OPERATOR'S MANUAL

Metal Working

Book 1 of 2

HYDRAULIC SHEAR

MODEL: SH-8003HD

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THANK YOU & WARRANTY

Thank you for your purchase of a machine from Baileigh Industrial. We hope that you find it productive and useful to you for a long time to come.

Inspection & Acceptance. Buyer shall inspect all Goods within ten (10) days after receipt thereof. Buyer's payment shall constitute final acceptance of the Goods and shall act as a waiver of the Buyer's rights to inspect or reject the goods unless otherwise agreed. If Buyer rejects any merchandise, Buyer must first obtain a Returned Goods Authorization ("RGA") number before returning any goods to Seller. Goods returned without a RGA will be refused. Seller will not be responsible for any freight costs, damages to goods, or any other costs or liabilities pertaining to goods returned without a RGA. Seller shall have the right to substitute a conforming tender. Buyer will be responsible for all freight costs to and from Buyer and repackaging costs, if any, if Buyer refuses to accept shipment. If Goods are returned in unsalable condition, Buyer shall be responsible for full value of the Goods. Buyer may not return any special order Goods. Any Goods returned hereunder shall be subject to a restocking fee equal to 30% of the invoice price.

Specifications. Seller may, at its option, make changes in the designs, specifications or components of the Goods to improve the safety of such Goods, or if in Seller's judgment, such changes will be beneficial to their operation or use. Buyer may not make any changes in the specifications for the Goods unless Seller approves of such changes in writing, in which event Seller may impose additional charges to implement such changes.

Limited Warranty. Seller warrants to the original end-user that the Goods manufactured or provided by Seller under this Agreement shall be free of defects in material or workmanship for a period of twelve (12) months from the date of purchase, provided that the Goods are installed, used, and maintained in accordance with any instruction manual or technical guidelines provided by the Seller or supplied with the Goods, if applicable. The original end-user must give written notice to Seller of any suspected defect in the Goods prior to the expiration of the warranty period. The original end-user must also obtain a RGA from Seller prior to returning any Goods to Seller for warranty service under this paragraph. Seller will not accept any responsibility for Goods returned without a RGA. The original end-user shall be responsible for all costs and expenses associated with returning the Goods to Seller for warranty service. In the event of a defect, Seller, at its sole option, shall repair or replace the defective Goods or refund to the original end-user the purchase price for such defective Goods. Goods are not eligible for replacement or return after a period of 30 days from date of receipt. The foregoing warranty is Seller's sole obligation, and the original end-user's exclusive remedy, with regard to any defective Goods. This limited warranty does not apply to: (a) die sets, tooling, and saw blades; (b) periodic or routine maintenance and setup, (c) repair or replacement of the Goods due to normal wear and tear, (d) defects or damage to the Goods resulting from misuse, abuse, neglect, or accidents, (f) defects or damage to the Goods resulting from improper or unauthorized alterations, modifications, or changes; and (f) any Goods that has not been installed and/or maintained in accordance with the instruction manual or technical guidelines provided by Seller.

EXCLUSION OF OTHER WARRANTIES. THE FOREGOING LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED. ANY AND ALL OTHER EXPRESS, STATUTORY OR IMPLIED WARRANTIES, INCLUDING BUT NOT LIMITED TO, ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE ARE EXPRESSLY DISCLAIMED. NO WARRANTY IS MADE WHICH EXTENDS BEYOND THAT WHICH IS EXPRESSLY CONTAINED HEREIN.

Limitation of Liability. IN NO EVENT SHALL SELLER BE LIABLE TO BUYER OR ANY OTHER PARTY FOR ANY INCIDENTIAL, CONSEQUENTIAL OR SPECIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOST PROFITS OR DOWN TIME) ARISING FROM OR IN MANNER CONNECTED WITH THE GOODS, ANY BREACH BY SELLER OR ITS AGENTS OF THIS AGREEMENT, OR ANY OTHER CAUSE WHATSOEVER, WHETHER BASED ON CONTRACT, TORT OR ANY OTHER THEORY OF LIABILITY. BUYER'S REMEDY WITH RESPECT TO ANY CLAIM ARISING UNDER THIS AGREEMENT IS STRICTLY LIMITED TO NO MORE THAN THE AMOUNT PAID BY THE BUYER FOR THE GOODS.

Force Majuere. Seller shall not be responsible for any delay in the delivery of, or failure to deliver, Goods due to causes beyond Seller's reasonable control including, without limitation, acts of God, acts of war or terrorism, enemy actions, hostilities, strikes, labor difficulties, embargoes, non-delivery or late delivery of materials, parts and equipment or transportation delays not caused by the fault of Seller, delays caused by civil authorities, governmental regulations or orders, fire, lightening, natural disasters or any other cause beyond Seller's reasonable control. In the event of any such delay, performance will be postponed by such length of time as may be reasonably necessary to compensate for the delay.

Installation. If Buyer purchases any Goods that require installation, Buyer shall, at its expense, make all arrangements and connections necessary to install and operate the Goods. Buyer shall install the Goods in accordance with any Seller instructions and shall indemnify Seller against any and all damages, demands, suits, causes of action, claims and expenses (including actual attorneys' fees and costs) arising directly or indirectly out of Buyer's failure to properly install the Goods.

Work By Others; Safety Devices. Unless agreed to in writing by Seller, Seller has no responsibility for labor or work performed by Buyer or others, of any nature, relating to design, manufacture, fabrication, use, installation or provision of Goods. Buyer is solely responsible for furnishing, and requiring its employees and customers to use all safety devices, guards and safe operating procedures required by law and/or as set forth in manuals and instruction sheets furnished by Seller. Buyer is responsible for consulting all operator's manuals, ANSI or comparable safety standards, OSHA regulations and other sources of safety standards and regulations applicable to the use and operation of the Goods.

Remedies. Each of the rights and remedies of Seller under this Agreement is cumulative and in addition to any other or further remedies provided under this Agreement or at law or equity.

Attorney's Fees. In the event legal action is necessary to recover monies due from Buyer or to enforce any provision of this Agreement, Buyer shall be liable to Seller for all costs and expenses associated therewith, including Seller's actual attorneys' fees and costs.

Governing Law/Venue. This Agreement shall be construed and governed under the laws of the State of Wisconsin, without application of conflict of law principles. Each party agrees that all actions or proceedings arising out of or in connection with this Agreement shall be commenced, tried, and litigated only in the state courts sitting in Manitowoc County, Wisconsin or the U.S. Federal Court for the Eastern District of Wisconsin. Each party waives any right it may have to assert the doctrine of "forum non conveniens" or to object to venue to the extent that any proceeding is brought in accordance with this section. Each party consents to and waives any objection to the exercise of personal jurisdiction over it by courts described in this section. Each party waives to the fullest extent permitted by applicable law the right to a trial by jury.

Summary of Return Policy.

- 10 Day acceptance period from date of delivery. Damage claims and order discrepancies will not be accepted after this time.
- You must obtain a Baileigh issued RGA number PRIOR to returning any materials.
- Returned materials must be received at Baileigh in new condition and in original packaging.
- Altered items are not eligible for return.
- Buyer is responsible for all shipping charges.
- A 30% re-stocking fee applies to all returns.

Baileigh Industrial makes every effort to ensure that our posted specifications, images, pricing and product availability are as correct and timely as possible. We apologize for any discrepancies that may occur. Baileigh Industrial reserves the right to make any and all changes deemed necessary in the course of business including but not limited to pricing, product specifications, quantities, and product availability.

For Customer Service & Technical Support:
Please contact one of our knowledgeable Sales and Service team members at:
(920) 684-4990 or e-mail us at sales@baileighindustrial.com

INTRODUCTION

The quality and reliability of the components assembled on a Baileigh Industrial machine guarantee near perfect functioning, free from problems, even under the most demanding working conditions. However if a situation arises, refer to the manual first. If a solution cannot be found, contact the distributor where you purchased our product. Make sure you have the serial number and production year of the machine (stamped on the nameplate). For replacement parts refer to the assembly numbers on the parts list drawings.

Our technical staff will do their best to help you get your machine back in working order.

In this manual you will find: (when applicable)

- Safety procedures
- Correct installation guidelines
- Description of the functional parts of the machine
- Capacity charts
- Set-up and start-up instructions
- Machine operation
- Scheduled maintenance
- Parts lists

GENERAL NOTES

After receiving your equipment remove the protective container. Do a complete visual inspection, and if damage is noted, **photograph it for insurance claims** and contact your carrier at once, requesting inspection. Also contact Baileigh Industrial and inform them of the unexpected occurrence. Temporarily suspend installation.

Take necessary precautions while loading / unloading or moving the machine to avoid any injuries.

Your machine is designed and manufactured to work smoothly and efficiently. Following proper maintenance instructions will help ensure this. Try and use original spare parts, whenever possible, and most importantly; **DO NOT** overload the machine or make any unauthorized modifications.

Note: *This symbol refers to useful information throughout the manual.*

IMPORTANT

PLEASE READ THIS OPERATORS MANUAL CAREFULLY

It contains important safety information, instructions, and necessary operating procedures. The continual observance of these procedures will help increase your production and extend the life of the equipment.

SAFETY INSTRUCTIONS

LEARN TO RECOGNIZE SAFETY INFORMATION

This is the safety alert symbol. When you see this symbol on your machine or in this manual, **BE ALERT TO THE POTENTIAL FOR PERSONAL INJURY!**

Follow recommended precautions and safe operating practices.

UNDERSTAND SIGNAL WORDS

A signal word – **DANGER**, **WARNING**, or **CAUTION** – is used with the safety alert symbol. **NOTICE**, which is not related to personal injury, is used without a symbol.

DANGER: Indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING: Indicates a hazardous situation which, if not avoided, could result in death or serious injury.

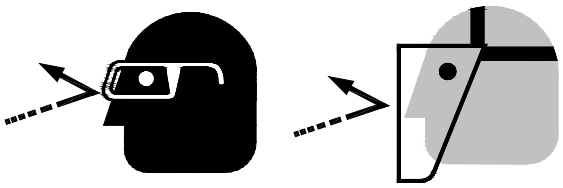
CAUTION: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

NOTICE: Indicates a situation which, if not avoided, could result in property damage.

SAVE THESE INSTRUCTIONS.
Refer to them often and use them to instruct others.

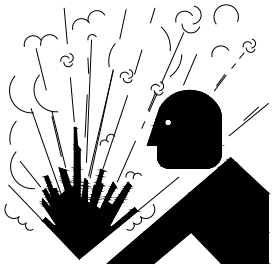
PROTECT EYES

Wear safety glasses or suitable eye protection when working on or around machinery.



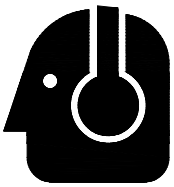
HYDRAULIC HOSE FAILURE

Exercise **CAUTION** around hydraulic hoses in case of a hose or fitting failure.



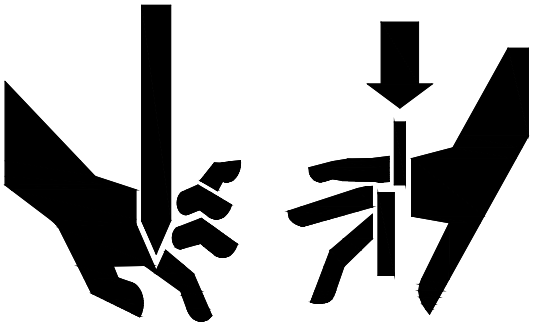
PROTECT AGAINST NOISE

Prolonged exposure to loud noise can cause impairment or loss of hearing. Wear suitable hearing protective devices such as ear muffs or earplugs to protect against objectionable or uncomfortable loud noises.



BEWARE OF SHEAR HAZARD

Blade is sharp. Placing hands or fingers near blade will result in cuts and possibly loss of fingers or limbs if placed in machine. **NEVER** place your hand or any part of your body in this machine.



Emergency Stop Button

In the event of incorrect operation or dangerous conditions, the machine can be stopped immediately by pressing the **E-STOP** button. Twist the emergency stop button clockwise (cw) to reset. Note: Resetting the E-Stop will not start the machine.

SAFETY PRECAUTIONS

Metal working can be dangerous if safe and proper operating procedures are not followed. As with all machinery, there are certain hazards involved with the operation of the product. Using the machine with respect and caution will considerably lessen the possibility of personal injury. However, if normal safety precautions are overlooked or ignored, personal injury to the operator may result.

Safety equipment such as guards, hold-downs, safety glasses, dust masks and hearing protection can reduce your potential for injury. But even the best guard won't make up for poor judgment, carelessness or inattention. **Always use common sense** and exercise **caution** in the workshop. If a procedure feels dangerous, don't try it.

REMEMBER: Your personal safety is your responsibility.

WARNING: FAILURE TO FOLLOW THESE RULES MAY RESULT IN SERIOUS PERSONAL INJURY

Dear Valued Customer:

- All Baileigh machines should be used only for their intended use.
- Baileigh does not recommend or endorse making any modifications or alterations to a Baileigh machine. Modifications or alterations to a machine may pose a substantial risk of injury to the operator or others and may do substantial damage to the machine.
- Any modifications or alterations to a Baileigh machine will invalidate the machine's warranty.

PLEASE ENJOY YOUR BAILEIGH MACHINE! ....PLEASE ENJOY IT SAFELY!

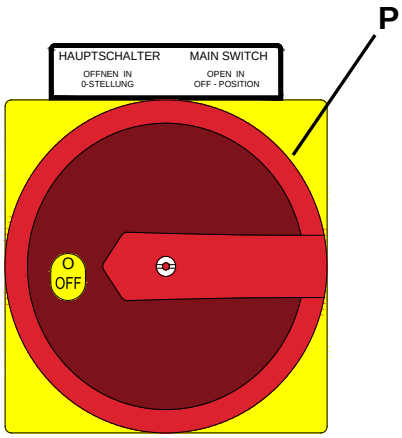
1. **FOR YOUR OWN SAFETY, READ INSTRUCTION MANUAL BEFORE OPERATING THE MACHINE.** Learn the machine's application and limitations as well as the specific hazards.
2. **Only trained and qualified personnel can operate this machine.**
3. **Make sure guards are in place and in proper working order before operating machinery.**
4. **Remove any adjusting tools.** Before operating the machine, make sure any adjusting tools have been removed.
5. **Keep work area clean.** Cluttered areas invite injuries.
6. **Overloading machine.** By overloading the machine, you may cause injury from flying parts. **DO NOT** exceed the specified machine capacities.
7. **Dressing material edges.** Always chamfer and deburr all sharp edges.
8. **Do not force tool.** Your machine will do a better and safer job if used as intended. **DO NOT** use inappropriate attachments in an attempt to exceed the machine's rated capacity.
9. **Use the right tool for the job. DO NOT** attempt to force a small tool or attachment to do the work of a large industrial tool. **DO NOT** use a tool for a purpose for which it was not intended.
10. **Dress appropriately. DO NOT** wear loose fitting clothing or jewelry as they can be caught in moving machine parts. Protective clothing and steel toe shoes are recommended when using machinery. Wear a restrictive hair covering to contain long hair.
11. **Use eye and ear protection**. Always wear ISO approved impact safety goggles. Wear a full-face shield if you are producing metal filings.
12. **Do not overreach**. Maintain proper footing and balance at all times. **DO NOT** reach over or across a running machine.
13. **Stay alert**. Watch what you are doing and use common sense. **DO NOT** operate any tool or machine when you are tired.
14. **Check for damaged parts**. Before using any tool or machine, carefully check any part that appears damaged. Check for alignment and binding of moving parts that may affect proper machine operation.
15. **Observe work area conditions**. **DO NOT** use machines or power tools in damp or wet locations. Do not expose to rain. Keep work area well lighted. **DO NOT** use electrically powered tools in the presence of flammable gases or liquids.
16. **Blade adjustments and maintenance**. Always keep blades sharp and properly adjusted for optimum performance.
17. **Keep children away**. Children must never be allowed in the work area. **DO NOT** let them handle machines, tools, or extension cords.
18. Keep visitors a safe distance from the work area.

19. **Store idle equipment**. When not in use, tools must be stored in a dry location to inhibit rust. Always lock up tools and keep them out of reach of children.
20. **DO NOT operate machine if under the influence of alcohol or drugs**. Read warning labels on prescriptions. If there is any doubt, **DO NOT** operate the machine.
21. **DO NOT** touch live electrical components or parts.
22. **Turn off** power before checking, cleaning, or replacing any parts.
23. Be sure **all** equipment is properly installed and grounded according to national, state, and local codes.
24. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. **Bare wiring can kill!**
25. **DO NOT** bypass or defeat any safety interlock systems.

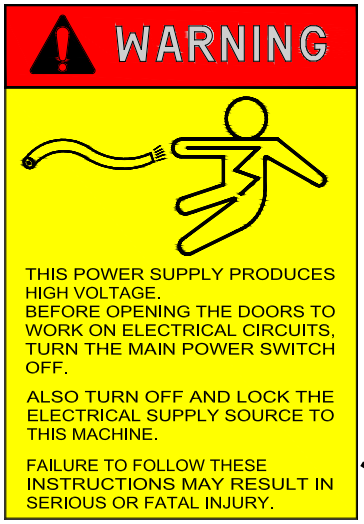
Electrical Enclosure Disconnect Switch

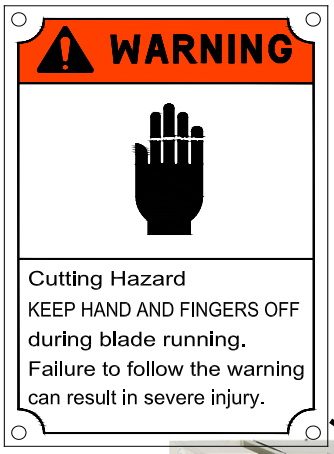
⚠ WARNING: Before opening the door to work on electrical circuits, turn the main disconnect switch "OFF". Also turn off and Lock Out the electrical supply source to this machine. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN FATAL OR SERIOUS INJURY.

The main disconnect switch (**P**) turns power on to the machine when in the **"ON"** position. If the door handle is turned while the switch is **"ON"**, a safety catch will prevent the door from opening.



Hazard Signs





TECHNICAL SPECIFICATIONS

Maximum Shear Length	80” (2032mm)
Maximum Material Thickness	1/4" (6.35mm) mild steel* 7 ga. (4.55mm) stainless steel**
Strokes/Minute	16 – 24
Front Gate Length	39.37” (1000mm)
Back Gate Length	23.62” (600mm)
Blade Angle	1/2° - 2°
Blade Clearance	Manual Adjustment Lever
Motor	15Hp (11.2Kw) 220V / 3Ph / 60Hz / 46A
Power Requirements	220V / 3Ph / 60Hz
Hydraulic Oil Capacity	28 gal. (106L)
Shipping Dimensions (L x W x H)	130” x 48” x 65” (3302 x 1219 x 1651mm)
Shipping Weight	7260 lbs. (3300 kg)
Based on a material tensile strength of *64000 PSI – mild steel **100000 PSI – stainless steel	

Machine Features

- Heavy Duty Electro-Welded Frame
- High Carbon, High Chromium Blades with Multiple Cutting Edges
- Hold Downs with Rubber Pads
- Industrial Grade Hydraulics
- 3 Axis Bearing System for Top Carriage
- Selector Switch for Single, Inch, or Auto Mode Operation
- Full Length Finger Guard
- 4’ Fluorescent Bulb for Shadow Line Lighting
- Pedestal with Foot Operated Control and E-Stop Switch
- Cycle Count Meter with Reset
- Manual Set Timer for Cut Length

TECHNICAL SUPPORT

Our technical support department can be reached at 920.684.4990, and asking for the support desk for purchased machines. Tech Support handles questions on machine setup, schematics, warranty issues, and individual parts needs: (other than die sets and blades).

For specific application needs or future machine purchases contact the Sales Department at: sales@baileighindustrial.com, Phone: 920.684.4990, or Fax: 920.684.3944.

***Note**: The photos and illustrations used in this manual are representative only and may not depict the actual color, labeling or accessories and may be intended to illustrate technique only.*

***Note:** The specifications and dimensions presented here are subject to change without prior notice due to improvements of our products.*

UNPACKING AND CHECKING CONTENTS

Your Baileigh machine is shipped complete. Separate all parts from the packing material and check each item carefully. Make certain all items are accounted for before discarding any packing material.

WARNING: SUFFOCATION HAZARD! Immediately discard any plastic bags and packing materials to eliminate choking and suffocation hazards to children and animals.
If any parts are missing, DO NOT place the machine into service until the missing parts are obtained and installed correctly.

Cleaning

WARNING: DO NOT USE gasoline or other petroleum products to clean the machine. They have low flash points and can explode or cause fire.

CAUTION: When using cleaning solvents work in a well-ventilated area. Many cleaning solvents are toxic if inhaled.

Your machine may be shipped with a rustproof waxy coating and/or grease on the exposed unpainted metal surfaces. Fully and completely remove this protective coating using a degreaser or solvent cleaner. Moving items will need to be moved along their travel path to allow for cleaning the entire surface. For a more thorough cleaning, some parts will occasionally have to be removed. **DO NOT USE** acetone or brake cleaner as they may damage painted surfaces.
Follow manufacturer's label instructions when using any type of cleaning product. After cleaning, wipe unpainted metal surfaces with a light coating of quality oil or grease for protection.

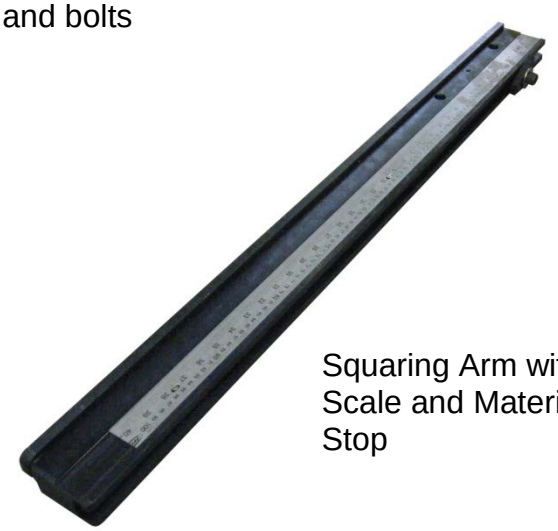
Important: *This waxy coating is **NOT** a lubricant and will cause the machine to stick and lose performance as the coating continues to dry.*

Contents of Tool Box:

Lever Type Grease Gun	1 pc
300mm Adjustable Wrench	1 pc
6 x 100mm Phillips Screwdriver	1 pc
Touchup Paint	3 cans
10 pc Hex Wrenches (1.5 - 2.0 - 2.5 - 3 - 4 - 5 - 5.5 - 6 - 8 -10mm)	1 set
Round Leveling Pads	4 pc

Manual Back Gauge

Back Gauge Washers and bolts



Squaring Arm with Scale and Material Stop

Pedestal with Foot Pedal and Emergency Stop Switch

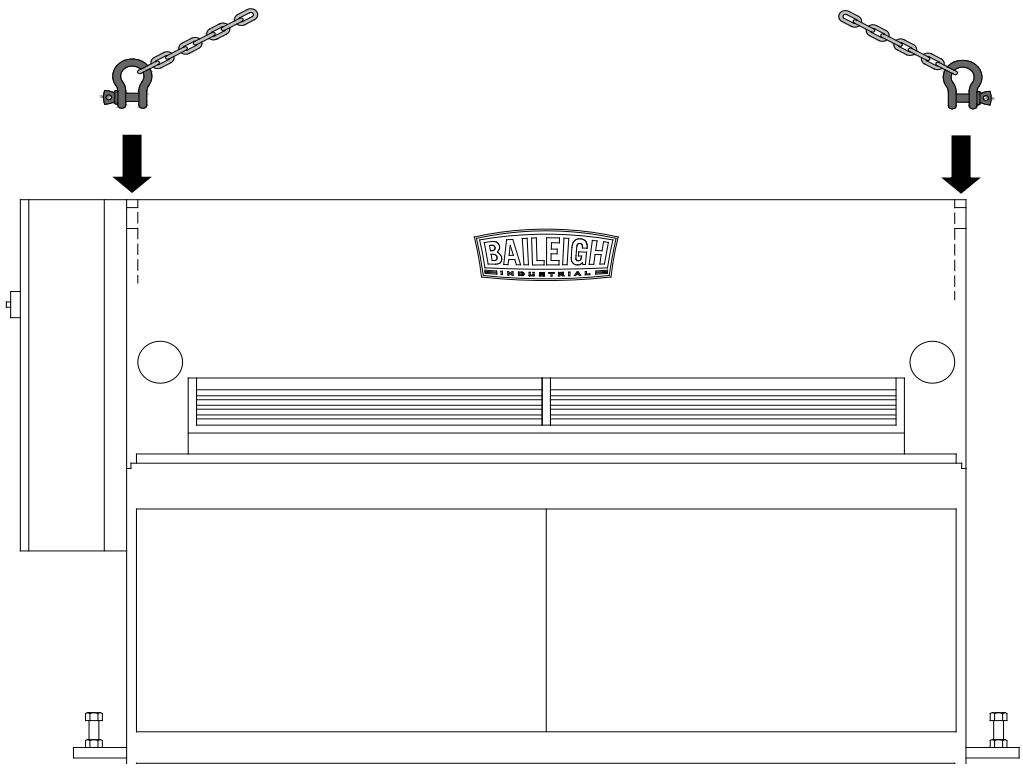
Front Support Arm with Material Stop

TRANSPORTING AND LIFTING

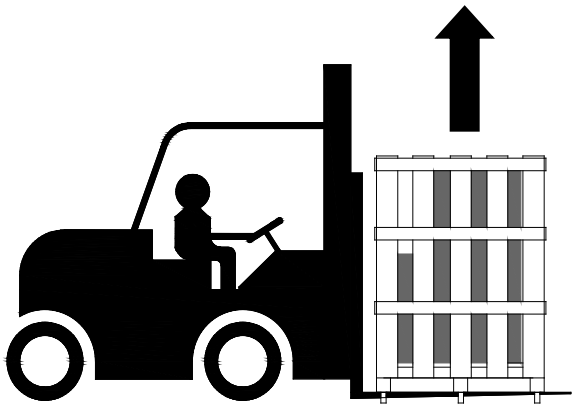
⚠ CAUTION: Lifting and carrying operations should be carried out by skilled workers, such as a truck operator, crane operator, etc. If a crane is used to lift the machine, attach the lifting chain carefully, making sure the machine is well balanced. Choose a location that will keep the machine free from vibration and dust from other machinery. Keep in mind that having a large clearance area around the machine is important for safe and efficient working conditions.

Follow these guidelines when lifting:

- Always lift and carry the machine with the lifting holes provided at the top of the machine.
- Use lift equipment such as straps, chains, capable of lifting 1.5 to 2 times the weight of the machine.
- Take proper precautions for handling and lifting.
- Check if the load is properly balanced by lifting it an inch or two.
- Lift the machine, avoiding sudden accelerations or quick changes of direction.
- Locate the machine where it is to be installed, and lower slowly until it touches the floor.



- The lift truck must be able to lift at least 1.5 – 2 times the machines gross weight.
- Make sure the machine is balanced. While transporting, avoid rough or jerky motion, and maintain a safe clearance zone around the transport area.
- Use a fork lift with sufficient lifting capacity and forks that are long enough to reach the complete width of the machine.
- Remove the securing bolts that attach the machine to the pallet.



- Approaching the machine from the side, lift the machine on the frame taking care that there are no cables or pipes in the area of the forks.
- Move the machine to the required position and lower gently to the floor.
- Level the machine so that all the supporting feet are taking the weight of the machine and no rocking is taking place.

INSTALLATION

IMPORTANT:

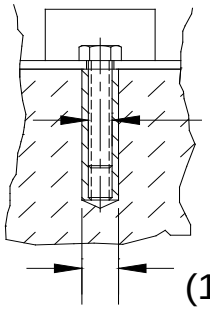
Consider the following when looking for a suitable location to place the machine:

- Overall weight of the machine.
- Weight of material being processed.
- Sizes of material to be processed through the machine.
- Space needed for auxiliary stands, work tables, or other machinery.
- Clearance from walls and other obstacles.
- Maintain an adequate working area around the machine for safety.
- Have the work area well illuminated with proper lighting.
- Keep the floor free of oil and make sure it is not slippery.
- Remove scrap and waste materials regularly, and make sure the work area is free from obstructing objects.
- If long lengths of material are to be fed into the machine, make sure that they will not extend into any aisles.

- **LEVELING:** The machine should be sited on a level, concrete floor. Provisions for securing it should be in position prior to placing the machine. The accuracy of any machine depends on the precise placement of it to the mounting surface.
- **FLOOR:** This tool distributes a large amount of weight over a small area. Make certain that the floor is capable of supporting the weight of the machine, work stock, and the operator. The floor should also be a level surface. If the unit wobbles or rocks once in place, be sure to eliminate by using shims.
- **WORKING CLEARANCES:** Take into consideration the size of the material to be processed. Make sure that you allow enough space for you to operate the machine freely.
- **POWER SUPPLY PLACEMENT:** The power supply should be located close enough to the machine so that the power cord is not in an area where it would cause a tripping hazard. Be sure to observe all electrical codes if installing new circuits and/or outlets.

Anchoring the Machine

- Once positioned, anchor the machine to the floor, as shown in the diagram. Use bolts and expansion plugs or sunken tie rods that connect through and are sized for the holes in the base of the stand.
- This machine requires a solid floor such as concrete at a minimum of 4” (102mm) thick. 6” (153mm) minimum is preferred.

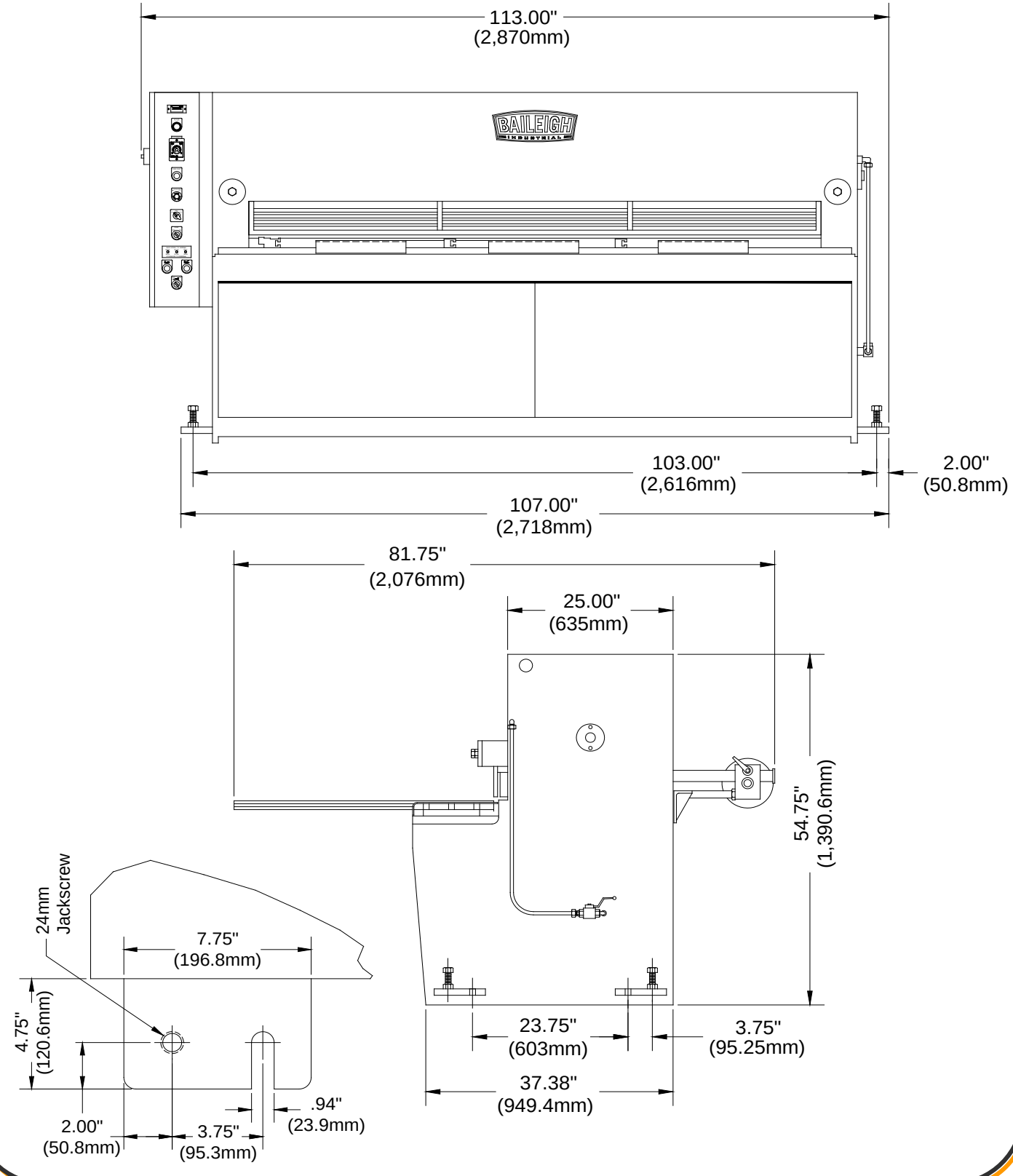


Tank Filling

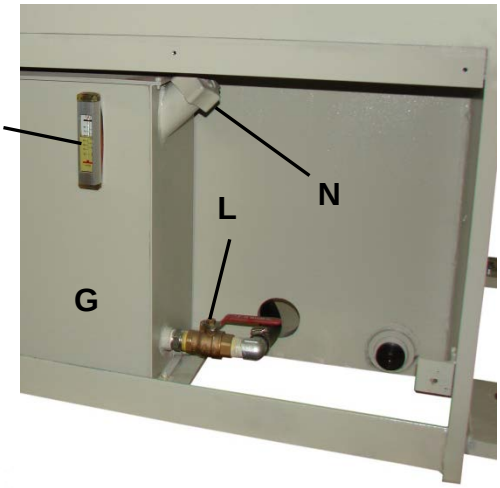
The hydraulic oil is the primary medium for transmitting pressure and also must lubricate the running parts of the pump.

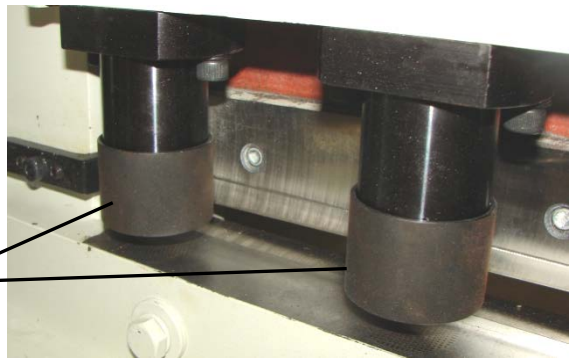
After installation of the machine and before machine startup, bring the oil level up to 90% of capacity. Use hydraulic oil #46 or #68 SHELL BRAND or an equivalent with similar specifications.
Verify that any cylinder rams are is in the retracted position to prevent overfilling of the tank. Recheck the oil level after the first few hours of operation and again after the first full week of operation.
A shortage of hydraulic oil can cause hydraulic system breakdown and damage to major mechanical parts due to overheating.

OVERALL DIMENSIONS

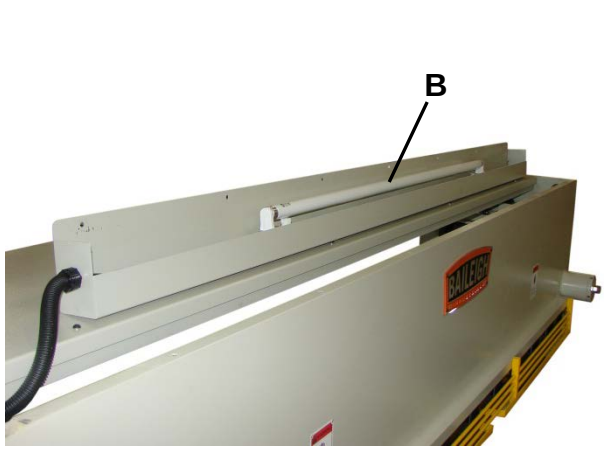


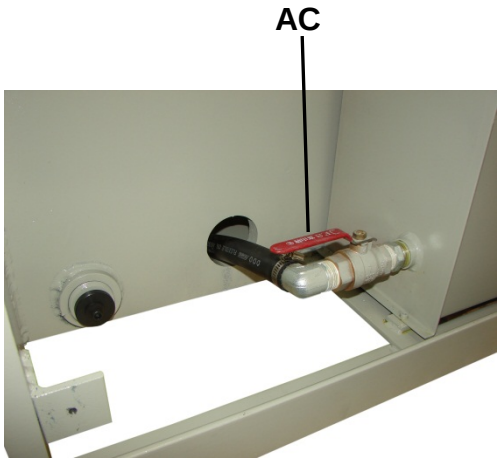
GETTING TO KNOW YOUR MACHINE



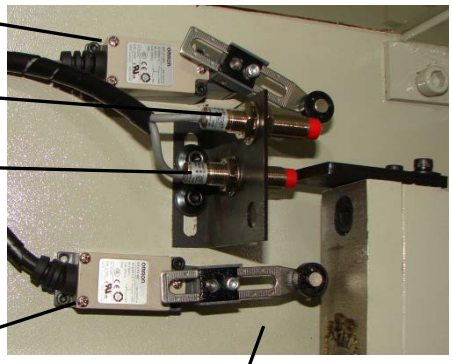


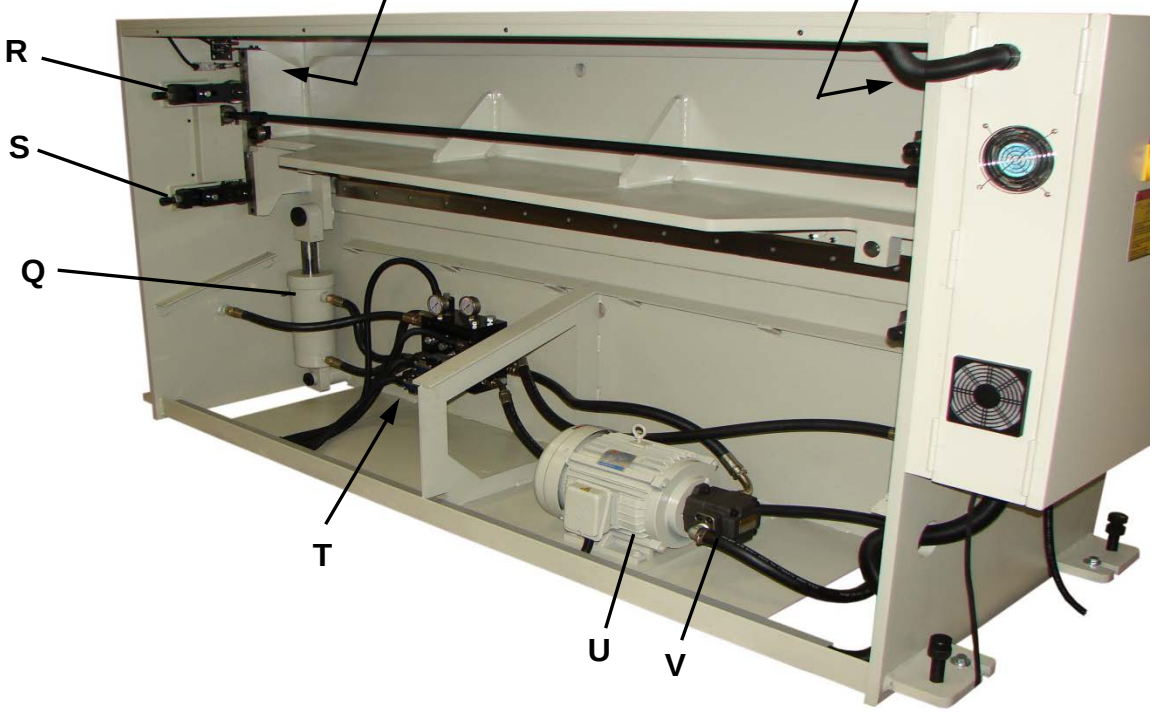
***Note**: Shown with guard removed for identification purposes only!*





Note: *Lamp fixture shown removed from machine and flipped over.*





***Note**: Shown with material drop-off shields and back gauge removed. Your machine may appear slightly different from the above photos.*

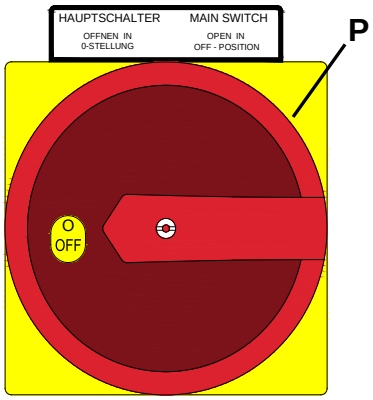
Item	Description	Function
A	Blade Gap Adjusting Handle	Adjusts gap according to material thickness
B	Fluorescent Light	Green light projects shadow line on material
C	Bearing Block (Front)	Consult Factory Before Adjusting
D	Material Support Arm	Supports larger sheets of material
E	Table with Ball Transfer	Allows for easy movement of material
F	Hydraulic Hold Down Cylinders	Grip the material before shearing
G	Oil Tank	Reservoir for hydraulic fluid
H	Squaring Arm	Keeps material perpendicular to the blade
I	Electrical Enclosure	Houses the electrical components
J	Footswitch Pedestal	Operator can relocate as needed
K	Hand and Finger Guard	Guards hands from blades and hold downs
L	Hydraulic Oil Shut-off Valve	Controls oil flow to manifold
M	Oil Site Gauge	Shows level of oil in tank
N	Hydraulic Oil Fill Cover	Remove cover to fill tank or access strainer
O	Emergency Stop Button	Press to stop all machine functions
P	Disconnect Switch	Controls main power to the shear
Q	Main Shear Cylinders	Together they raise and lower the upper blade
R	Bearing Block (Upper)	Consult Factory Before Adjusting
S	Bearing Block (Lower)	Consult Factory Before Adjusting
T	Manifold Block	Distributes hydraulic oil to selected component
U	Motor 15hp (11.2kw)	Powers the hydraulic pump
V	Hydraulic Pump	Pressurizes hydraulic oil for cylinders

Item	Description	Function
W	Limit Switch	Rake angle upper limit
X	Proximity Switch	Rake angle center position
Y	Proximity Switch	Rake angle lower limit
Z	Limit Switch	Shear blade at down position
AA	Limit Switch	Shear blade at up position
AB	Hold Down Valve	Controls hydraulic oil to all hold downs
AC	Hydraulic Oil Shut-off Valve	Controls oil flow to pump inlet

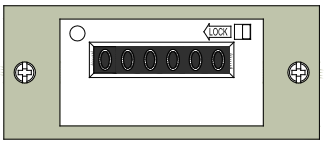
Electrical Enclosure Switch and Button Functions

WARNING: Before opening the door to work on electrical circuits, turn the main disconnect switch "OFF". Also turn off and Lock Out the electrical supply source to this machine. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN FATAL OR SERIOUS INJURY.

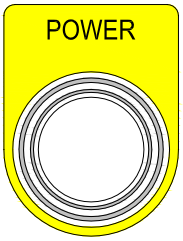
The main disconnect switch (**P**) turns power on to the machine when in the **"ON"** position. If the door handle is turned while the switch is **"ON"**, a safety catch will prevent the door from opening.



WORKPIECE COUNTER – The counter registers each completed cycle that the upper blade makes. The slide switch at the upper right of the counter, when in the locked position, keeps the counter from accidentally being reset. To reset the counter, press the button in the upper left corner.

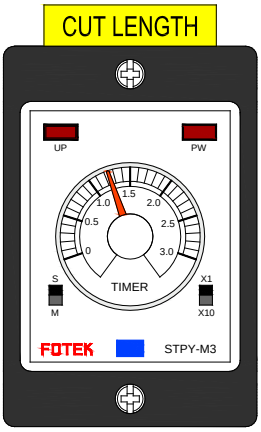


POWER INDICATOR LIGHT – When the disconnect switch is turned on the white light will be lit. Make sure machine is plugged into correct power source and that both E-Stop buttons have been reset.

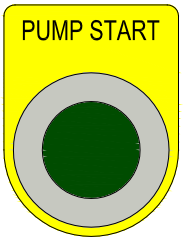


CUT LENGTH ADJUSTABLE TIMER – The cut length timer determines how soon the top blade starts returning to the up position. For a narrow piece of material set the number on the timer low. (0 to.5) For a wider piece increase the number on the timer.

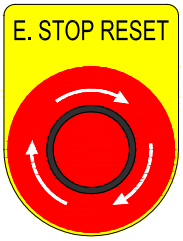
***Note**: <u>As the rake angle is increased, it will become necessary to increase the number on the timer as well.</u>*



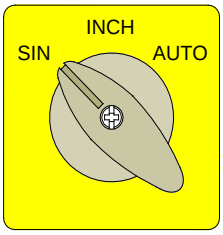
PUMP START PUSHBUTTON – When depressed the green light on the **"PUMP START"** button will be lit and the pump motor will start. Press the footswitch pedal and the top blade should go down and return to the up position.



E-STOP BUTTON – When pressed, the red E-STOP button will be lit and all machine functions will stop. Turn button clockwise (**cw**) to reset.

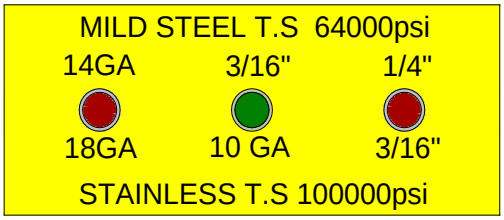


CUTTING MODE SELECTOR SWITCH – This is a 3-position selector switch which allows you to pick one of three shearing modes. Pressing the foot pedal in the **SIN** (singular) mode will complete one full shear cycle. In **INCH** mode the top blade can be stepped down gradually. When it reaches the bottom of the stroke it will automatically raise up. In **AUTO** mode the upper blade will cycle continuously.

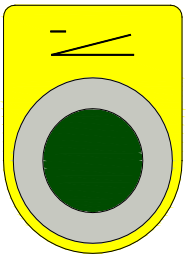


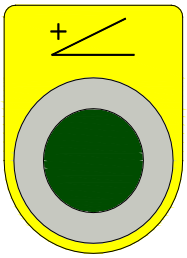
LAMP ON-OFF SWITCH – This selector switch turns the green fluorescent lamp on or off. The main disconnect must be on.

RAKE ANGLE POSITION INDICATOR LIGHTS – As the rake angle changes, these lights indicate what gauge material the rake angle is set for.

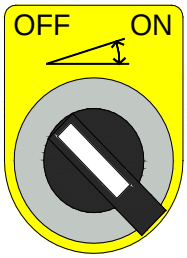


RAKE ANGLE DECREASE AND INCREASE PUSH BUTTONS – The red pushbutton when depressed multiple times decreases the rake angle. Pushing the green button multiple times increases the rake angle.





RAKE ANGLE ADJUSTMENT ON - OFF SWITCH – This selector switch must be "**ON"** in order for the rake increase / decrease pushbuttons to work.



Blade Gap Adjusting Handle

The process of shearing can produce a shear edge burr. This burr can be minimized by adjusting the blade gap to the thickness of material being sheared and by keeping the blades sharp. The gap distance (fig.12) is changed by positioning the handle up or down as in (fig. 11). Pull out the spring loaded pin and rotate 90°. Move the handle over the size of the material you will be shearing and release the pin. The correct blade gap is now set. This gap must be held **parallel** along the full length of the blade. This is accomplished by precisely rotating the two lower eccentric bearings the same distance on each end of the machine. Note the chain drives on both ends and the shaft connecting them together (fig. 13).

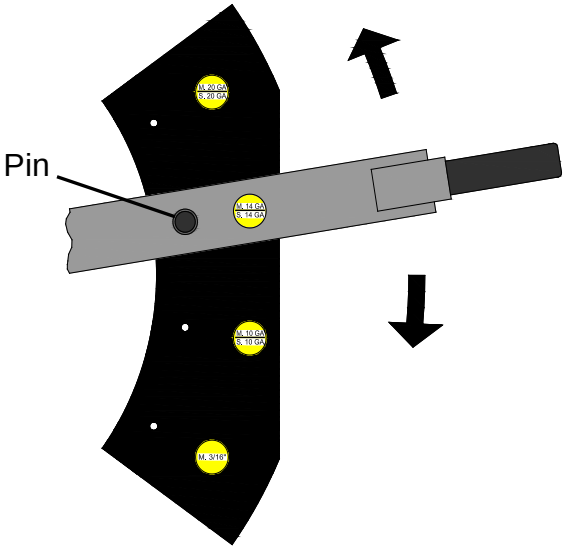


figure 11

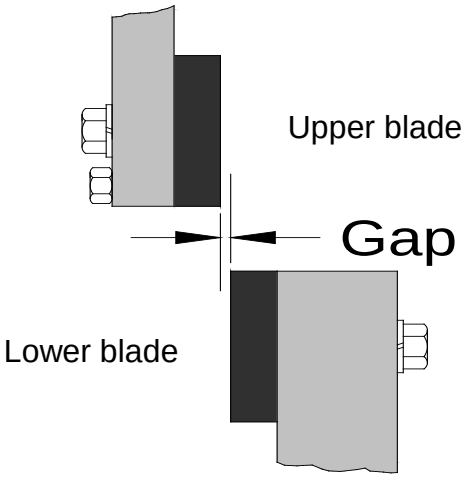


figure 12

Shown with chain Guard removed

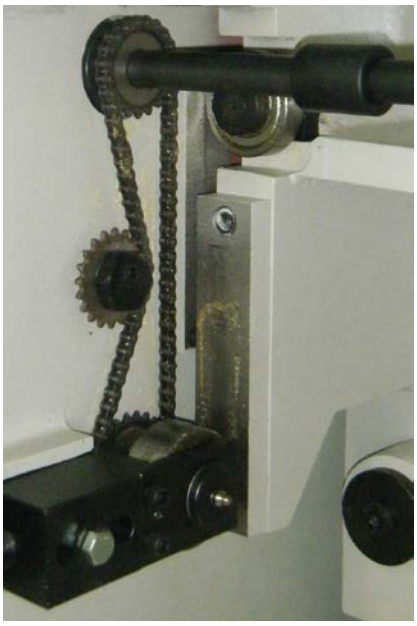


figure 13

Manual Back Gauge

The back gauge is used to adjust the setting of the back gauge dimension to control the size of the pieces dropping behind the blades.

The manual back gauge assembly will need to be attached to the back end of the shear. There are two blocks with holes in them for this purpose. Move the back gauge into position using a suitable lifting device. Slide the shafts into the blocks until they bottom out. If necessary, gently tap them in from side to side. Once in place, secure with the bolts and washers shown in (fig. 14). To use the back gauge, loosen the two adjustable handles which are attached to the guide blocks. By turning the hand wheel you will be able to move the stop angle into position. The scale and indicator allow you to keep track of that position. Tighten the handles.

CAUTION: When handling large piece parts, you may require assistance in handling the piece as it exits the blades. Failure to adequately support the piece part may result in the piece falling and causing bodily injury.

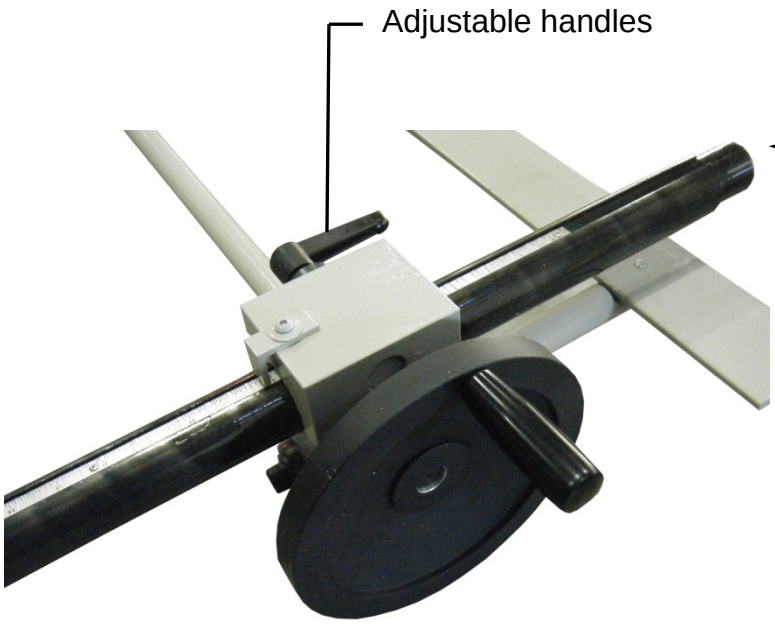


figure 15

figure 14

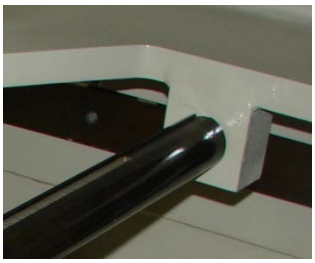


figure 16

Squaring Arm

The squaring arm is used to square the material to the shear blade. It can also be used for front gauging by utilizing the graduated scale or as a material support. The adjustable rotating dog pivots out of the way when material passes over it. The dog pops up when the material passes allowing it to be used as a stop at a predetermined dimension.

figure 17

To mount the squaring arm, remove the two bolts, (**AD**). Back off both bolts (**AE**) a bit. Set the arm onto the 6mm pin and replace bolts (**AD**). Note: **DO NOT** tighten at this time. Using bolts (**AE**), square the arm to the blade and then tighten bolts (**AD**).

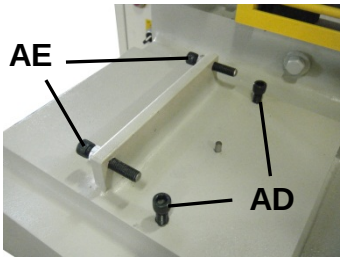


figure 18

Material Support Arm

The support arm is used to support material at the front of the machine. The arm has an adjustable rotating dog that pivots out of the way when material passes over it and pops up after the material has passed.

figure 19

To mount a support arm, remove the two bolts (**AF**). Put the arm in place, replace the bolts, and tighten them.

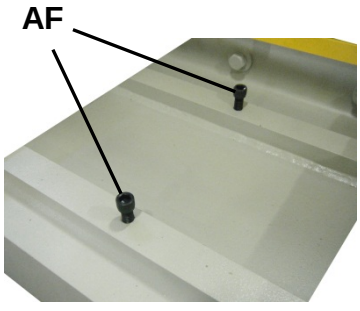


figure 20

Connecting cable to pedestal

Orientate the fittings and push them together. Turn the threaded ring clockwise (**cw**) until snug, ensuring a solid electrical connection.

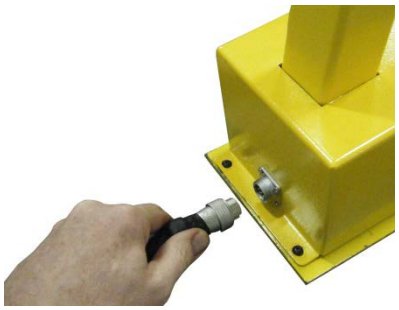


figure 21

Light Beam / Shearing Line

A wire is stretched down the full length of the top blade. See (fig. 22). The operator first scribes the material where it is to be sheared. The shadow line that is cast on the material allows the operator to line up the scribed line with the edge of the blade providing for a more accurate cut.

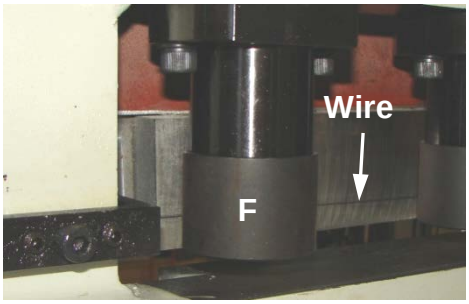


figure 22

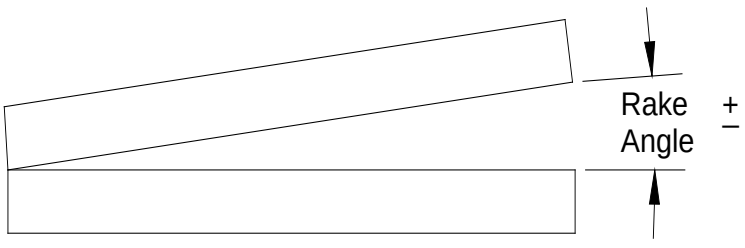
***Note**: Shown with guard removed for identification purposes only!*

Material Hold down

There are 8 hold down cylinders (F) along the length of the blades. For operator safety the yellow guard must be in place at all times.

Rake Angle

The Baileigh SH-8003HD shear has a variable rake angle that can be adjusted to suit the width of the piece part that is being cut. Rake angle is the angle of the moving blade as it passes the fixed blade and is a factor in determining a quality cut. In a majority of the cases, the lower the rake angle the better the quality of the cut. Bow, twist, and camber are typically seen on shorter pieces.



ELECTRICAL

WARNING: Baileigh Industrial is not responsible for any damage caused by wiring up to an alternative 3-phase power source other than direct 3-phase. If you are using an alternate power source, consult a certified electrician or contact Baileigh Industrial prior to energizing the machine.

CAUTION: HAVE ELECTRICAL UTILITIES CONNECTED TO MACHINE BY A CERTIFIED ELECTRICIAN!
Check if the available power supply is the same as listed on the machine nameplate.

WARNING: Make sure the grounding wire (green) is properly connected to avoid electric shock. DO NOT switch the position of the green grounding wire if any electrical plug wires are switched during hookup.

Power Specifications

Your machine is wired for 220 volts, 60hz alternating current. Before connecting the machine to the power source, make sure the power source is OFF.
Before switching on the power, you must check the voltage and frequency of the power to see if they meet with the requirement, the allowed range for the voltage is ±5%, and for the frequency is ±1%.

Considerations

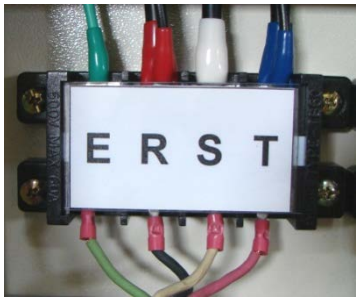
- Observe local electrical codes when connecting the machine.
- The circuit should be protected with a time delay fuse or circuit breaker with a amperage rating slightly higher than the full load current of machine.
- A separate electrical circuit should be used for your tools. Before connecting the motor to the power line, make sure the switch is in the “OFF” position and be sure that the electric current is of the same characteristics as indicated on the tool.
- All line connections should make good contact. Running on low voltage will damage the motor.
- In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

⚠ WARNING: In all cases, make certain the receptacle in question is properly grounded. If you are not sure, have a qualified electrician check the receptacle.

- Improper connection of the equipment-grounding conductor can result in risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.
- Check with a qualified electrician or service personnel if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.
- Repair or replace damaged or worn cord immediately.

Power cord connection:

1. Unlock and open the electrical enclosure door.
2. Insert a cord / cable fitting into an open hole in the electrical enclosure to grip the power cord (supplied by customer).
3. Route the power cord through the newly installed fitting and into the electrical enclosure.
    a. Route the power cord so that it will NOT become entangled in the machine in any way.
    b. Route the cord to the power supply is a way that does NOT create a trip hazard.
4. Connect the three power wires to terminals **R, S,** & **T.** Connect the ground wire (typically green) to the "**E**" (Safety Ground) terminal.
5. Check for correct rotation of motor and pump.
6. Check that the power cord has not been damaged during installation.



Check for correct rotation of the motor

1. Close the electrical enclosure door.
2. With power connected and the main disconnect turned ON, the power light on the control panel will be lit.
3. Verify that both "E"-STOP buttons are in the released / up position.
4. With power connected and disconnect switch turned "**ON**", the power light will be lit.
5. Turn the cutting mode selector switch to (**SIN**).

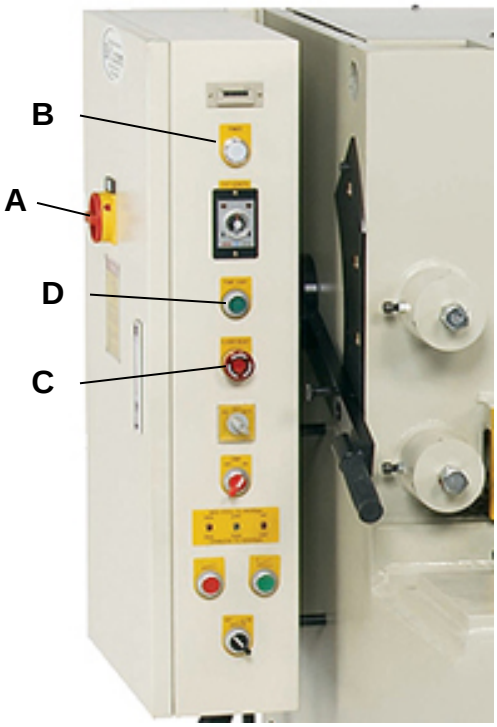
6. Press the green pump start button and briefly step on the footswitch. The shear blade should come down. If not, disconnect power to the machine, and switch the **R** & **T** wires. **DO NOT** move the ground wire **E**. **Improper rotation can severely damage the hydraulic pump.**

SHEAR OPERATING PROCEDURE

CAUTION: Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges.
When handling large heavy material make sure they are properly supported.

Start Machine Power

1. Turn the main disconnect clockwise to the ON position (**A**).
2. The POWER lamp (**B**) will be illuminated.



Start Hydraulic Pump Motor

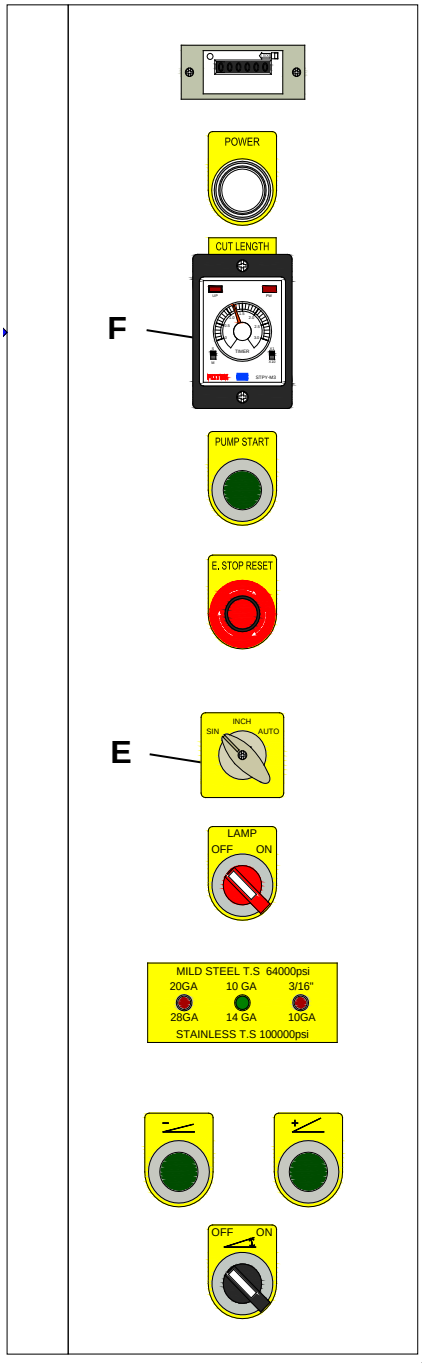
1. Verify that the inlet and outlet valves on the hydraulic tank are open.
2. Clear the shear table.
3. Turn on the main power to start the machine.
4. Re-set the emergency stop button (**C**).
5. Press the PUMP START button/lamp (**D**). The internal lamp will illuminate.

Single Mode

CAUTION: Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges.
Keep hands and fingers clear of the shearing blade and clamping cylinders.
When handling large heavy sheets make sure they are properly supported.

When performing a cut in the **SIN** mode, pressing the foot pedal will complete one full shear cycle.

1. Place the 3-position selector switch (**E**) in the **SIN** (singular) position.
2. Clear the shear table.
3. Turn on the main power to start the machine.
4. Re-set the emergency stop button, and start the hydraulic pump.
5. The upper blade will automatically rise to the upper limit.
6. Set the CUT LENGTH timer (**F**).
7. Load and position the material to be cut.
8. Check that the cutting area has only the material to be cut and step down on the footswitch. The upper blade will lower to cut the material and automatically return the upper limit position. The blade will stop until the foot pedal is released and pressed again.
9. The COUNTER will accumulate the number of strokes automatically.

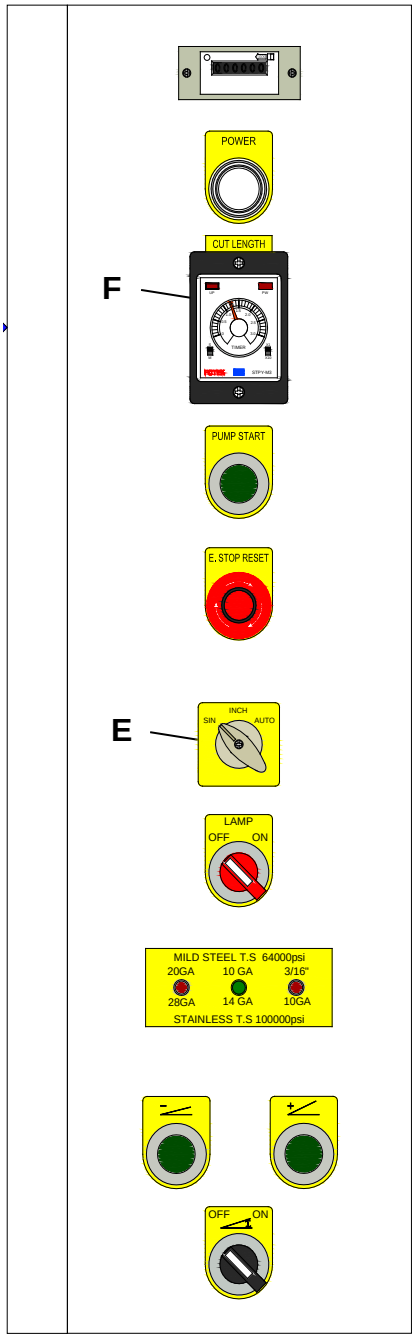


Auto Mode

CAUTION: Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges.
Keep hands and fingers clear of the shearing blade and clamping cylinders.
When handling large heavy sheets make sure they are properly supported.

When performing a cut in **AUTO** mode, pressing and holding the foot pedal will cycle the upper blade continuously as long as the foot pedal is depressed.

1. Place the 3-position selector switch (**E**) in the **AUTO** (automatic) position.
2. Clear the shear table.
3. Turn on the main power to start the machine.
4. Re-set the emergency stop button, and start the hydraulic pump.
5. The upper blade will automatically rise to the upper limit.
6. Set the CUT LENGTH timer (**F**).
7. Load and position the material to be cut.
8. Check that the cutting area has only the material to be cut and step down and hold the footswitch. The upper blade will lower to cut the material and automatically return the upper limit position and repeat the cycle until the foot pedal is released. The blade will return to the upper limit position and stop until the foot pedal is pressed again.
9. The COUNTER will accumulate the number of strokes automatically.



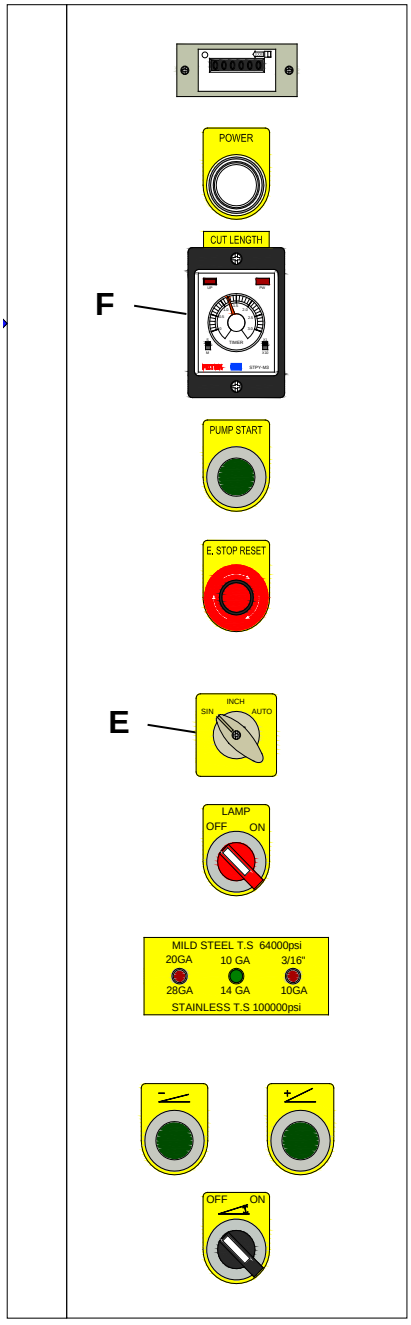
NOTE: *The interval between each cutting cycle can be set from 1 to 3 seconds with the timer in the electrical enclosure.*

Inch Mode

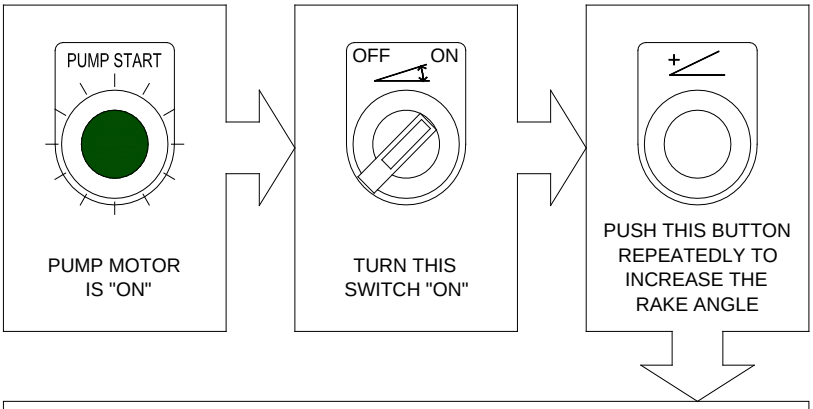
CAUTION: Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges.
Keep hands and fingers clear of the shearing blade and clamping cylinders.
When handling large heavy sheets make sure they are properly supported.

When in the **INCH** mode the upper blade can be stepped down gradually. When it reaches the bottom of the stroke it will automatically raise up. The Inch mode is useful for making blade adjustment such as blade gap.

1. Place the 3-position selector switch (**E**) in the **INCH** position.
2. Clear the shear table.
3. Turn on the main power to start the machine.
4. Re-set the emergency stop button, and start the hydraulic pump.
5. The upper blade will automatically rise to the upper limit.
6. Set the CUT LENGTH timer (**F**). In the Inch mode it may be beneficial to set the timer to a slower setting to allow the blade to be stopped at the desired position more easily.
7. Load and position the material to be cut.
8. Check that the cutting area has only the material to be cut and step down on the footswitch. The upper blade will lower to cut the material as long as the foot pedal is depressed. When the pedal is released during the down cycle the blade will stop at that position. When the blade has reached the lower cut limit it will automatically return the upper limit position and stop. The blade will remain at the upper limit position until the foot pedal is pressed again.
9. The COUNTER will accumulate the number of strokes automatically.

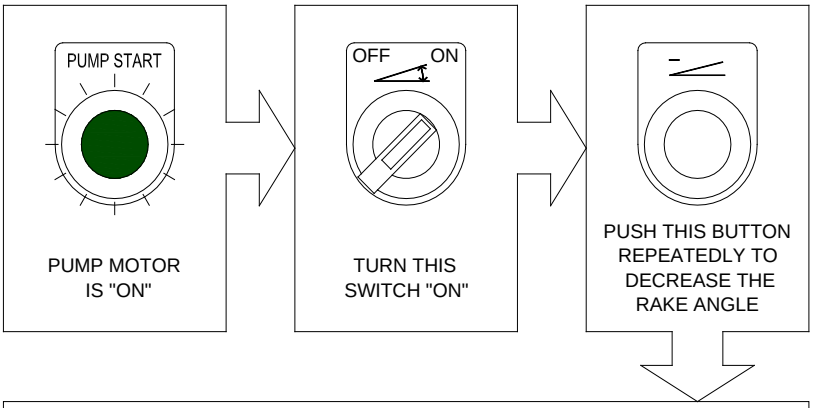


Rake Angle Adjustment (Increase)



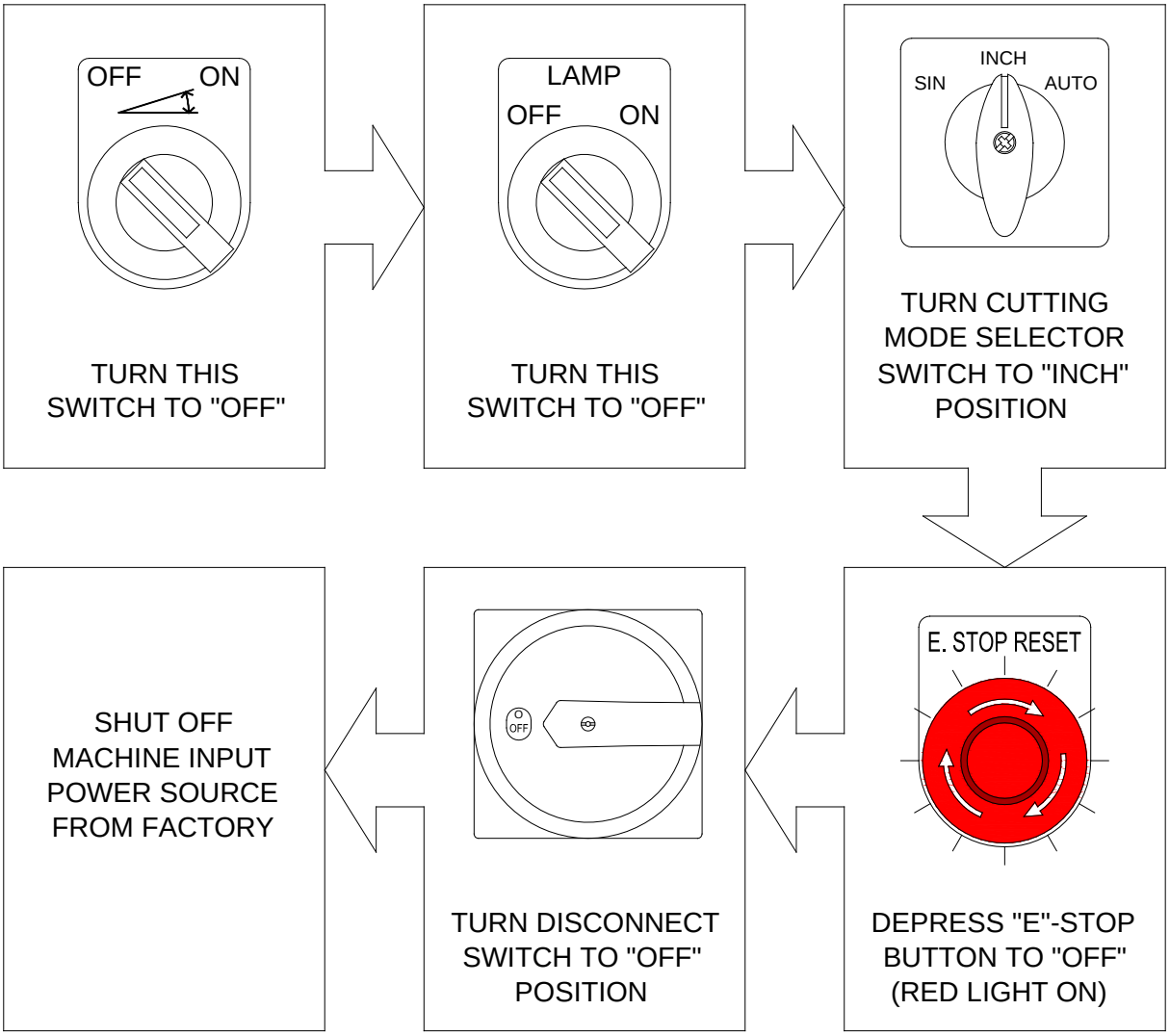
RAKE ANGLE INDICATOR LED WILL BE "ON" WHEN IT IS IN THAT POSITION. WHEN REACHING MAXIMUM ANGLE (1/4" MILD STEEL) NO FURTHER ADJUSTMENT IS POSSIBLE.

Rake Angle Adjustment (Decrease)



RAKE ANGLE INDICATOR LED WILL BE "ON" WHEN IT IS IN THAT POSITION. WHEN REACHING MINIMUM ANGLE (14GA MILD STEEL) NO FURTHER ADJUSTMENT IS POSSIBLE.

Turning Off Machine Power



NOTES

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