



# HYDRAULIC GUILLOTINE OPERATION MANUAL



## Models.

**SG-420, SG-815H**

Order Code S535, Order Code S537

*Edition No* :SG-4281-2

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**MACHINE DETAILS****MACHINE**

HYDRAULIC GUILLOTINE

**MODEL NO.****SERIAL NO.****DATE OF MANF.**

Distributed by

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This manual is only for your reference. Owing to the continuous improvement of the Metalmaster machines, 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.

**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)

| <b>METALMASTER</b>  |                      |
|---|----------------------|
| PRODUCT SPECIFICATION   |                      |
| <b>MODEL:</b>   | <input type="text"/> |
| <b>CAPACITY:</b>  | <input type="text"/> |
| <b>SER. NO:</b>   | <input type="text"/> |
| <b>MFG DATE:</b>  | <input type="text"/> |
| <b>WEIGHT:</b>  | <input type="text"/> |
| <b>VOLTS:</b>   | <input type="text"/> |
| <b>MOTOR Kw:</b>  | <input type="text"/> |
| <a href="http://www.machineryhouse.com.au">www.machineryhouse.com.au</a><br>Made in China |                      |

Fig.1

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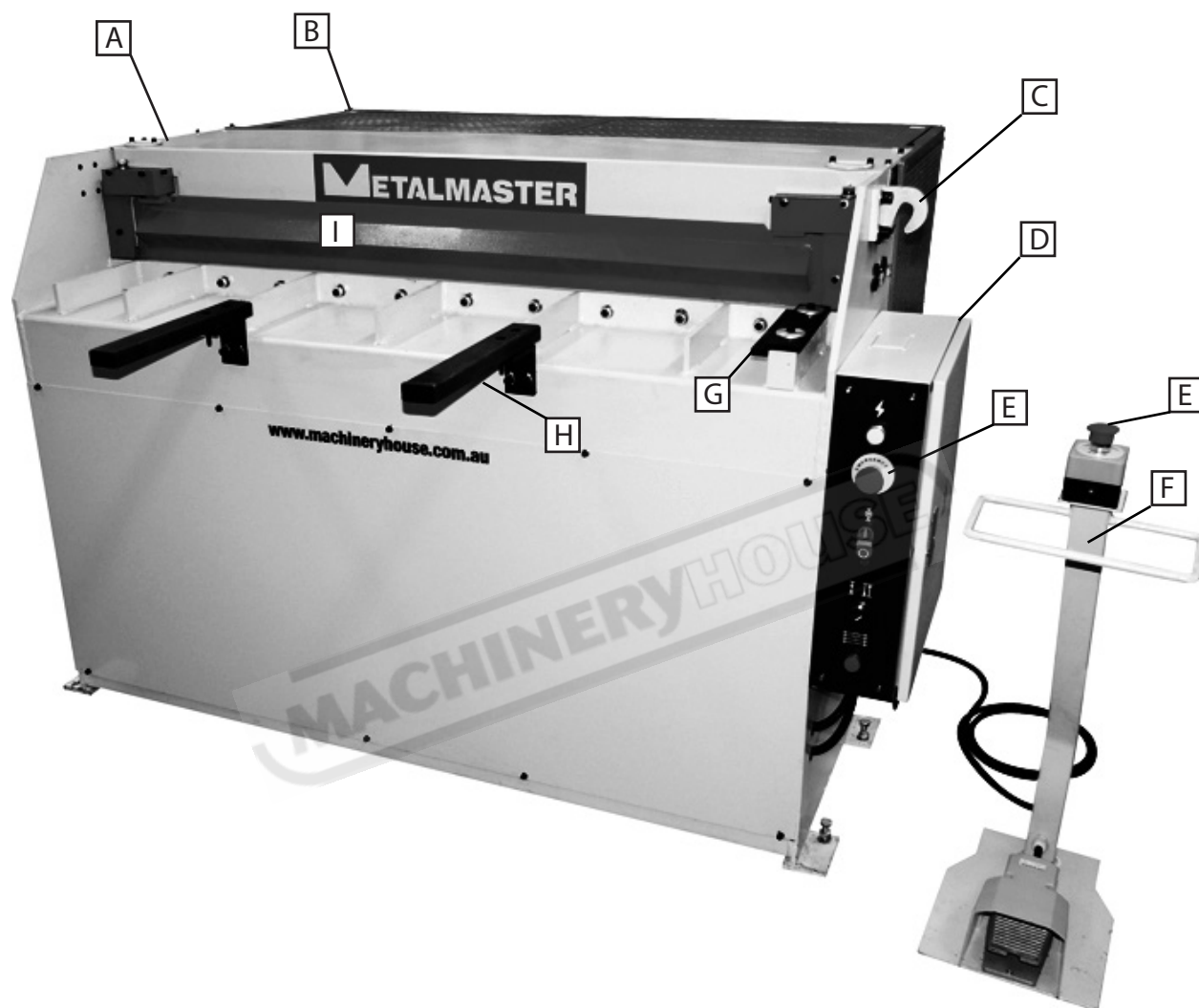
## 1.2 SPECIFICATIONS

|  |                 |                 |
|--|-----------------|-----------------|
| Order Code                               | S535            | S537            |
| <b>Model</b>                             | <b>SG-420</b>   | <b>SG-815H</b>  |
| Shearing Capacity - Mild Steel (mm)      | 2               | 1.6             |
| Shearing Capacity - Stainless Steel (mm) | 1.2             | 0.9             |
| Shearing Length (mm)                     | 1300            | 2470            |
| Back gauge Travel (mm)                   | 550             | 550             |
| Back gauge (Type)                        | Manual          |                 |
| Blade Angle (Deg.)                       | 2               | 2               |
| Motor Power (kW/hp)                      | 2.2/3           | 2.2/3           |
| Voltage (Volts)                          | 240             | 240             |
| Amperage (amps)                          | 15              | 15              |
| Shipping Dimensions (L x W x H) (cm)     | 185 x 122 x 116 | 298 x 120 x 150 |
| Dimensions (L x W x H) (cm)              | 166 x 120 x 110 | 279 x 134 x 110 |
| Weight (kg)                              | 560             | 1185            |

## 1.2 STANDARD EQUIPMENT

1. Manual Back Gauge
2. Front Sheet Supports
3. Mobile Foot Pedal
4. Safety Back Guard
5. Instruction Manual

### 1.3 IDENTIFICATION



|          |                          |          |                     |
|----------|--------------------------|----------|---------------------|
| <b>A</b> | Main Frame               | <b>F</b> | Mobile Foot Control |
| <b>B</b> | Rear Guard               | <b>G</b> | Squaring Arm        |
| <b>C</b> | Lifting Hook             | <b>H</b> | Sheet Supports      |
| <b>D</b> | Control & Electrical Box | <b>I</b> | Finger Guard        |
| <b>E</b> | Emergency Stops          |          |                     |

## 2.1 GENERAL METALWORKING MACHINE SAFE PRACTICES

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 SAFE PRACTICES 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, necktie's, rings, bracelets or other jewellery that can be come 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.



BEFORE OPERATING ANY MACHINE, TAKE TIME TO READ AND UNDERSTAND ALL SAFETY SIGNS AND SYMBOLS. IF NOT UNDERSTOOD SEEK EXPLANATION FROM YOUR SUPERVISOR.

## 2.2 SAFE WORK PROCEDURE METAL CUTTING GUILLOTINE

**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

### 2.3 LIFTING INSTRUCTIONS

On the day that the machine arrives, make sure that a crane 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. To handle the machine, the slings should be positioned so the machine is level when lifted. When using slings please take note of the sling angle and the loads that apply

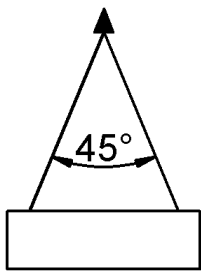


Fig 2.1.

When the slings are at a 45° angle then each sling is carrying the equivalent of 50% of load weight. (Fig.2.1).

When the slings are at a 90° angle then each sling will have a weight equal to 75% of the load on each sling. (Fig 2.2)

Note! The manufacturer recommends not to exceed 90° angle

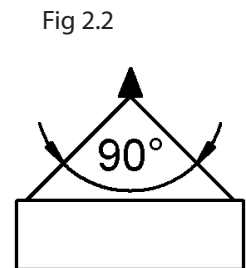


Fig 2.2

#### Lifting Points

The machine is supplied with lifting points that are designed to lift the machine safely. (Fig.2.3)

When lifting the machine only certified lifting slings should be used.

Make sure that when lifting, the machine is level and will not tip over.

Check that the lifting slings do not interfere with the hydraulic pipes or electrical conduits.

Failure to follow these instructions could cause damage to the machine

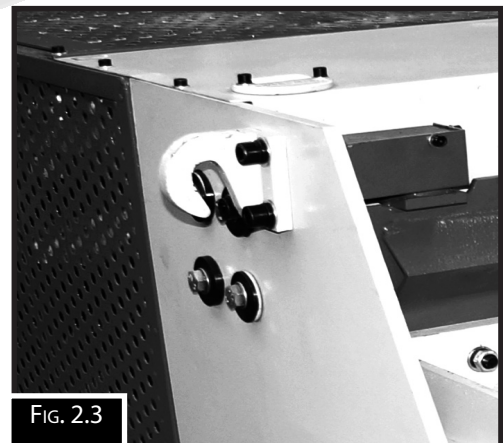


Fig. 2.3

**NOTE:** Only people with rigging qualifications should be used to direct the lifting of this machine.



#### ELECTROCUTION HAZARD

To avoid injury or death, keep all parts of the crane, the rigging and parts of the machine, at least 6 meters away from all overhead electrical power lines and equipment.

### 3. SETUP

#### 3.1 SITE PREPARATION AND INSTALLATION

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. The machine should be mounted on a reinforced concrete floor with a minimum of 150mm thickness. The floor must be able to support the weight of the machine and any workpiece that is to be worked.

#### 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 prevented products.

Hafco advise 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.

#### OPTIONS FOR MOUNTING

The machine is best mounted on a concrete slab.

Masonry anchors with bolts are the best way to anchor machinery, because the anchors sit flush with the floor surface, making it easy to unbolt and move the machine later, if needed. (Fig. 3-1)

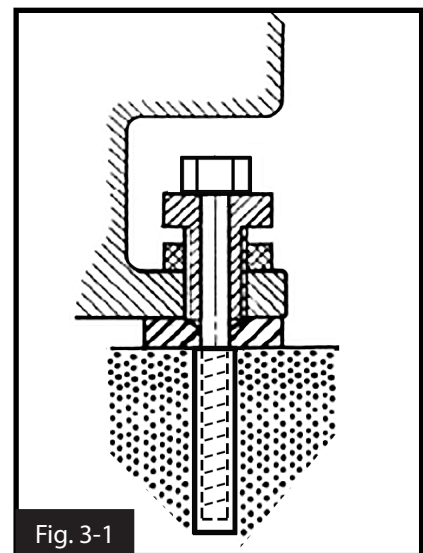


Fig. 3-1

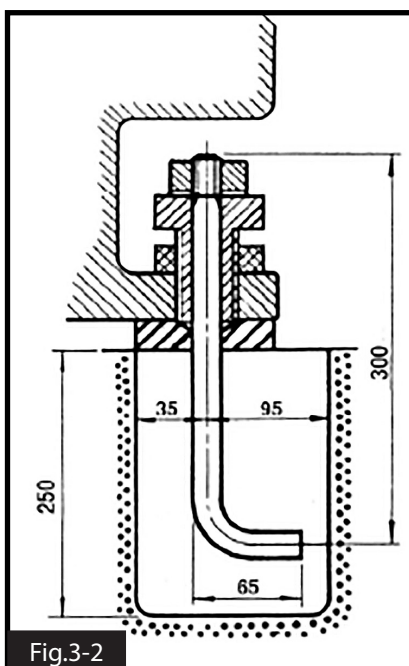


Fig.3-2

In some case a suitable foundation may not be available and a new one may need to be prepared.

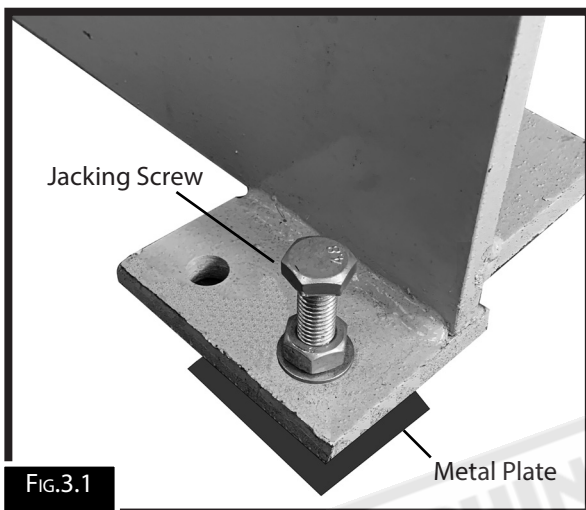
The foundation should be concrete approximately 200mm thick with pockets left clear for the hold down bolts. The hold down bolts can be "L" shape as per the example in Fig. 3-2

### 3.2 MACHINE LEVELING

To set your machine up so that it operates to optimum performance, apply the following leveling procedure

After your guillotine has been anchored to a concrete slab floor, it then needs to be leveled. The leveling is performed using the screws on each pad.(Fig. 3.1). Loosen the hold down bolts and place a level on the surface of the working table. Tolerances: 1000:0.30mm, for both longitudinal and transverse.

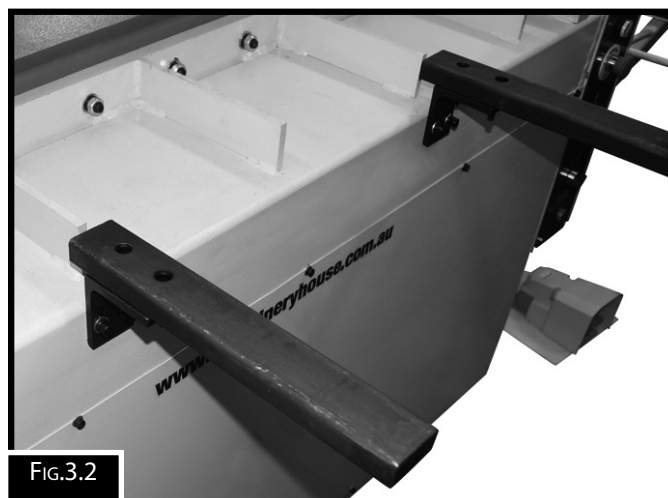
Metal plates need to be placed under each jacking screw to distribute the load. Once level then tighten the hold down bolts.



The machine must not rest on supports other than those defined in Fig. 3.1

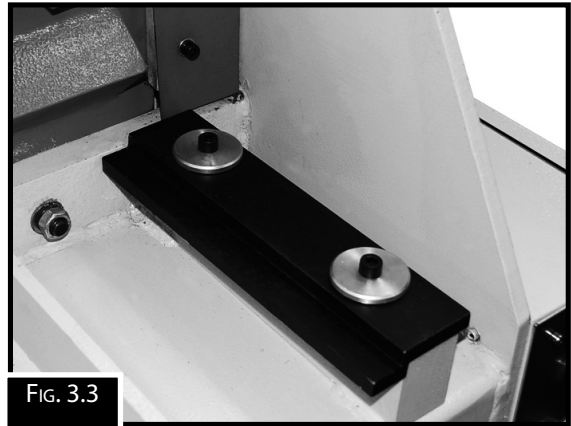
### 3.3 ATTACHING THE ACCESSORIES.

- ☐ Bolt the support arms onto the feed table. Ensure they are level and square to the table. (Fig.3.2)



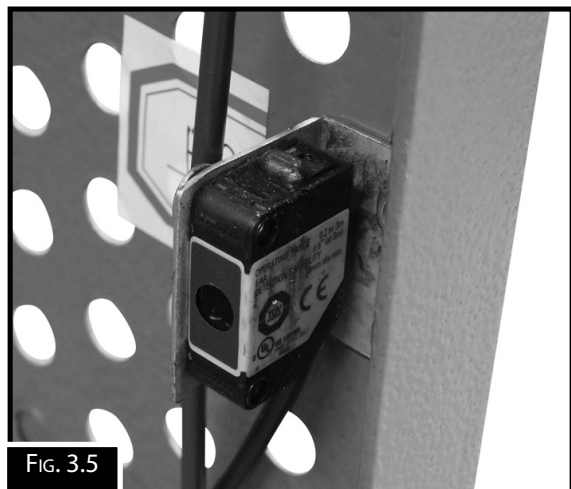
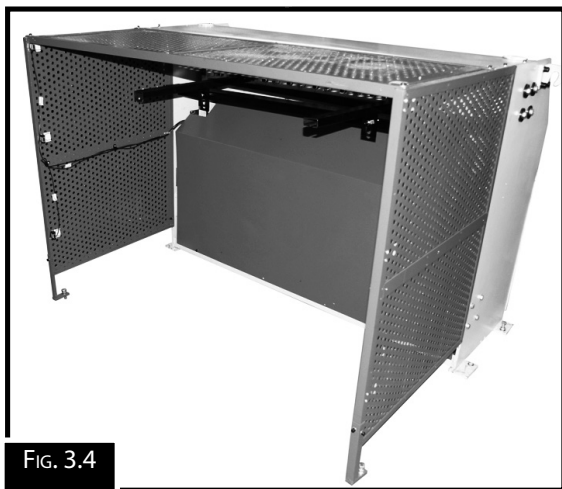
### 3.3 ATTACHING THE ACCESSORIES Cont.

- ❑ Place the squaring stop Fig 3.3 into position on the table top, securing into place with the bolts supplied. Check that the square stop is square to the blade.  
Adjustment can be made by loosening the bolts and moving the stop by the amount allowed by the clearance of the holes.
- ❑ Re tighten the screws.



### ATTACHING THE REAR SAFETY FENCE

- ❑ Unpack and attach the rear fence to the back of the machine with the bolts supplied. (Fig.3.4)
- ❑ Ensure that the sensors have been connected and set up. (Fig.3.5) (See "4.2 Safety Sensor Alignment" on Page 15)



### MANUAL BACK GAUGE

Consists of two arms similar to the front stops. These are positioned on the underside of the top beam. Adjustment for being level and parallel can be made as for the front stops. Once the arms have been positioned, slide the "slide blocks" onto the arms and bolt the back gauge to the blocks. (Fig.3.6, 7)

**NOTE:** Ensure that the brass slug is under the bolt clamp to avoid damage to the arm.

- ❑ To adjust the back gauge, undo the clamp and slide the back gauge to the required setting and re-tighten the clamp.

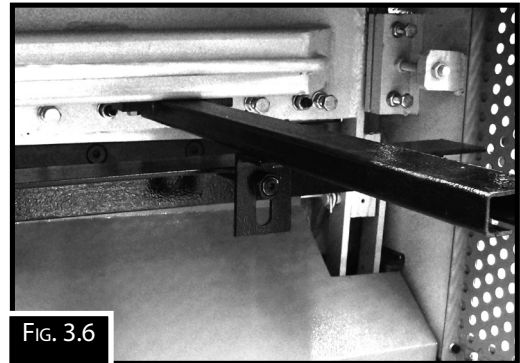


FIG. 3.6



FIG. 3.7

### ATTACHING THE MOBILE FOOT PEDAL

- ❑ Unpack the mobile foot control and plug it into the socket provided on the back of the control box located on the side of the machine. (Fig.3.8) The plug and socket are fitted with a location slot and key and will only connect in the one position



FIG. 3.8

### 3.4 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. To minimize the risk of electrocution, fire, or equipment damage, these machines should be hard wired with installation work and electrical wiring done by a qualified electrician.

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.....15 Amps**  
**Full Load Current.....12.8 Amps**

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

### 3.5 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 at 240V is 12.8 Amps

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.

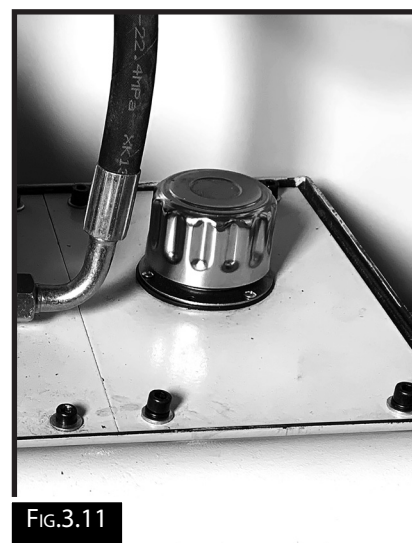
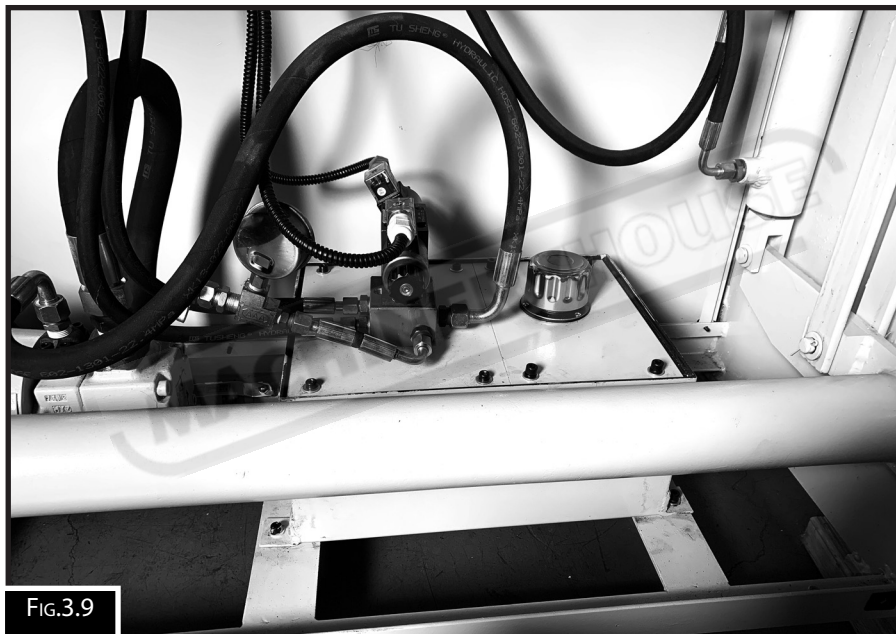


### 3.5 FILLING THE HYDRAULIC OIL TANK.

The machine is shipped with the oil tank empty for safety. Before the machine is used the oil tank needs to be filled.

When filling the tank with oil, make sure that the top of the tank is clean and free from dust and dirt.

- ☐ Remove the rear guard to access the oil tank (Fig 3.9)
- ☐ Remove the screws from the oil tank cover and remove the cover
- ☐ Using a clean cloth wipe out the bottom of the tank making sure there is no dirt or dust remaining in the tank.
- ☐ Replace the oil tank cover and open the oil cap.(Fig 3.11)
- ☐ Using a pump or proper equipment, add 46 grade hydraulic oil into the tank
- ☐ Oil level must be filled to the middle mark of the oil indicator. (Fig. 3.10)
- ☐ Always keep the oil at the same level.



## 4. COMMISSIONING

### 4.1. PREPARATION OF THE MACHINE

- ☐ Remove all wrapping and packing grease from the machine.
- ☐ Check the machine for loose bolts. Tighten as required.
- ☐ Inspect for oil leakage or loose fittings. Similarly check the main rams between the frames.
- ☐ Clean the blades and tighten the securing bolts as required. Examine the cutting edges of both blades for damage.
- ☐ Inform your service provider of any damage or faults with the machine.

### 4.2 SAFETY SENSOR ALIGNMENT

**Warning-** Follow all setup instructions before starting the hydraulic pump.

The safety circuit consists of a reset button and two rear side guards, each having 3 sensors. The machine has a RED warning light mounted on the control panel when the circuit has been tripped.. (Fig.4.1) When the main power is switched on or the rear sensors have been tripped, the safety circuit must be reset before the hydraulic pump can be started.

#### Reset Button

The reset button is mounted on the rear of the control panel under the isolating switch. Press to reset the safety circuit (Fig.4.2)

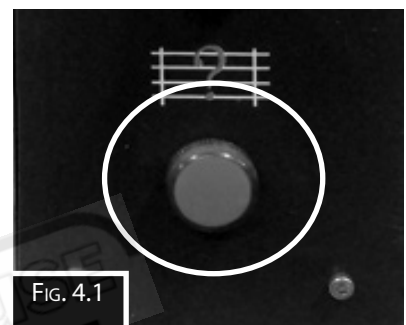
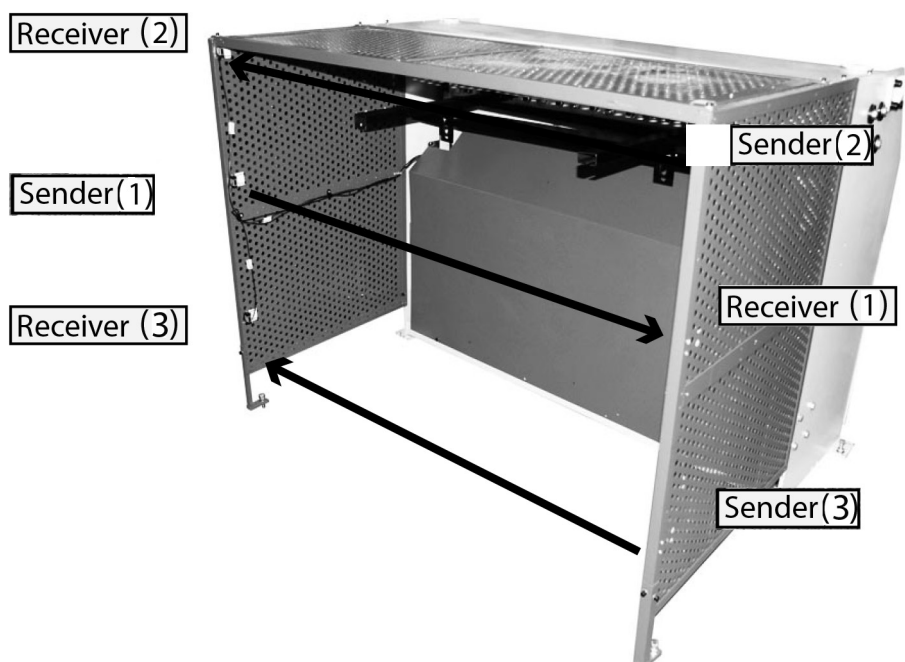


FIG. 4.1



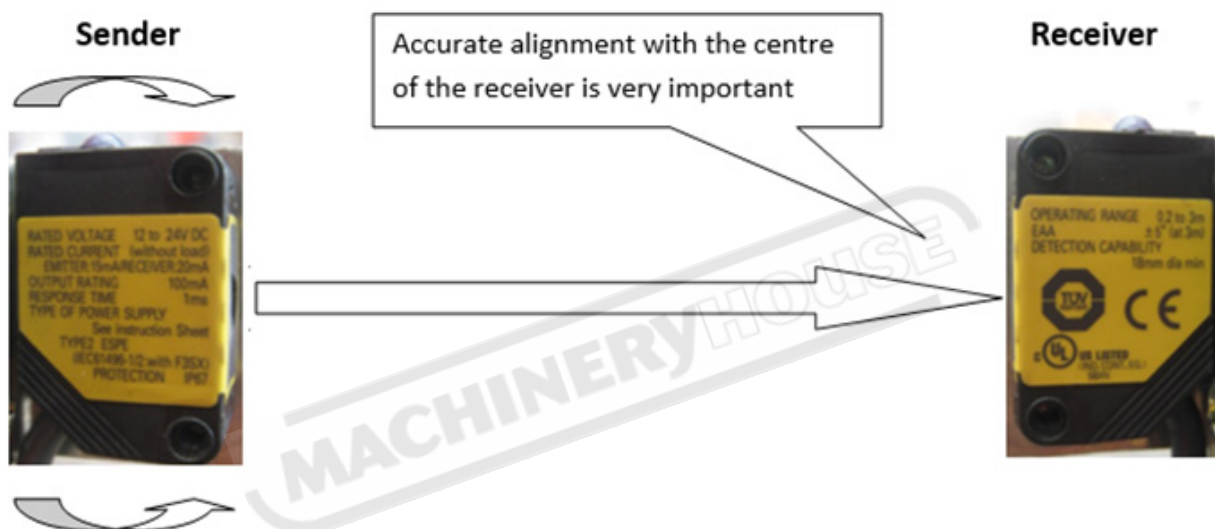
FIG. 4.2



## 4.2 SAFETY SENSOR ALIGNMENT CONT.

**Machine setup-** First ensure that the machine is level and all four levelling jacking bolts are correctly adjusted. Ensure the rear fences are tight and the stabilizing bolt is on the ground to stop the fence moving around.

**Alignment-** The sensors are sensitive to alignment so try to align as accurately as possible. If the sender is only slightly aligned with the receiver any vibration when cutting will stop the pump and the safety circuit will have to be reset again. Alignment could involve loosening the sensor mounting screws or bending the mounting brackets to get the best alignment



### Identifying sensors

**Senders-** Each sender has a red light on top of the unit and a red light on the front. These two lights will be on all the time while the machine has power.



#### 4.2 SAFETY SENSOR ALIGNMENT. CONT.

Receivers- Each receiver has two lights on top of the unit. These lights indicate if the receiver has power and if it has been aligned correctly with the sender.

**No Lights on**



**No power**

**Green light on**



**Power on but not aligned**

**Orange and green light on**



**Has Power & aligned ok**

**Alignment order-** The receivers are wired in series and must be aligned in the correct order. As each receiver is aligned correctly it will send power to the next receiver.

**No-1 receiver (middle)-** A green light on indicates it has power. When it is correctly aligned with the sender an orange & green light will be on and it will send power to No-2 receiver.

**No-2 receiver (top)-** A green light on indicates it has power. When correctly aligned with the sender an orange & green light will be on and it will send power to the No-3 receiver.

**No-3 receiver (bottom)-** will have a green light on and when it is correctly aligned with the sender the orange & green light will be on and it will send power to the reset button.

**Successful alignment-** When all 3 receivers are aligned correctly with their corresponding senders, they should all have an orange and green light on top. The reset button can now be pressed.

### 4.3 CONTROLS

Before operating the machine it is important to know where the controls are and what each item does.

The controls for the machine are found in three places.

1. The back of the electrical cabinet
2. The control panel situated on the right hand side of the machine on the front of the electrical cabinet.
3. The mobile foot pedal.

Below are the explanation of each control.

- A. Isolating Switch.** Main power supply switch mounted on the back of the electrical cabinet. (Fig.4.4)
- B. Safety Reset Button.** This button resets the safety circuit after the rear safety beam has been broken. (Fig.4.4)
- C. Power Lamp.** This light is illuminated when the power supply is switched on. (Fig.4.5)
- D. Emergency Stop Buttons (2).** When pressed disconnects the power to the machine. The button needs to be twisted to release and reset the circuitry (Fig.4.5) (Fig.4.6)
- E. ON/OFF Button.** Switches the Hydraulic pump ON of OFF (Fig.4.5)
- F. Function Switch.** This switch switches the function between "INCH" or "CYCLE" mode (Fig.4.5)
- G. Rear Sensor Lamp.** Is illuminated when the rear safety guard circuit has been tripped (Fig.4.5)
- H. Operating Pedal.** When pressed, activates the guillotine when either "Inching" or "Cycling" mode has been selected. (Fig.4.6)  
If in the "INCHING" mode, the top blade can be moved and stopped by pressing and releasing the pedal.  
If in the "CYCLING" mode, pressing the pedal will complete one full cycle.



FIG.4.4

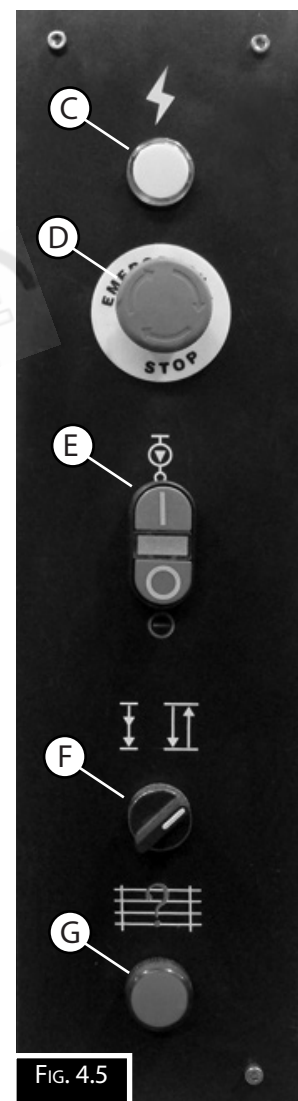


FIG. 4.5



FIG. 4.6

### 4.4 COMMISSIONING CHECK LIST.

Before starting the machine the following checks must be carried out.

- ☐ Installation and machine preparation has been performed according to the instructions in this manual.
- ☐ Fill the oil reservoir with 30 grade hydraulic oil and ensure that the oil filter breather cap is fitted
- ☐ All grease nipple points have been lubricated.
- ☐ Electrical earth fitted and power circuits, switches, and foot-pedal have been checked.
- ☐ Check power connections and any damage to any wiring.
- ☐ Setup rear sensors
- ☐ Test safety operation, Emergency stop, rear sensors, stop button etc.
- ☐ Test cut material and check quality of cut
- ☐ Tools, equipment and personnel are clear of the machine.
- ☐ Operation Manual on how to operate the machine has been read.

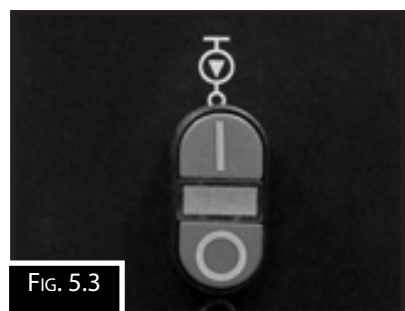
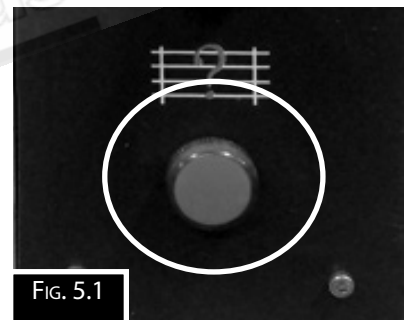
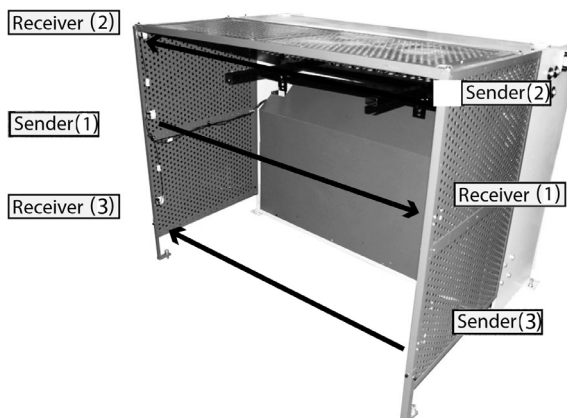
## 5. OPERATION INSTRUCTIONS

### 5.1 PRE-OPERATIONAL SAFETY CHECK PRIOR TO OPERATING

Before operating the machine the rear safety beam guard needs to be checked.

Below are the steps that need to be followed.

1. Start the machine as per the instruction procedures
2. Stand outside the rear safety gate & obstruct sensor (1)
3. Ensure the machine has stopped and is disabled
4. Check your control panel warning light is illuminated. (Fig. 5.1)
5. Press the green reset button on the rear of the electrical box (Fig. 5.2)
6. Press the Hydraulic pump start button on the control panel to activate the operational system. (Fig. 5.3)
7. Repeat steps 1 to 6 for each sensor (2) & (3)



**Emergency Stop Button Check,**

The machine has two Emergency Stop Buttons. These can be found, one on the control panel and one on the mobile foot pedal. (Fig. 5.4) Before using the machine these emergency stop buttons need to be tested to insure that they are working correctly.

**To test the Emergency Stop Buttons**

1. Start machine as per the instruction procedures
2. Press the emergency stop button on control panel
3. Ensure machine has stopped and is disabled
4. Reset emergency stop button by twisting red dial (Some models need the rear guard safety button also to be reset) (Fig. 5.2)
5. Repeat steps 1 to 4 for each emergency stop on your machine



Fig.5.4

## 5.2 SETTING THE BLADE GAP

Check the maximum cutting capacity of the guillotine.. This can be found on the specification plate on the machine. The capacity listed is for Mild Steel. Stainless steel capacity can be found in the specification table in this manual. (Page 4)

### Check The Blade Gap Setting

The machine is supplied from the factory with the blade gap set to the capacity of the machine.

When cutting large runs of material the blade gap should be set to that thickness.

The blade gap should be approximately 10% of the thickness of the material.

E.G. 1mm material = 0.1mm Blade Gap

2mm material = 0.2mm Blade Gap

| <b>METALMASTER</b>               |                      |
|----------------------------------|----------------------|
| PRODUCT SPECIFICATION            |                      |
| <b>MODEL:</b>                    | <input type="text"/> |
| <b>CAPACITY:</b>                 | <input type="text"/> |
| <b>SER. NO:</b>                  | <input type="text"/> |
| <b>MFG DATE:</b>                 | <input type="text"/> |
| <b>WEIGHT:</b>                   | <input type="text"/> |
| <b>VOLTS:</b>                    | <input type="text"/> |
| <b>MOTOR Kw:</b>                 | <input type="text"/> |
| <b>www.machineryhouse.com.au</b> |                      |
| Made in China                    |                      |

### Adjusting the Blade Gap.

There are two points that need to be adjusted to be able to change the blade gap on these machines. These are found on each side of the blade beam, and are accessed from the rear of the machine.

To adjust the blade gap,

1. Loosen the 4 bolts on both sides of machine, (Fig. 5.5)  
Both sides need to be loosened before any adjustment is made.
2. Set the selector control on the control box to "INCH"  
Depress the foot pedal at short intervals (INCHING) until the blades on the right hand side are about to pass. If! No danger of the blades clashing continue "inching" the machine,
3. ISOLATE THE MACHINE FROM THE POWER SUPPLY.
4. Using a feeler gauge between the blades adjust the gap using the nuts on the centre stud inside the machine on either end of the side plates.(Fig. 5.6)
5. Tighten the four bolts on both sides of the machine.
6. Using a test piece take a cut and check the gap again to ensure it hasn't moved



Fig. 5.5

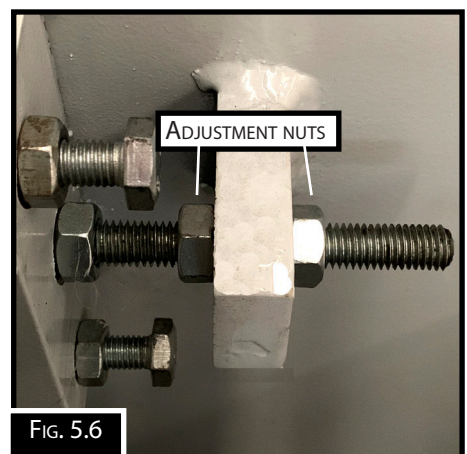


Fig. 5.6

## 6. MAINTENANCE

### 6.1 TYPE AND FREQUENCY OF INSPECTIONS

| Inspection   | Period   | Responsibility |
|--|----------|----------------|
| Lubrication of all grease points with MOS2 grease      | Daily    | Operator       |
| Lubrication of slide-ways with MOS2 grease             | Weekly   | Operator       |
| All Guards that protect against physical damage        | Daily    | Operator       |
| Machine fixing bolts against loosening                 | Weekly   | Operator       |
| Oil leakage in cylinders                               | Weekly   | Operator       |
| Hydraulic Oil Change and filter with #46 Hydraulic Oil | 1000hrs  | Maintenance    |
| Oil leakage in pipes, hoses and hydraulic elements     | Weekly   | Operator       |
| Hydraulic fluid level                                  | Weekly   | Operator       |
| Cylinder connections bolts against loosening           | Weekly   | Operator       |
| Safety & limit switches against loosening, damage      | Weekly   | Operator       |
| Terminal connections of the electrical installation    | Annually | Electrician    |

## 6.2 CHANGING THE HYDRAULIC OIL AND FILTER

The Hydraulic Oil should be changed after every 1000 hours of use.

All precautions must be taken to keep the hydraulic system clean at all times.

When changing the oil, make sure that the top of the oil tank is clean and free from dust and dirt.

- ☐ ISOLATE THE MACHINE FROM THE POWER SUPPLY
- ☐ Remove the rear guard to access the oil tank (Fig 6.1)
- ☐ Remove the screws from the oil tank cover and remove the cover
- ☐ Remove the old oil from the tank and dispose of it responsibly
- ☐ Using a clean cloth wipe out the bottom of the tank making sure there is no dirt or dust remaining in the tank.
- ☐ Check or replace the oil filter while the tank cover is removed.
- ☐ Replace the oil tank cover and open the oil cap.(Fig 6.2)
- ☐ Using a pump or proper equipment, add 46 grade hydraulic oil into the tank
- ☐ Oil level must be filled to the middle mark of the oil indicator. (Fig. 6.3)
- ☐ Always keep the oil at the same level.
- ☐ Replace the rear guard that protects the tank and hoses.



FIG. 6.1



FIG. 6.3

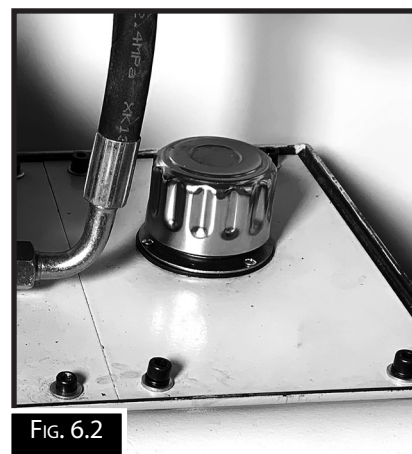


FIG. 6.2

### 6.3 TOP SLIDE ADJUSTMENT

The top slide clearance tolerance has been set in the factory but may at some time need to be adjusted. The clearance should be between 0.06 ~ 0.10 mm. If the clearance is not in the tolerance range, then the clearance must be adjusted by the following steps below

To adjust the top slide.

1. DISCONNECT THE MACHINE FROM THE POWER SUPPLY
2. The two slides adjustment bolts can be found at the back of the machine. (Fig.6.4)
3. Using a feeler gauge between the slide and the keeper plate, check the clearance. If the clearance is not between 0.06 ~ 0.10 mm then adjustment is required. (Fig.6.5)
4. To adjust, loosen the two lock nuts on one side (Fig. 6.6) and adjust the bolts until the clearance is within the tolerance.
5. Tighten the two lock nuts and repeat the process on the other side of the machine.
6. Once completed, check the clearance again.
7. Once the slide clearance has been set then the "Setting The Blade Gap" (Page 22) process needs to be checked.



FIG. 6.4

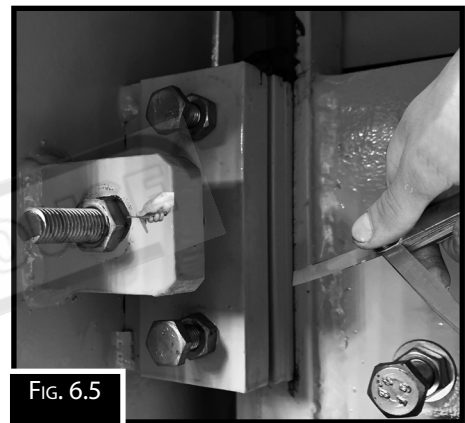


FIG. 6.5

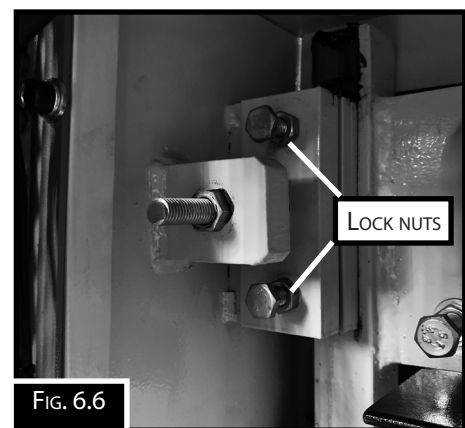


FIG. 6.6

### **WARNING**

Before doing any adjustment to the machine, disconnect the machine from the power supply and place a sign on the front of the machine warning any operator that the machine is being worked on and must not be used until all adjustments have been made and personnel are clear of the back of the machine. Failure to comply may cause death or serious injury.

## 6.4 REMOVING THE BLADES

It may be necessary at some time during the life of the machine, to remove the blades for sharpening or replacement. Below is the procedure.

- 1.. Inch the machine to its upper limit and position the manual back stop into its maximum rear position, and remove the clamp beam.
2. DISCONNECT THE MACHINE FROM THE POWER SUPPLY



### **WARNING**

**UNDER NO CIRCUMSTANCE PLACE HANDS, FINGERS OR OTHER PARTS OF THE BODY BETWEEN THE SHEAR BLADES.**

**When handling the blades, gloves should be worn to protect the hands.**

3. Release the entire lower blade screws, accept for one screw in the centre of the blade.  
(Fig. 6.7) Place two dowels 12mm diameter by 100 mm long into two screw holes, one at each end of the blade.
4. Two people will be required at this stage. Whilst holding the blade in position, remove the remaining screw. Slide the lower blade onto the two dowels. While taking the weight off the blade, remove the dowels and lower the blade. Once the blade has been removed then remove the upper blade by loosening the nuts, (Fig. 6.7) and removing all but two of the nuts. Once the blade has been released from its position then, support the blade and remove the last two nuts, and remove the blade.
5. Replace the blades by reversing the sequence for the blade removal and refer to "CHECKING THE BLADE GAP" on Page 22 in this manual for the instructions on inspecting and setting the blade gap.

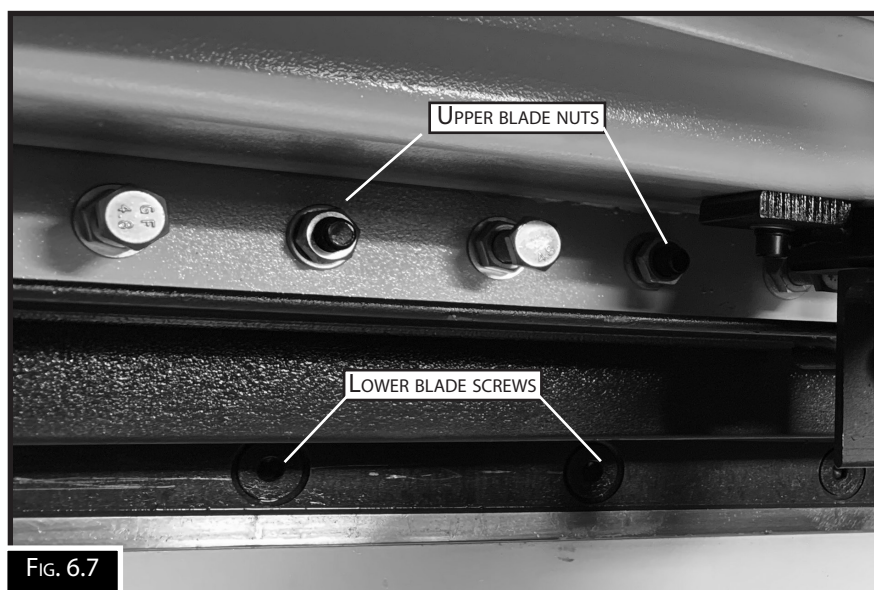


FIG. 6.7

## 6.5 TROUBLESHOOTING

| PROBLEM  | POSSIBLE CAUSES  | ACTION  |
|--|--|---|
| Machine shudder on the down stroke.            | <ul style="list-style-type: none"> <li>• Incorrect relief valve setting</li> </ul>                                       | <ul style="list-style-type: none"> <li>• Re-adjust relief valve<br/>Adjust the relief valve by unlocking the hexagon head grub screw on the side of the body of the valve. Turn in a clockwise direction closing the valve while cycling the machine.</li> </ul>  |
| Machine will not cut.                          | Check the blades for excessive clearance or damage to the cutting edges  | <ul style="list-style-type: none"> <li>• Reset or regrind as required.</li> <li>1. Test the hydraulic pressure, if insufficient; lower the top cutting blade to its lowest position. Disconnect the hydraulic hoses to the cylinder and plug the hose. Test the machine by operating the foot pedal and inch up. If pressure is obtained in both directions, replace the hydraulic cylinder.</li> <li>2. If pressure is not obtained in either direction, plug the pump delivery and recheck. If no pressure is obtained, repair or replace both the pump and the relief valve.</li> <li>3. When pressure is obtained in one direction only. Remove the main ram cylinder and check for leaks by operating on a test bench. If the cylinder is not leaking, replace the directional control valve.</li> </ul> |
| Machine will not stop in the neutral position. | <ul style="list-style-type: none"> <li>• Check limit switch /relay</li> <li>• Check directional control valve</li> </ul> | <ul style="list-style-type: none"> <li>• Replace if necessary.</li> <li>• Remove valve, check replace if necessary</li> </ul>   |
| Oil leaking from cylinder                      | <ul style="list-style-type: none"> <li>• Gland seal is damaged</li> </ul>  | <ul style="list-style-type: none"> <li>• Change seal</li> </ul>   |
| Oil leaking from fittings                      | <ul style="list-style-type: none"> <li>• Fittings are loose</li> </ul>   | <ul style="list-style-type: none"> <li>• Tighten fittings</li> </ul>  |

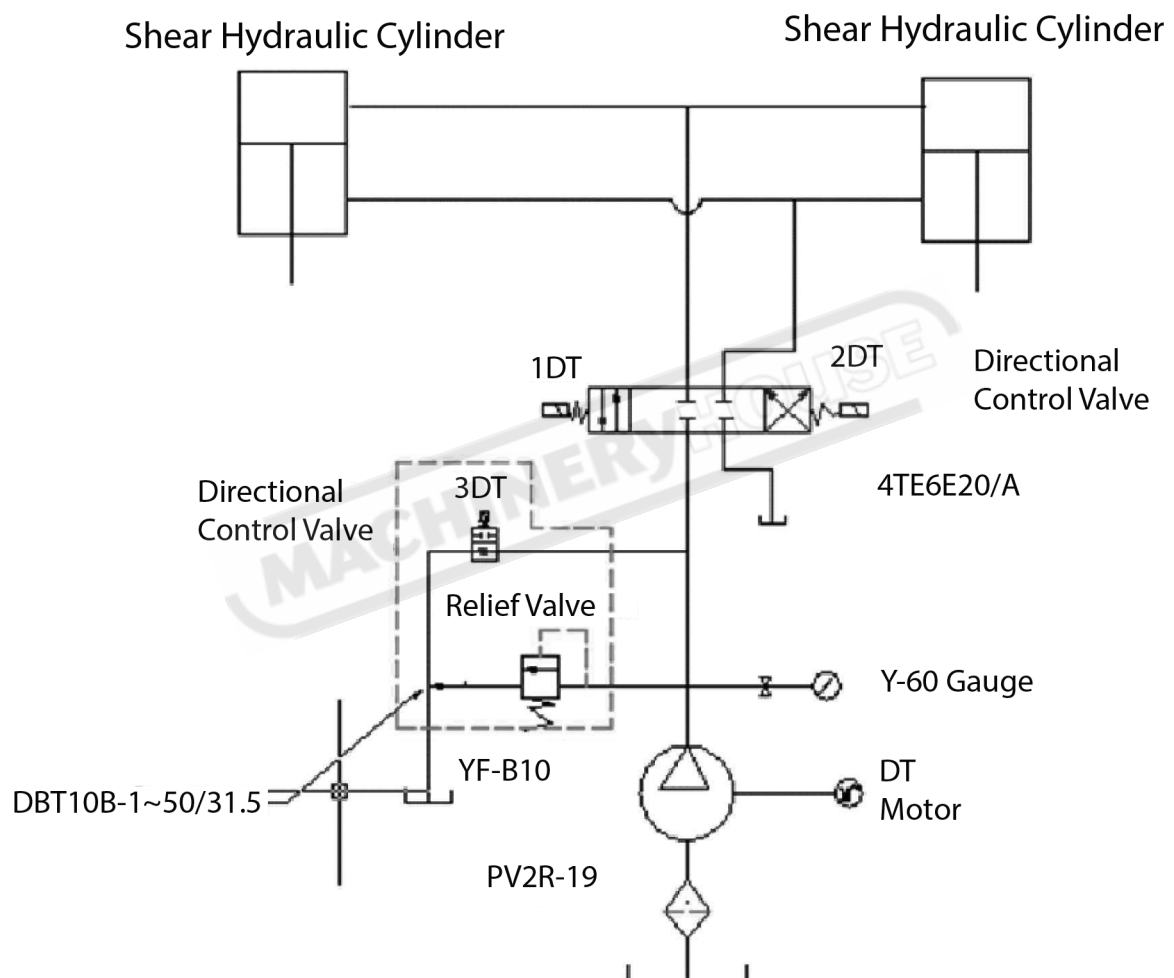
## SPARE PARTS SECTION

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 any time without notification.

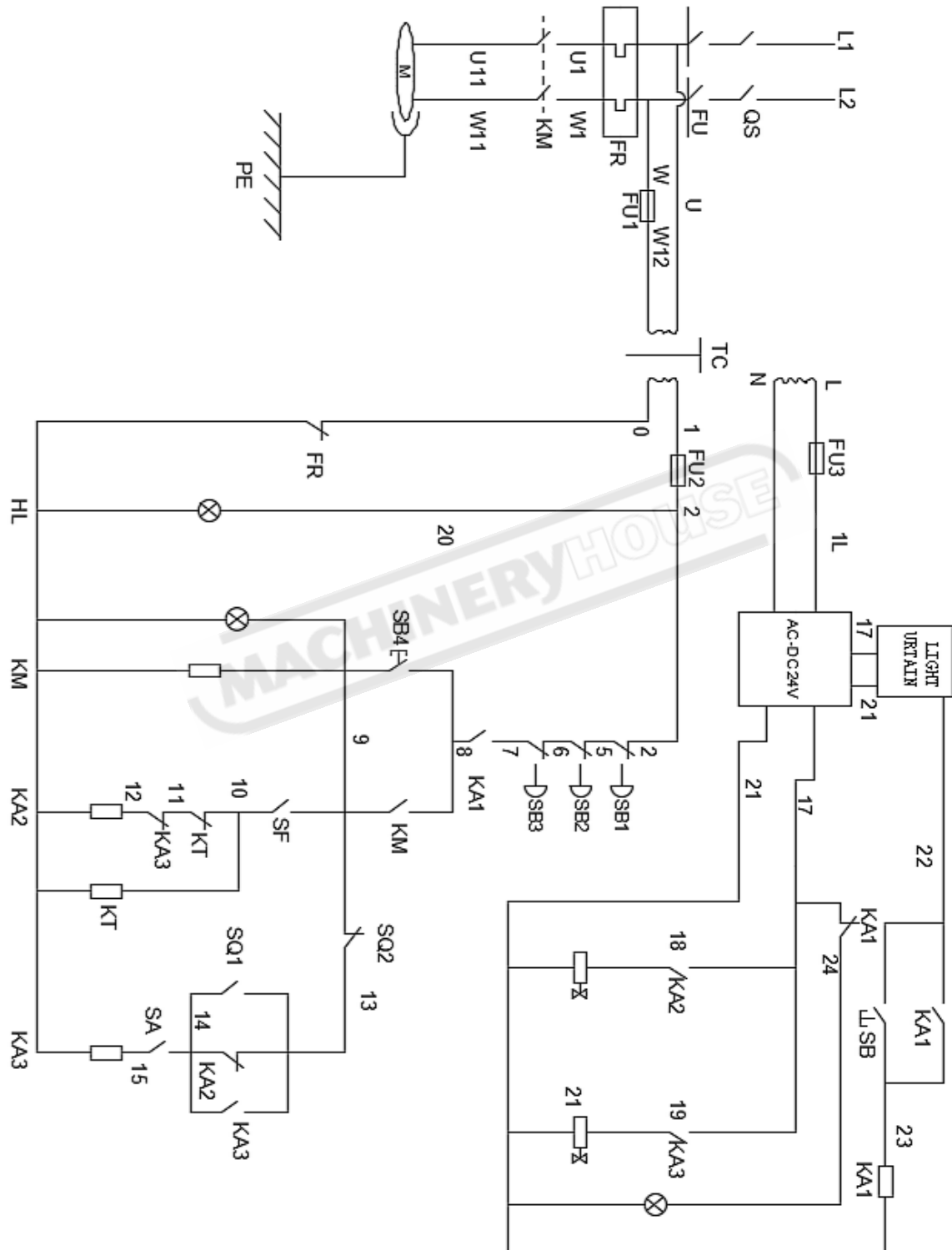
### HOW TO ORDER SPARE PARTS

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
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.



**HYDRAULIC DIAGRAM**

## ELECTRICAL DIAGRAM



# **WARNING**

## **General Machinery Safety Instructions**

---

Machinery House  
requires you to read this entire Manual before using this machine.

- 1. Read the entire Manual before starting machinery.** Machinery may cause serious injury if not correctly used.
- 2. Always use correct hearing protection when operating machinery.** Machinery noise may cause permanent hearing damage.
- 3. Machinery must never be used when tired, or under the influence of drugs or alcohol.** When running machinery you must be alert at all times.
- 4. Wear correct Clothing.** At all times remove all loose clothing, necklaces, rings, jewelry, etc. Long hair must be contained in a hair net. Non-slip protective footwear must be worn.
- 5. Always wear correct respirators around fumes or dust when operating machinery.** Machinery fumes & dust can cause serious respiratory illness. Dust extractors must be used where applicable.
- 6. Always wear correct safety glasses.** When machining you must use the correct eye protection to prevent injuring your eyes.
- 7. Keep work clean and make sure you have good lighting.** Cluttered and dark shadows may cause accidents.
- 8. Personnel must be properly trained or well supervised when operating machinery.** Make sure you have clear and safe understanding of the machine you are operating.
- 9. Keep children and visitors away.** Make sure children and visitors are at a safe distance for you work area.
- 10. Keep your workshop childproof.** Use padlocks, Turn off master power switches and remove start switch keys.
- 11. Never leave machine unattended.** Turn power off and wait till machine has come to a complete stop before leaving the machine unattended.
- 12. Make a safe working environment.** Do not use machine in a damp, wet area, or where flammable or noxious fumes may exist.
- 13. Disconnect main power before service machine.** Make sure power switch is in the off position before re-connecting.
- 14. Use correct amperage extension cords.** Undersized extension cords overheat and lose power. Replace extension cords if they become damaged.
- 15. Keep machine well maintained.** Keep blades sharp and clean for best and safest performance. Follow instructions when lubricating and changing accessories.
- 16. Keep machine well guarded.** Make sure guards on machine are in place and are all working correctly.
- 17. Do not overreach.** Keep proper footing and balance at all times.
- 18. Secure workpiece.** Use clamps or a vice to hold the workpiece where practical. Keeping the workpiece secure will free up your hand to operate the machine and will protect hand from injury.
- 19. Check machine over before operating.** Check machine for damaged parts, loose bolts, Keys and wrenches left on machine and any other conditions that may effect the machines operation. Repair and replace damaged parts.
- 20. Use recommended accessories.** Refer to instruction manual or ask correct service officer when using accessories. The use of improper accessories may cause the risk of injury.
- 21. Do not force machinery.** Work at the speed and capacity at which the machine or accessory was designed.
- 22. Use correct lifting practice.** Always use the correct lifting methods when using machinery. Incorrect lifting methods can cause serious injury.
- 23. Lock mobile bases.** Make sure any mobile bases are locked before using machine.
- 24. Allergic reactions.** Certain metal shavings and cutting fluids may cause an allergic reaction in people and animals, especially when cutting as the fumes can be inhaled. Make sure you know what type of metal and cutting fluid you will be exposed to and how to avoid contamination.
- 25. Call for help.** If at any time you experience difficulties, stop the machine and call you nearest branch service department for help.



# WARNING

## Power Operated Guillotine Safety Instructions

---

Machinery House  
requires you to read this entire Manual before using this machine.

- 1. Maintenance.** Make sure the Guillotine is turned off and disconnect from the main power supply and make sure all moving parts have come to a complete stop before any inspection, adjustment or maintenance is carried out.
- 2. Guillotine Condition.** Guillotine must be maintained for a proper working condition. Never operate a Guillotine that has low oil levels, damaged or worn parts. Scheduled routine maintenance should be performed on a scheduled basis.
- 3. Blade Condition.** Never operate a Guillotine with a damaged or badly worn blades. Replace if required.
- 4. Pump Direction.** Pump rotation must be in arrow direction otherwise the pump will be damaged.
- 5. Hand Hazard.** Keep hands and fingers clear from moving parts. Serious injury can occur if hand or finger tips come between blades.
- 6. Personal Protection.** Gloves are recommended when handling the workpieces.
- 7. Authorized and trained personnel.** The machine must be operated by authorized and trained personnel. The shear is designed to be operated by a single user. Using the machine with more than one operator is forbidden, except for certain maintenance situations.
- 8. Power outage.** In the event of a power failure during use of the machine, turn off all switches to avoid possible sudden start up once power is restored.
- 9. Work area hazards.** Keep the area around the Guillotine clean from oil, tools, objects & chips. Pay attention to other persons in the area and know what is going on around the area to ensure unintended accidents.
- 10. Guards.** Operate machine only with all protective devices and guarding in place and operational. Never remove, defeat or bypass. Any presence-sensing safeguarding used must have regular Safety integrity tests and records kept. These records must be kept for 5 years or for the life of the plant and be handed to any person that you relinquish control of the plant to. Tests include stop time measurements, safety distance calculations and inspections, with operator checks and periodic maintenance checks. (WHS Regulation 226)
- 11. Material.** Material must NOT be hardened ceramic or glass-originated, non flat metals (at origin) e.g. rods, bars, tubes & pipes.
- 12. Blade gap adjustment.** Do NOT operate the machine without proper blade gap adjustment according to sheet thickness.
- 13. Warning Labels.** Take note of any warning labels on the machine and do not remove them.
- 14. Backgauge Area.** Do not access the backgauge area, while the machine is working.
- 15. Protective fence.** Do not bridge the safety limit switch of the rear protective fence.
- 16. Squaring arm.** Do not use side squaring arm and front support arms for intermediate storage of workpieces.
- 17. Operation.** During the shearing process, the workpiece may slide or move unexpectedly. Therefore, the material must be handled carefully.
- 18. Emergency stop.** Use the emergency stop button in case of any emergency.
- 19. Level machine.** Level the machine on a flat concrete surface by using a spirit level.
- 20. Overloading machine.** Do not exceed the rated capacity of the guillotine. Please refer to the manual for capacities.
- 21. Hearing protection and hazards.** Always wear hearing protection as noise generated from machine and workpiece can cause permanent hearing loss over time.
- 22. Call for help.** If at any time you experience difficulties, stop the machine and call your nearest branch service department for help.

# PLANT SAFETY PROGRAM

## **NEW** MACHINERY HAZARD IDENTIFICATION, ASSESSMENT & CONTROL

### Power Operated Guillotine

Developed in Co-operation Between A.W.I.S.A and Australia Chamber of Manufactures  
This program is based upon the Safe Work Australia, Code of Practice - Managing Risks of Plant in the Workplace ( WHSA 2011 No10 )

| Item No.  | Hazard Identification         | Hazard Assessment | Risk Control Strategies<br>(Recommended for Purchase / Buyer / User)   |
|---|-------------------------------|-------------------|--|
| B   | CRUSHING                      | LOW               | Secure & support work material on table.   |
| C   | CUTTING, STABBING, PUNCTURING | MEDIUM            | Wear gloves to prevent cuts from sharp material offcuts.   |
| D   | SHEARING                      | MEDIUM            | Hands should be kept clear of moving parts and blades.<br>Isolate power to machine prior to any checks or maintenance.<br>Ensure front blade guard is fitted securely.<br>Do not adjust or clean until machine has fully stopped.<br>Access to the rear of machine must be interlock or photoelectric guarded to prevent access when the machine is operating, (see workover authority principles of machine guarding for guidelines). |
| F   | STRIKING                      | MEDIUM            | Wear safety glasses.<br>Stand clear of falling offcuts.<br>Ensure material hold downs are correctly adjusted.<br>Ensure guards are secured properly.   |
| H   | ELECTRICAL                    | MEDIUM            | Machine should be installed & checked by a Licensed Electrician.<br>All electrical enclosures should only be opened with a tool that is not to be kept with the machine.   |
| O   | OTHER HAZARDS, NOISE.         | LOW               | Wear hearing protection as required.   |
| Plant Safety Program to be read in conjunction with manufactures instructions |                               |                   |  |



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[www.machineryhouse.co.nz](http://www.machineryhouse.co.nz)

Authorised and signed by:

Safety officer: .....

Manager: .....

Revised Date: 25th Sept 2015