damaged.

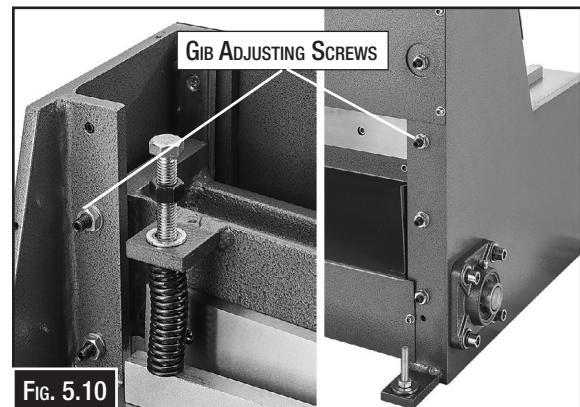
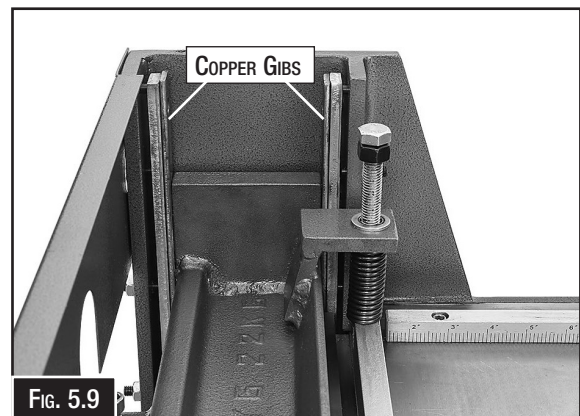
The goal of adjusting the gibs is to keep the front to back movement of the sliding shafts snug without interfering with the sliding action.

### To Adjust The Gibs:

1. Remove blade guard.
2. On each side of shear, loosen hex nuts on gib set screws (Fig. 5.10).

**Note: On front, two gib set screws are above the bed and two gib set screws are beneath the bed.**

3. Using a wrench to keep the hex nut slack, use a hex wrench to tighten all the gib set screws in even increments until the gibs are snug against the upper blade base. Back off each set screw 1/8 turn and hold in place while tightening the hex nut.
4. Make a test cut to check the sliding action of the blades. If necessary, rotate the set screws clockwise to tighten the gib or counterclockwise to loosen, then repeat the test cut and adjust until you are satisfied with the gib adjustment and shearing action.
5. Hold the set screws with a hex wrench and re-tighten the hex nuts.
6. Check and adjust the blade gap (see Page 17).
7. Re-install the blade guard.



# MANUAL BENCH TOP GUILLOTINE

**SG-650H**

Order Code: (S655)

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](http://www.machineryhouse.com.au/contactus) and fill out the inquiry form attaching a copy of scanned parts list.



### **WARNING!**

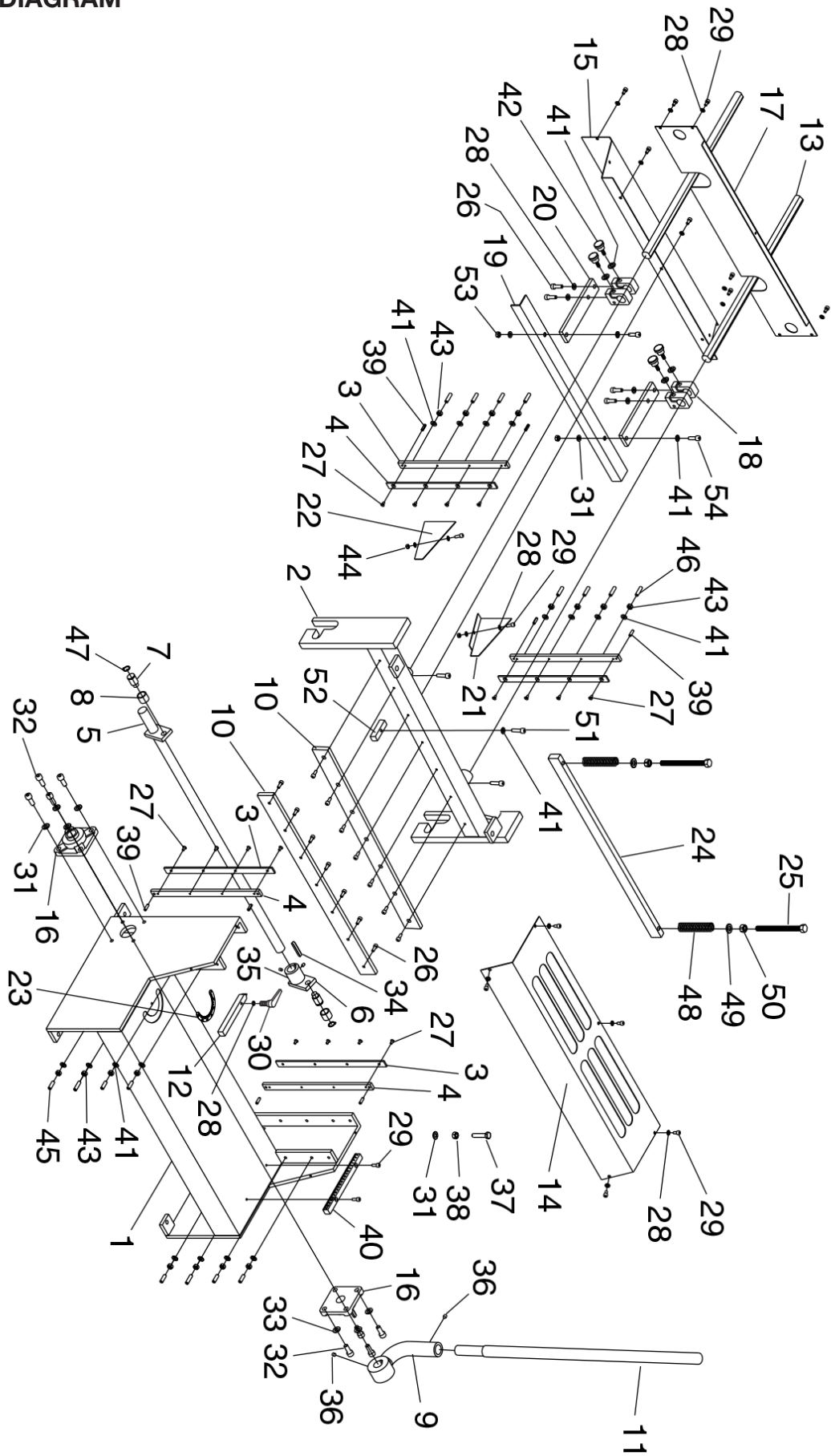
*Electricity is dangerous and could cause death.  
All electrical work must be carried out by a qualified electrician.*



### **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**



## PARTS LIST

ITEM	PART NO.	DESCRIPTION	ITEM	PART NO.	DESCRIPTION
1	P0828001	FRAME	28	P0828028	FLAT WASHER 6MM
2	P0828002	UPPER BLADE FRAME	29	P0828029	CAP SCREW M6-1 X 12 SS
3	P0828003	PLATE 8 X 20 X 350 STEEL	30	P0828030	ADJUSTABLE HANDLE 49L, M6-1 X 25
4	P0828004	GIB 4 X 20 X 350 COPPER	31	P0828031	FLAT WASHER 10MM
5	P0828005	CAM COUPLER	32	P0828032	CAP SCREW M10-1.5 X 25
6	P0828006	CAM	33	P0828033	KEY 8 X 8 X 40
7	P0828007	CAM SHAFT	34	P0828034	KEY 8 X 8 X 50
8	P0828008	CAM RING	35	P0828035	SET SCREW M6-1 X 10
9	P0828009	CAM SHAFT LEVER	36	P0828036	SET SCREW M8-1.25 X 10
10	P0828010	BLADE 11 X 50 X 680MM	37	P0828037	HEX BOLT M10-1.5 X 45
11	P0828011	CUTTING LEVER 30 X 800MM	38	P0828038	HEX NUT M10-1.5
12	P0828012	ANGLE CUTTING GUIDE	39	P0828039	ROLL PIN 6 X 20
13	P0828013	REAR SUPPORT ROD	40	P0828040	90° GUIDE
14	P0828014	BLADE GUARD	41	P0828041	FLAT WASHER 8MM
15	P0828015	LOWER COVER	42	P0828042	KNURLED THUMB SCREW M8-1.25 X 45
16	P0828016	PILLOW BEARING UCF205	43	P0828-43	HEX NUT M8-1.25
17	P0828017	UPPER COVER	44	P0828044	HEX NUT M6-1
18	P0828018	REAR STOP SLIDER BRACKET (ALUM)	45	P0828045	SET SCREW M8-1.25 X 25
19	P0828019	REAR STOP PLATE	46	P0828046	SET SCREW M8-1.25 X 30
20	P0828020	REAR STOP SLIDER PLATE	47	P0828047	SHAFT SPACER 16MM
21	P0828021	LOWER COVER PANEL (L)	48	P0828048	COMPRESSION SPRING 3 X 22 X 94
22	P0828022	LOWER COVER PANEL (R)	49	P0828049	FLAT WASHER 12MM
23	P0828023	ANGLE CUTTING SCALE	50	P0828050	HEX NUT M12-1.75
24	P0828024	HOLD-DOWN BAR	51	P0828051	SET SCREW M8-1.25 X 30
25	P0828025	HEX BOLT M12-1.75 X 145	52	P0828052	RETAINING BLOCK
26	P0828026	CAP SCREW M6-1 X 16 SS	53	P0828053	LOCK NUT M8-1.25
27	P0828027	FLAT HD SCR M5-.8 X 10	54	P0828054	CAP SCREW M8-1.25 X 25

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





#### **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



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