



OPERATOR'S MANUAL



HYDRAULIC SHEAR MODEL: SH-8010HD

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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, (e) 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 INCIDENTAL, 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 Majeure. 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. **DANGER** identifies a hazard or unsafe practice that will result in severe **Injury or Death.**

Safety signs with signal word **DANGER** or **WARNING** are typically near specific hazards.

General precautions are listed on **CAUTION** safety signs. **CAUTION** also calls attention to safety messages in this manual.



DANGER



WARNING

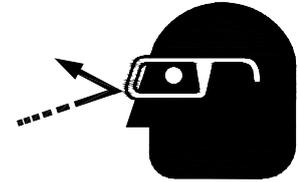


CAUTION



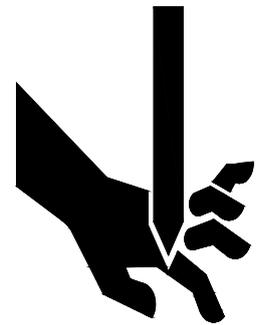
PROTECT EYES

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



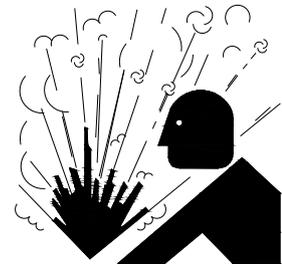
BEWARE OF SHEAR HAZARD

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.



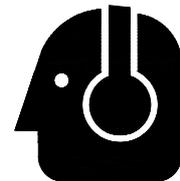
HYDRAULIC HOSE FAILURE

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.





SAFETY PRECAUTIONS



1. **Only trained and qualified personnel can operate this machine.**
2. **Make sure guards are in place and in proper working order before operating machinery.**
3. **Remove any adjusting tools.** Before operating the machine, make sure any adjusting tools have been removed.
4. **Keep work area clean.** Cluttered areas invite injuries.
5. **Overloading machine.** By overloading the machine you may cause injury from flying parts. **DO NOT** exceed the specified machine capacities.
6. **Machine usage. DO NOT** use the machine as a press or crushing tool.
7. **Dressing material edges.** After shearing sheet metal, 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 machines 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 appropriate. 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.



SAFETY PRECAUTIONS (cont.)



16. **Blade adjustments and maintenance.** Always keep blades sharp and properly adjusted for optimum performance.
17. **Keep visitors and children away.** Visitors and children must never be allowed in the work area. **DO NOT** let them handle machines, tools, or extension cords.
18. **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.
19. **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.
20. **DO NOT** touch live electrical components or parts.
21. Be sure all equipment is properly installed and grounded according to national, state, and local codes.
22. Keep all cords dry, free from grease and oil, and protected from sparks and hot metal.
23. Inspect power and control cables periodically. Replace if damaged or bare wires are exposed. **Bare wiring can kill!**
24. **DO NOT** bypass or defeat any safety interlock systems.

Emergency Stop Button



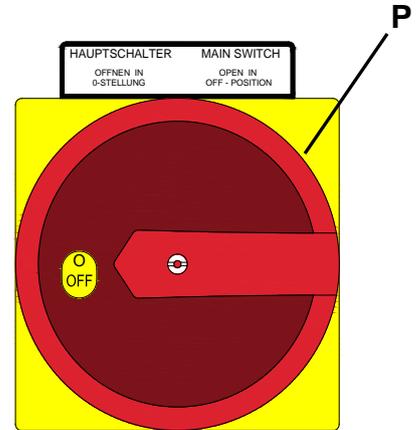
In the event of incorrect operation or dangerous conditions, the machine can be stopped immediately by pressing the **E-STOP** button. Twist the emergency stop button clockwise (cw) to reset. Note: Resetting the E-Stop will not start the machine.





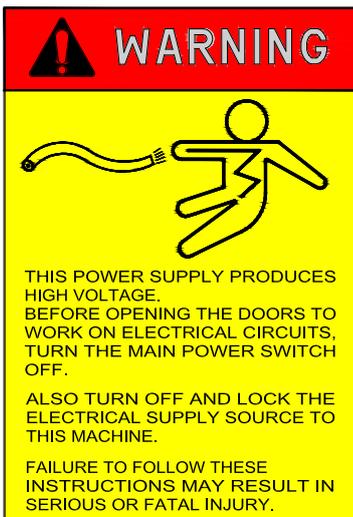
Electrical Enclosure Disconnect Switch

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.



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.

Hazard Signs





TECHNICAL SPECIFICATIONS

Maximum Shear Length	80" (2032mm)
Maximum Material Thickness	10 ga. (3.42mm) mild steel* 13 ga. (2.28mm) stainless steel**
Strokes/Minute	32 – 44
Front Gate Length	39.37" (1000mm)
Back Gate Length	23.62" (600mm)
Blade Angle	1/2° - 2°
Blade Clearance	Manual Adjustment Lever
Motor	7.5Hp (5.59Kw)
Power Requirements	220V / 3Ph / 60Hz
Hydraulic Oil Capacity	35 gal. (132.5L)
Shipping Dimensions (L x W x H)	119" x 48" x 65" (3023 x 1219 x 1651mm)
Shipping Weight	6600 lbs. (3000 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.

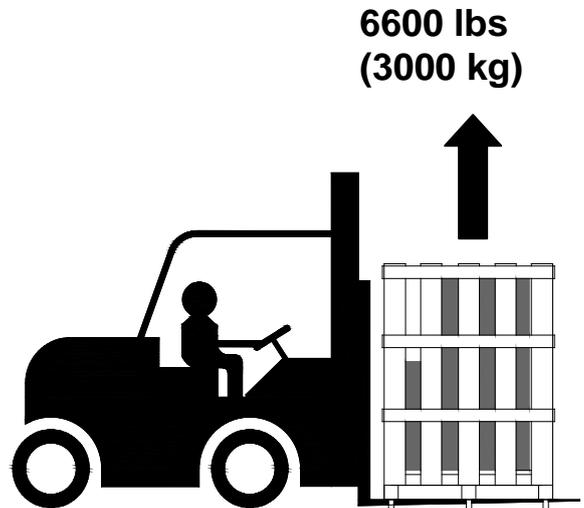


Note: The specifications and dimensions presented here are subject to change without prior notice due to improvements of our products.



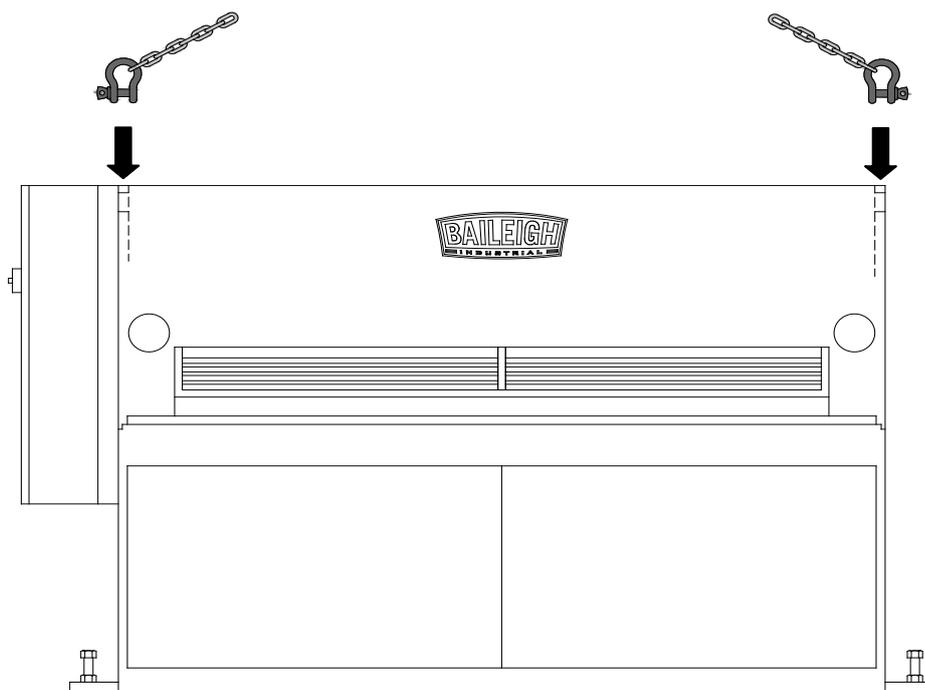
TRANSPORTING AND LIFTING

⚠ 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 brake 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 a steel chain capable of lifting 10,000 lbs. (4536 kg) min.
- 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.





UNPACKING AND CHECKING CONTENTS

Your Baileigh SH-8010HD Hydraulic Shear is shipped complete in one crate. 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: If any parts are missing, do not plug in the power cable, or turn the power switch on until the missing parts are obtained and installed correctly.

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

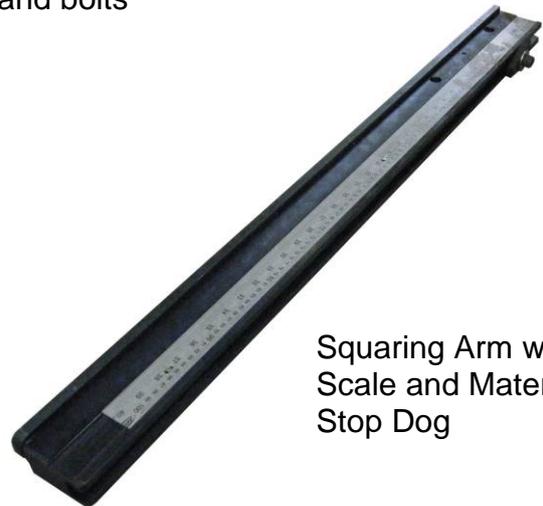




Manual Back Gauge



Back Gauge Washers and bolts



Squaring Arm with Scale and Material Stop Dog



Pedestal with Foot Pedal and Emergency Stop Switch

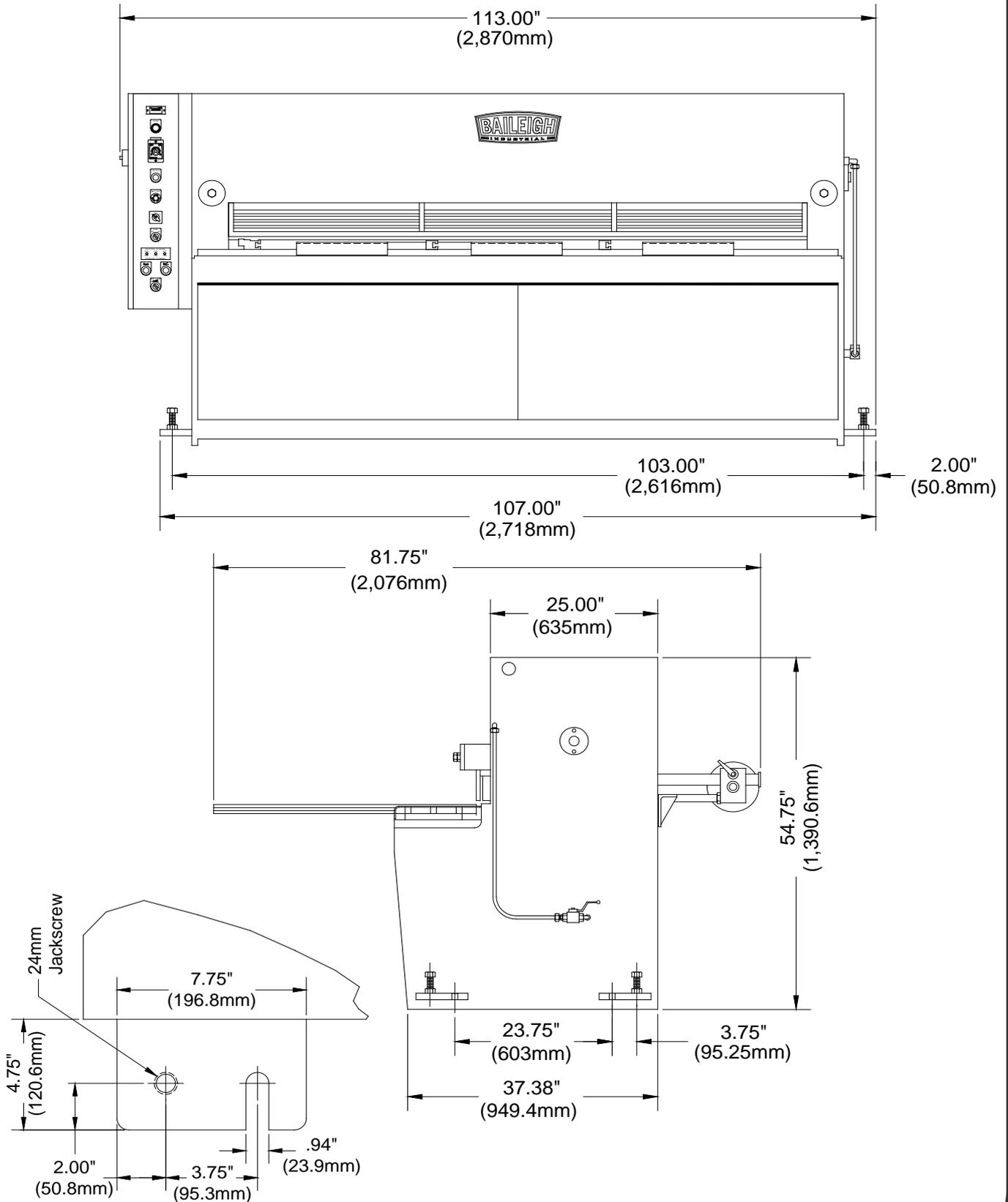


Front Supports with Material Stop Dog

figure 4



OVERALL DIMENSIONS





INSTALLATION

Levelling

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.

Level the table to within .003"/ft. (.25mm / meter) front to back and left to right.

IMPORTANT:

- Maintain an adequate working area around the machine for safety.
- Have the work area well illuminated with proper lighting.
- Remove scrap and waste materials regularly, and make sure the work area is free from obstructing objects.
- Keep the floor free of oil and make sure it is not slippery.
- If long lengths of material are to be fed into the machine, make sure that they will not extend into any aisles.

Cleaning

Your machine may be shipped with a rustproof waxy oil coating and grease on the exposed unpainted metal surfaces. To remove this protective coating, use a degreaser or solvent cleaner. 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.



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.





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

⚠ CAUTION: HAVE ELECTRICAL UTILITIES CONNECTED TO MACHINE BY A CERTIFIED ELECTRICIAN!

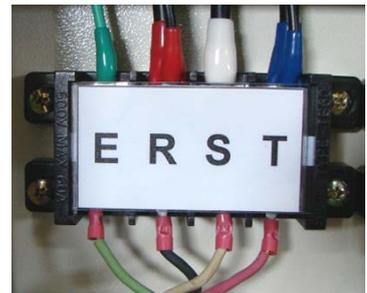
Check if the available power supply is the same as listed on the machine nameplate.

⚠ 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.

Connecting Power Supply

For three phase, connect the three power wires to terminals **R**, **S**, & **T**. Connect the ground wire (typically green) to the "**E**" (Safety Ground) terminal.

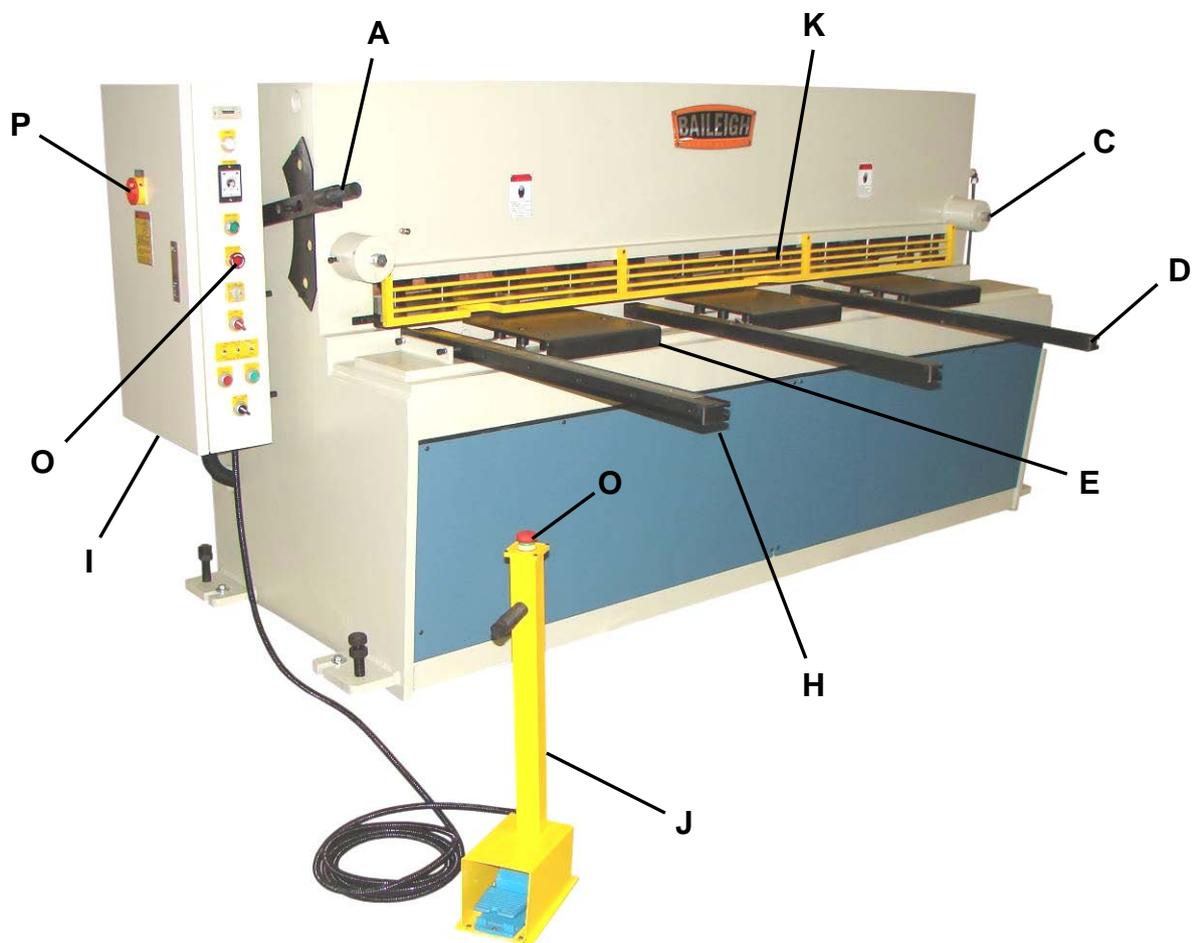
Check for correct rotation of motor and pump.

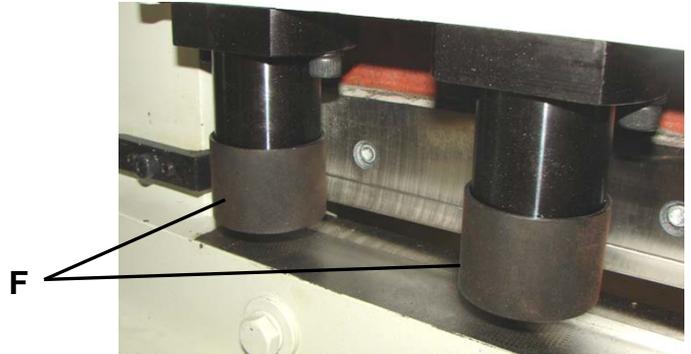
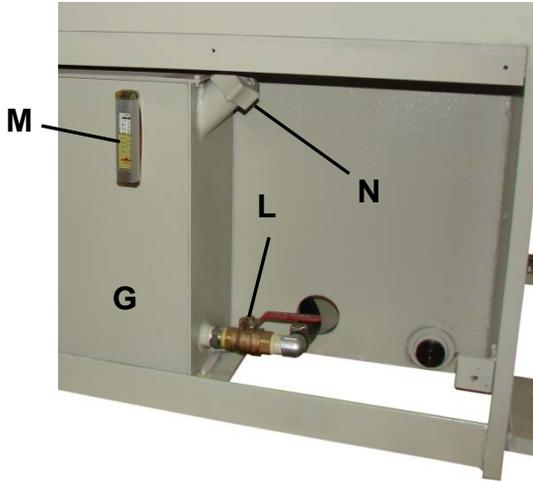


Reset both "E"-STOP buttons. With power connected and disconnect switch turned "**ON**", the power light will be lit. Turn the cutting mode selector switch to (**SIN**). Press the green pump start button and briefly step on the footswitch. The shear blade should come down. If not, disconnect power to the machine, and switch the **R** & **T** wires. **DO NOT** move the ground wire **E**. **Improper rotation can severely damage the hydraulic pump.**

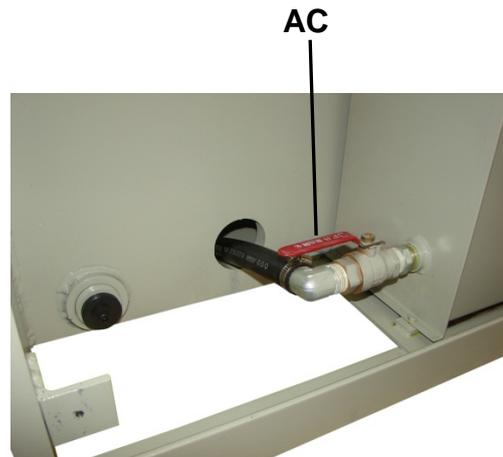
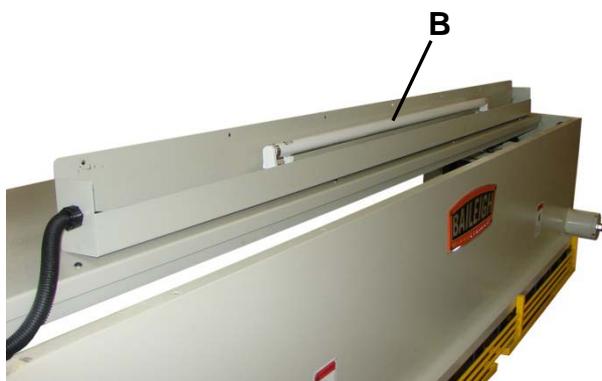


GETTING TO KNOW YOUR MACHINE

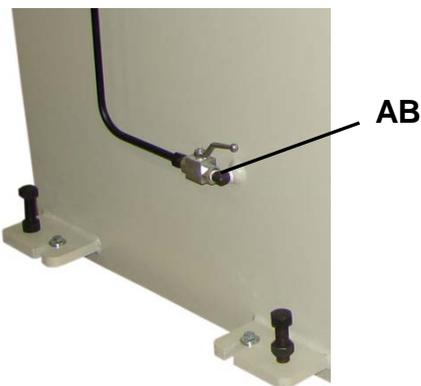
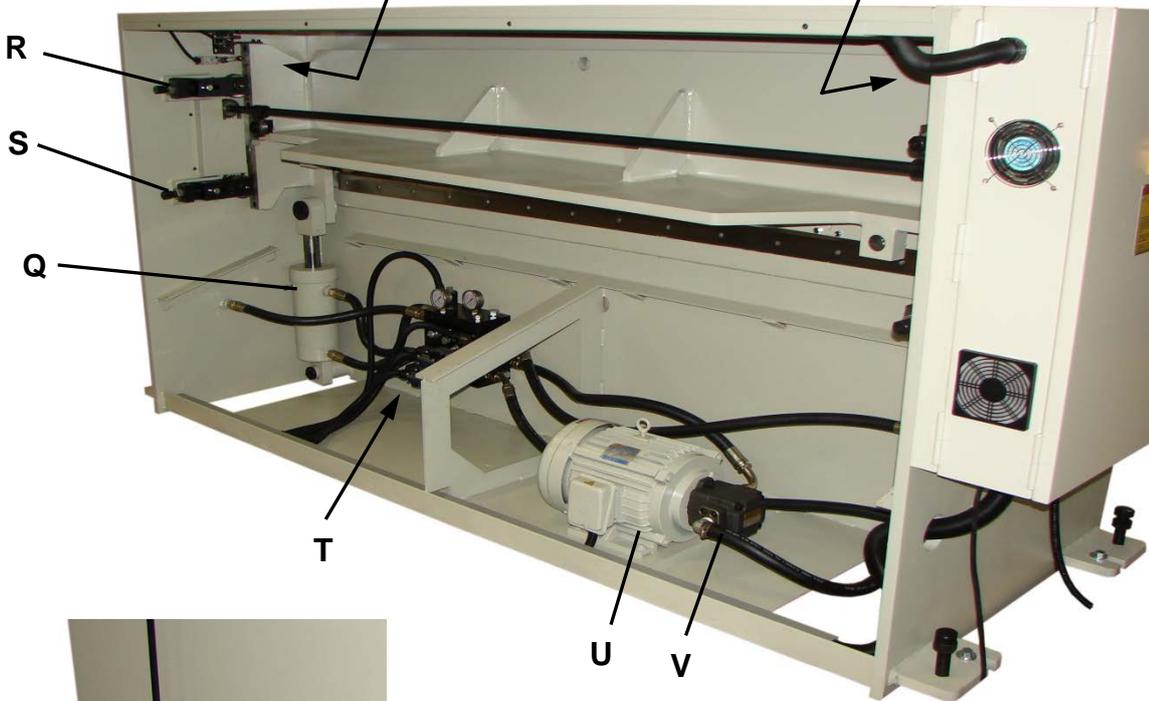
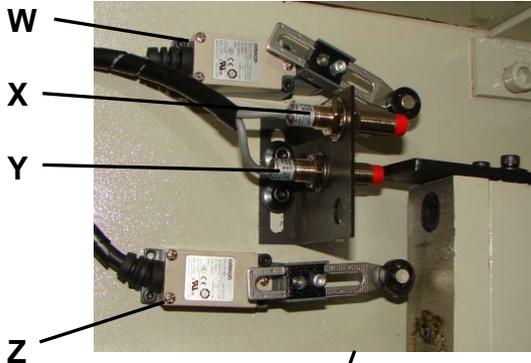




Note: Shown with guard removed. (For identification purposes only!)



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



Note: Shown with material drop-off shields and manual back gauge removed.



Note: Your machine may appear slightly different from the above photos.



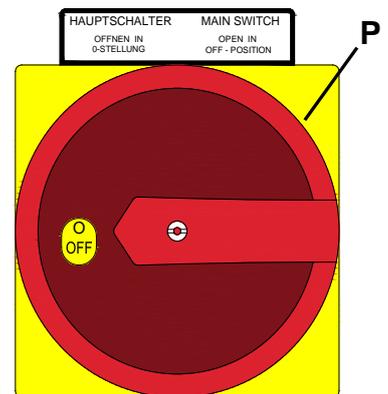
Item	Description	Function
A	Blade Gap Adjusting Handle	Adjusts gap according to material thickness
B	Fluorescent Light	Green light projects shadow line on material
C	Bearing Block (Front)	Consult Factory Before Adjusting
D	Material Support Arm	Supports larger sheets of material
E	Table with Ball Transfer	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 7.5hp (5.59kw)	Powers the hydraulic pump
V	Hydraulic Pump	Pressurizes hydraulic oil for cylinders
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

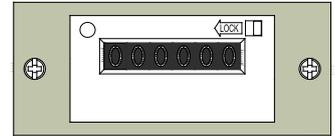
⚠ WARNING: Before opening the door to work on electrical circuits, turn the main disconnect switch “OFF”. Also turn off and Lock Out the electrical supply source to this machine. FAILURE TO FOLLOW THESE INSTRUCTIONS MAY RESULT IN FATAL OR SERIOUS INJURY.

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.

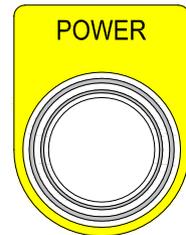




WORKPIECE COUNTER – The counter registers each completed cycle that the upper blade makes. The slide switch at the upper right of the counter, when in the locked position, keeps the counter from accidentally being reset. To reset the counter, press the button in the upper left corner.



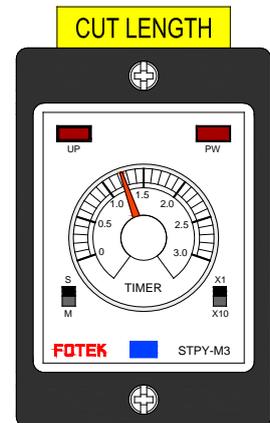
POWER INDICATOR LIGHT – When the disconnect switch is turned on the white light will be lit. Make sure machine is plugged into correct power source and that both E-Stop buttons have been reset.



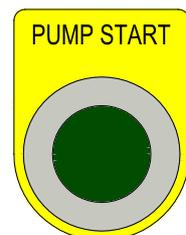
CUT LENGTH ADJUSTABLE TIMER – The cut length timer determines how soon the top blade starts returning to the up position. For a narrow piece of material set the number on the timer low. (0 to.5) For a wider piece increase the number on the timer.



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



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.

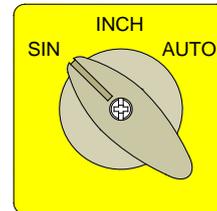


E-STOP BUTTON – When pressed, the red E-STOP button will be lit and all machine functions will stop. Turn button clockwise (**cw**) to reset.





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.



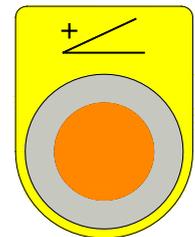
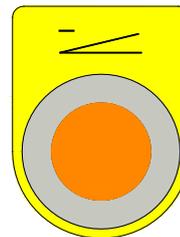
LAMP ON-OFF SWITCH – This selector switch turns the green fluorescent lamp on or off. The main disconnect must be on.



RAKE ANGLE DECREASE AND INCREASE PUSH BUTTONS – When the decrease (-) pushbutton is depressed multiple times the rake angle decreases.

Pushing the increase (+) button multiple times increases the rake angle.

When the minimum (decrease) rake angle is reached the lamp in the decrease (-) button will illuminate. When the maximum (increase) rake angle is reached the lamp in the increase (+) button will illuminate.



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).

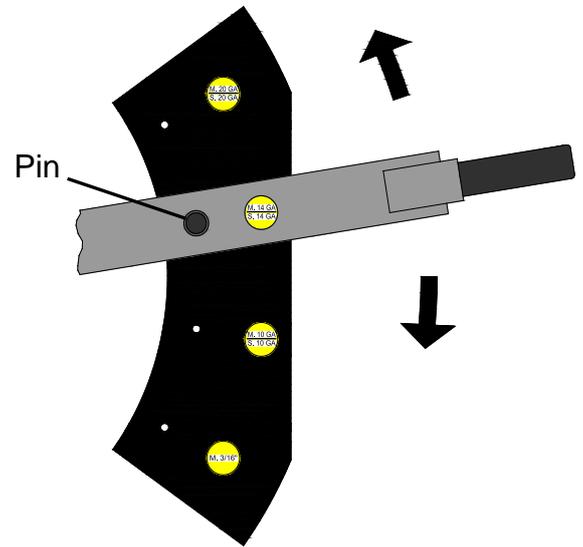


figure 11

Shown with chain
Guard removed

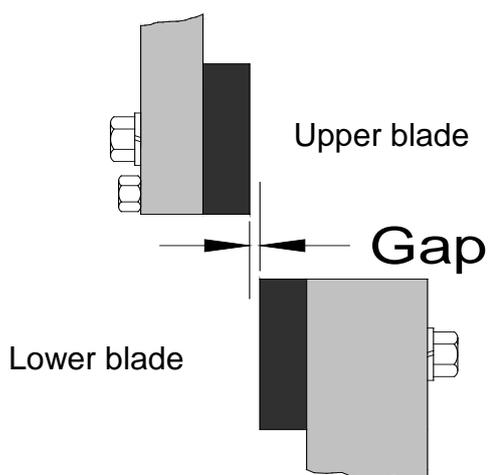


figure 12

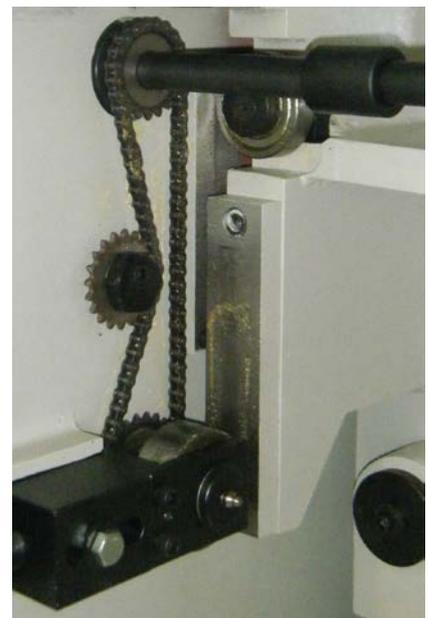


figure 13

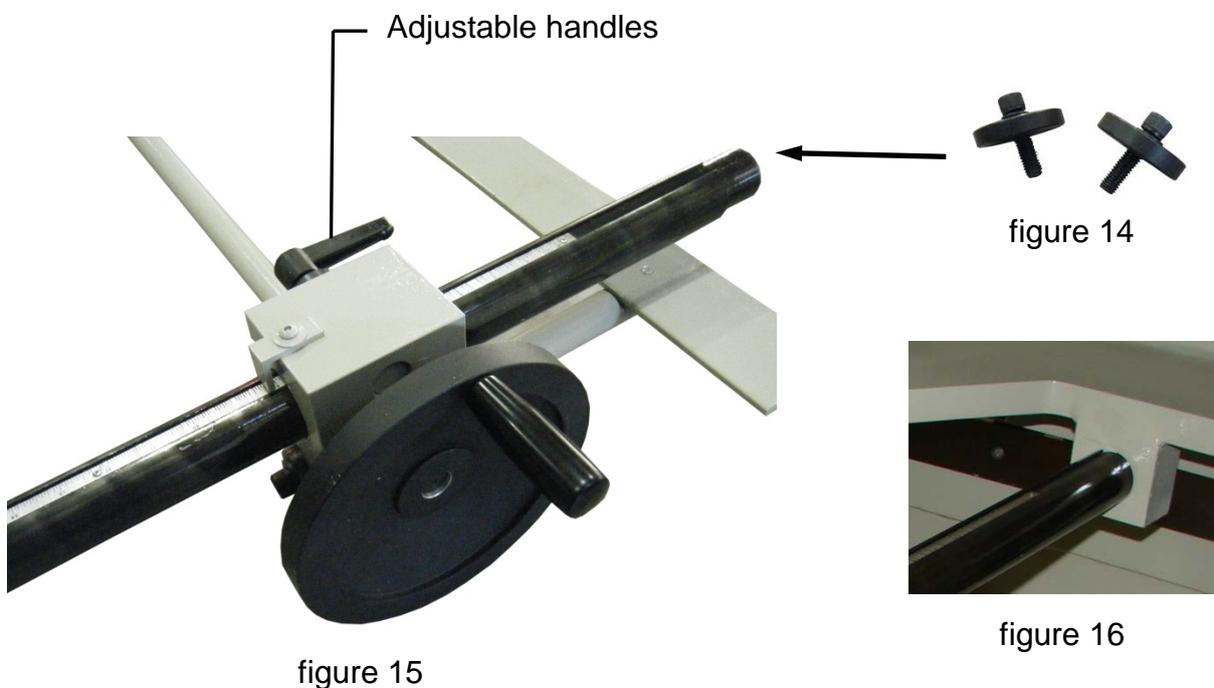


Manual Back Gauge

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





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).

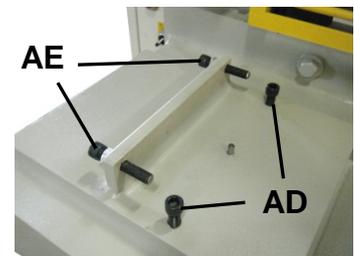


figure 18

Material Support Arm

The support arms are used to support material at the front of the machine. Each 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.

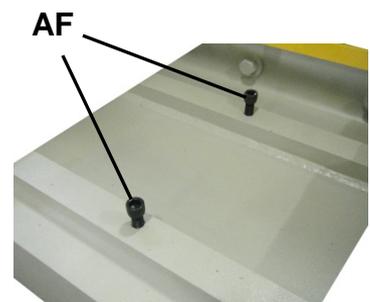


figure 20



Connecting cable to pedestal

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

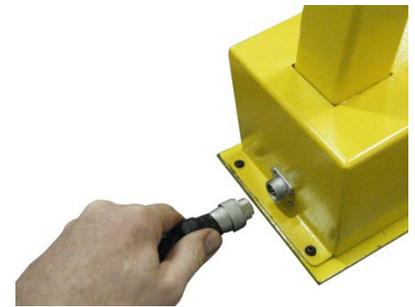


figure 21

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.

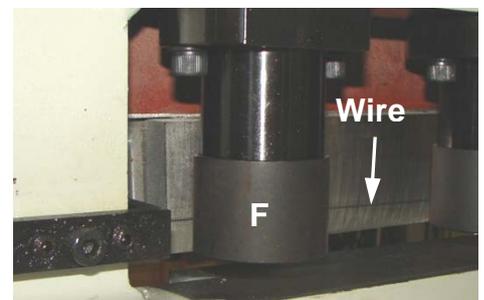


figure 22



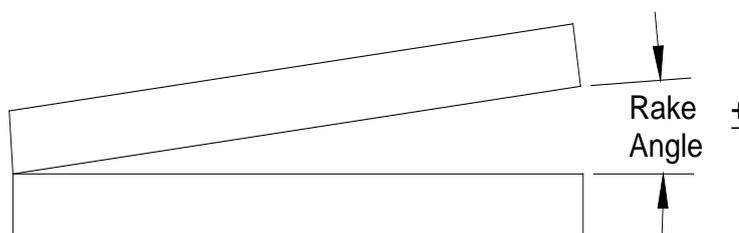
Note: Shown with guard removed. (For identification purposes only!)

Material Hold down

There are 12 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-8010HD 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.





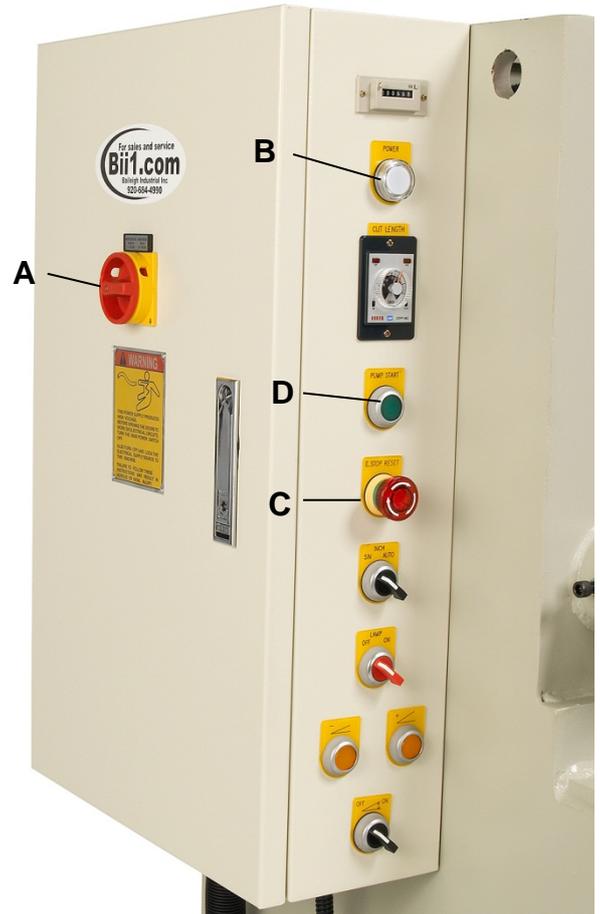
SHEAR OPERATING PROCEDURE

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. Open the electrical cabinet and set the Cycle delay timer as needed to allow enough time to safely advance and position the material for the next cut.
8. Load and position the material to be cut.
9. 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.

10. 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 inside of 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.





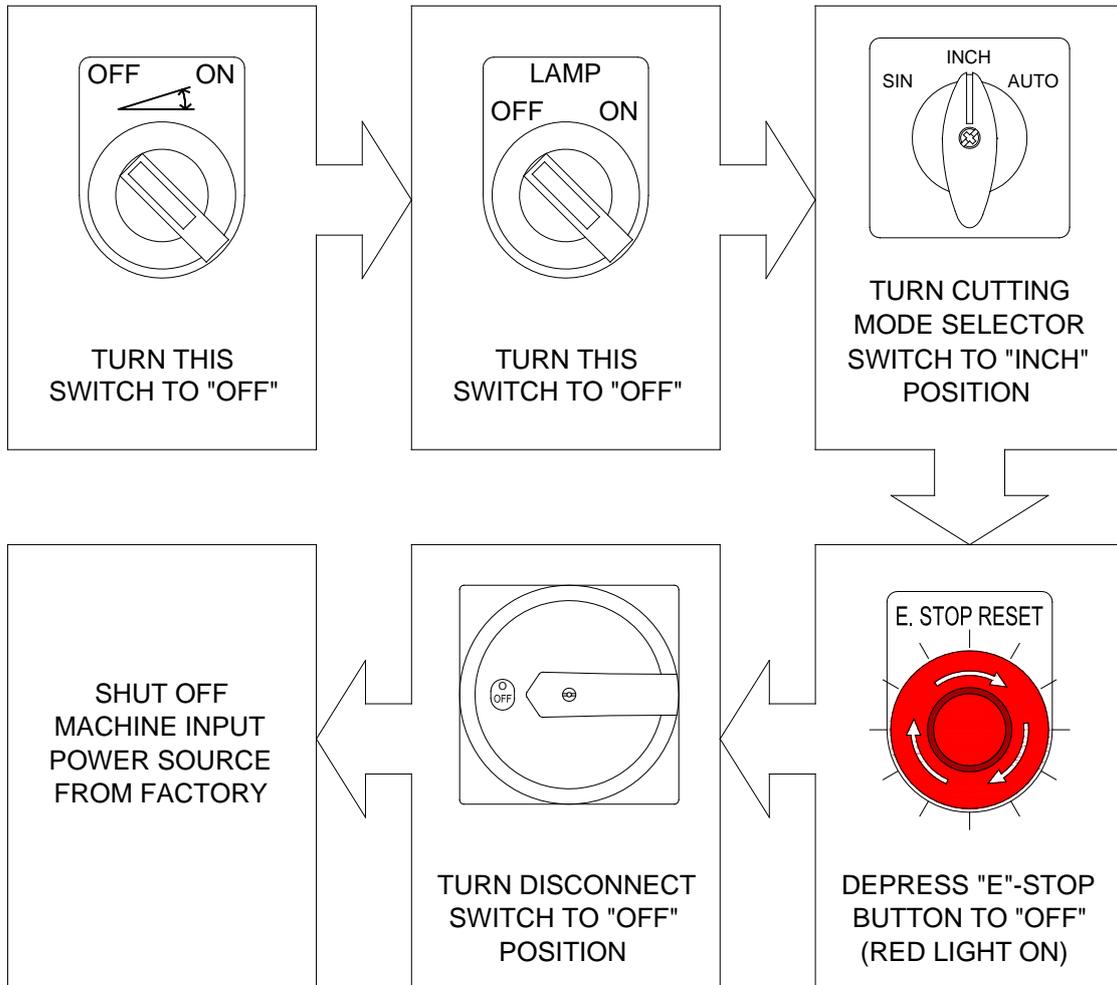
Rake Angle Adjustment

1. Turn on the main power to start the machine.
2. Re-set the emergency stop button, and start the hydraulic pump.
3. The upper blade will automatically rise to the upper limit.
4. Turn the Rake Angle switch (**G**) to the ON position.
5. Press and release (pulse) the Rake Angle Increase button (**H**) to increase the rake angle. When the maximum rake angle is reached the button will illuminate.
6. Press and release (pulse) the Rake Angle Decrease button (**I**) to decrease the rake angle. When the minimum rake angle is reached the button will illuminate.
7. When the rake angle is set, turn the Rake Angle switch (**G**) to the OFF position.





Turning Off Machine Power





LUBRICATION AND MAINTENANCE

⚠ WARNING: Make sure the electrical disconnect is OFF before working on the machine.

Maintenance should be performed on a regular basis by qualified personnel.

Always follow proper safety precautions when working on or around any machinery.

Daily Maintenance

- Check daily for any unsafe conditions and fix immediately.
- Inspect the power plug and cord.
- Check the foot switch cable for any loosening or damage.
- Check hydraulic hoses and fittings for leakage.
- Keep area around machine clear of debris.
- Check that all nuts and bolts are properly tightened.

Weekly Maintenance

- Make sure proximity switches and limit switches are secure and adjusted properly.
- On a weekly basis clean the machine and the area around it.
- Lubricate threaded components and sliding devices.
- Apply rust inhibitive lubricant to all non-painted surfaces.

Roller Lubrication

Lubricate the machines roller wheels monthly or as necessary using the grease gun provided. There are two grease fittings on each side, at the back of the shear. Also make sure there is adequate grease on the surfaces that the wheels ride on.

The blade gap adjustment chains and sprockets need to be oiled periodically. They are located between the rollers at each end of the machine.



figure 23



Note: Proper maintenance can increase the life expectancy of your machine.



Hydraulic Oil

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

The hydraulic reservoir was filled to approximately 80% of capacity before leaving Baileigh Industrial. After installation of the machine and before machine startup, bring the oil level up to 90% of capacity.

A shortage of hydraulic oil can cause hydraulic system breakdown and damage to major mechanical parts due to over heating.

- Use hydraulic oil Shell Tellus #68 brand or an equivalent with similar specifications.
- Keep hydraulic reservoir filled to 90% of capacity.
- **DO NOT** rely totally on the oil gauge as they can sometimes indicate an incorrect level reading. Do a visual inspection with the oil fill cap removed as well.
- A shortage of hydraulic oil will cause hydraulic system breakdown to major mechanical components due to overheating.
- Change the hydraulic oil every 6 months along with the oil filter.

Oil Change and Disposal

Change the oil in the hydraulic tank after the first 6 months, and every 12 months after that. Clean the filter basket located under the fill cap before refilling the tank.

Capacity of the oil tank is approx. 35 gallons.(132.5 liters) max. Required oil capacity is 31.5 gallons (119.25 liters).

Used oil products must be disposed of in a proper manner following your local regulations.

Air bleed for hydraulic hold down cylinders. If hold down cylinders don't all function the same, there might be air in the line. (consult the factory)

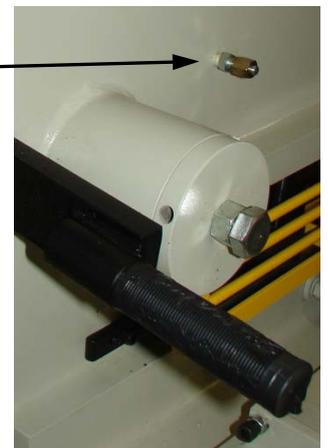


figure 24



MATERIAL SELECTION

⚠ CAUTION: It must be determined by the customer that materials being processed through the machine are NOT potentially hazardous to operator or personnel working nearby.

When selecting materials keep these instructions in mind:

- Material must be clean and dry. (without oil)
- Material should have a smooth surface so it processes easily.
- Dimensional properties of material must be consistent and not exceed the machine capacity values.
- Chemical structure of material must be consistent.
- Buy certificated steel from the same vendor when possible.

REPLACING THE SHEAR BLADES

⚠ WARNING: The shearing blade poses an amputation hazard. Make sure no body part or clothing is near the specific hazard. Failure to follow this warning could result in severed or crushed fingers.

The blades on the Baileigh SH-8010HD shear have multiple usable edges. If you have not already used both cutting edges on the top blade you can rotate it end for end to expose a sharp edge. The bottom blade has four usable edges. After all edges have been used, the blade can be reground or replaced. Contact Baileigh Industrial at (920.684.4990) for replacement blades.



To Rotate or Replace the Top Blade:

⚠ 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.

8. Raise the blade to the up position.
9. Shut down and lockout power to the machine.
10. Remove the yellow safety guard.
11. Remove the shadow wire to avoid breaking it, before changing the blade. Loosen the center bolts of both brackets and the outside setscrews to relieve tension on the wire. (fig. 25)
12. **CAUTION:** ALWAYS WEAR LEATHER GLOVES WHEN HANDLING THE BLADE. Remove the capscrews and washers that hold the blade in place.
13. Turn the blade end for end if the other side is sharp, or replace the blade with a new one.
14. When the blade is in position, secure with the bolts and washers.
15. Re-attach the shadow wire. Adjust so that the wire is taut and as close to the blade as possible without touching.
16. **Re-mount the yellow safety guard!**
17. Set the blade gap arm to the 3/16" (4.76mm) setting, start the machine, and lower the top blade until it overlaps the bottom blade along the full length. The gap should measure .60mm or .023" along the full length. (The blades must be parallel.)
18. The blade gap adjustment setscrews are shown in (fig. 26). These were preset at the factory. **ADJUST ONLY IF ABSOLUTELY NECESSARY!**

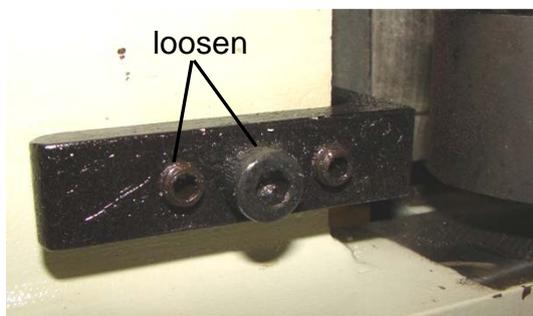


figure 25

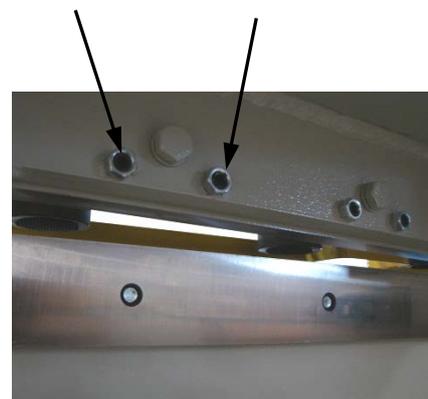


figure 26



To Rotate or Replace the Bottom Blade:

⚠ 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.

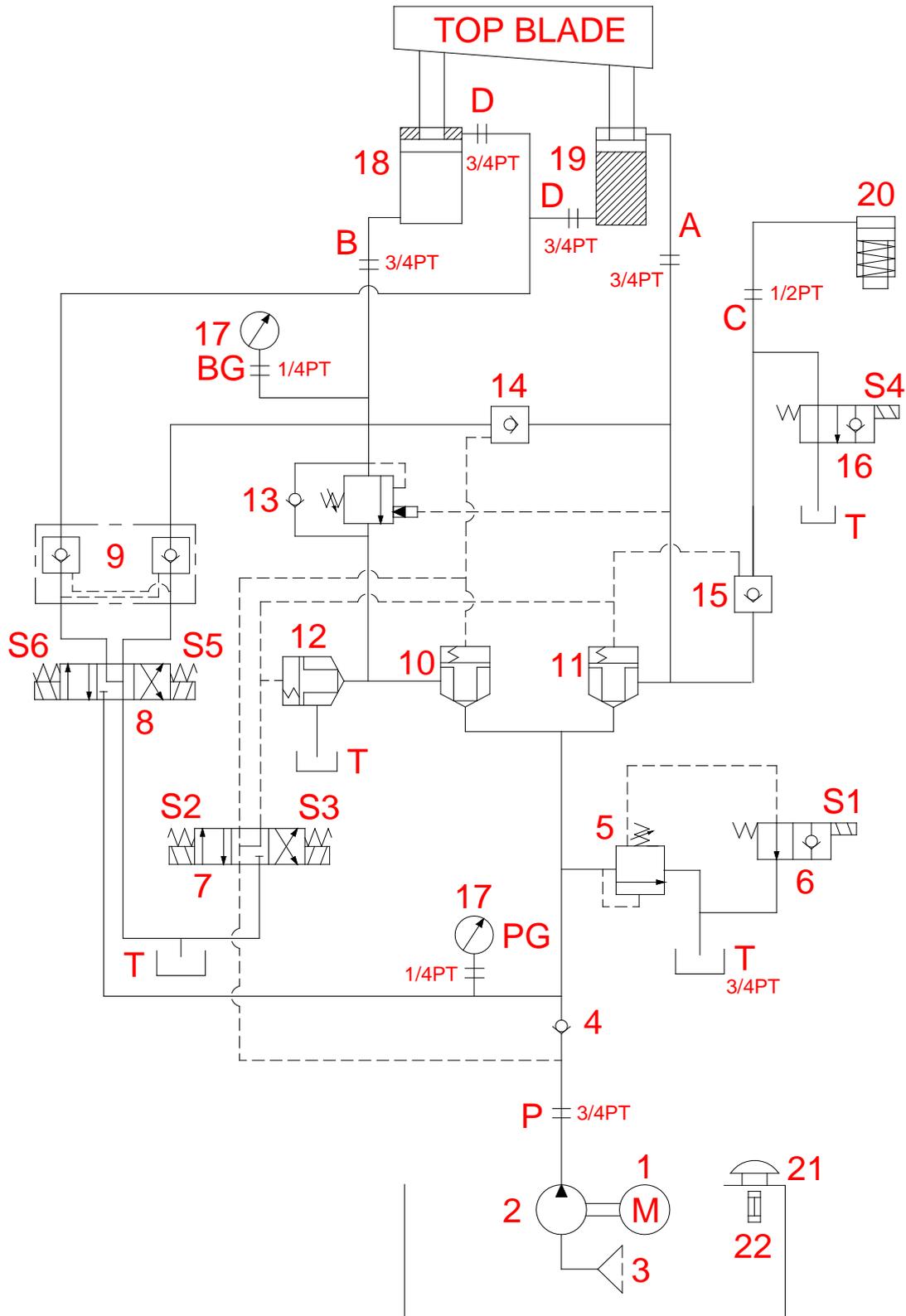
1. Raise the blade to the up position.
2. Shut down and lockout power to the machine.
3. Unbolt and remove the 2 ball transfer tables and the squaring arm. This will allow access to the rest of the bottom blade bolts. (fig. 27)
4. **CAUTION: ALWAYS WEAR LEATHER GLOVES WHEN HANDLING THE BLADE.** Remove the capscrews and washers from the front of the machine that hold the blade in place while the blade is removed from the back.
5. Turn the blade if you have not already used all four cutting edges, or replace the blade with a new one.
6. When in position, secure the blade with the bolts and washers.
7. Mount the 2 ball transfer tables and the squaring arm.
8. Set the blade gap arm to the 0.1875" (4.76mm) setting, start the machine, and lower the top blade until it overlaps the bottom blade along the full length. The gap should measure 0.023" (0.60mm) along the full length. (The blades must be parallel.)
9. There is no adjustment for the lower blade.



figure 27

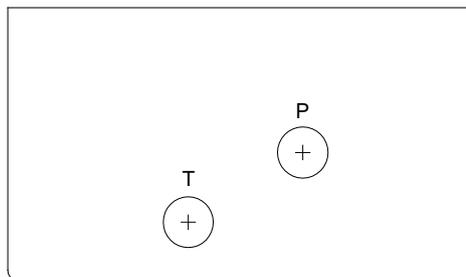
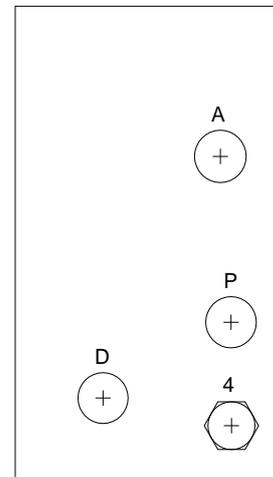
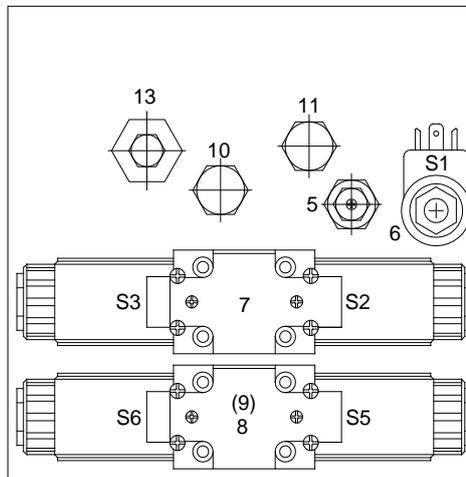
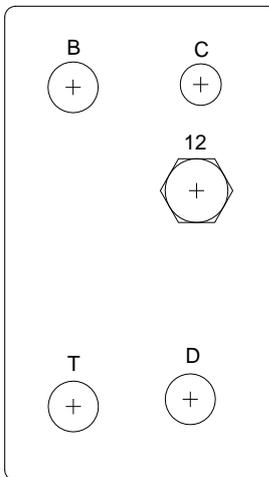
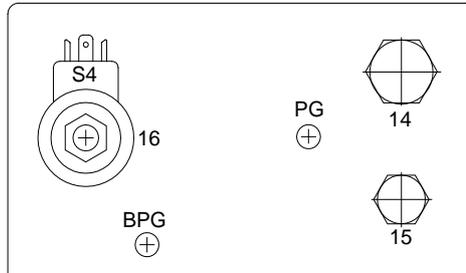


HYDRAULIC SCHEMATIC





MANIFOLD BLOCK



OPERATION	SOLENOID					
	S1	S2	S3	S4	S5	S6
CUTTING HOLD-DOWN, DOWN	▲	▲		▲		
BLADE, UP	▲		▲	▲		
HOLD-DOWN, UP						
TOP BLADE ANGLE, LARGE	▲				▲	
TOP BLADE ANGLE, SMALL	▲					▲

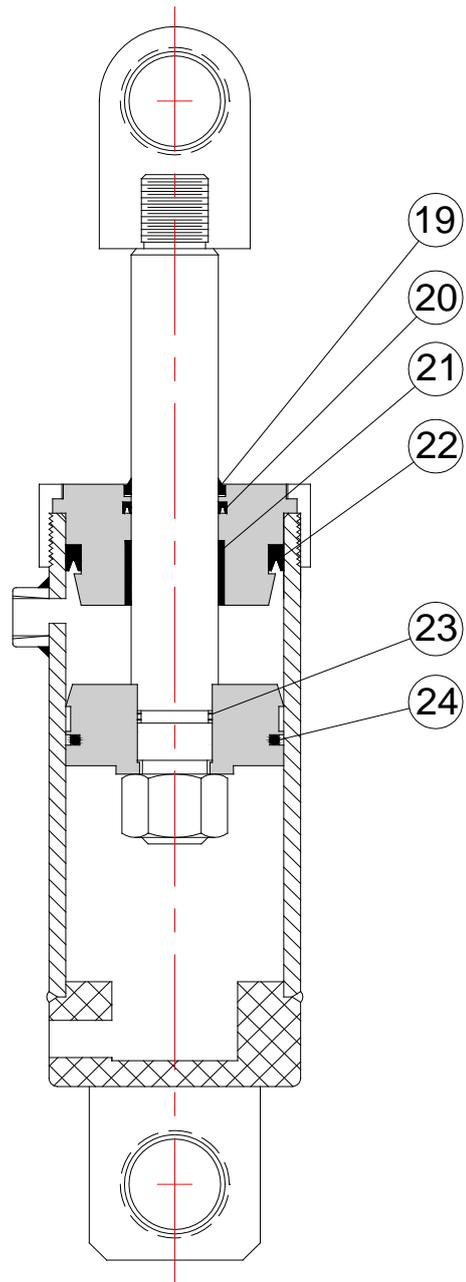
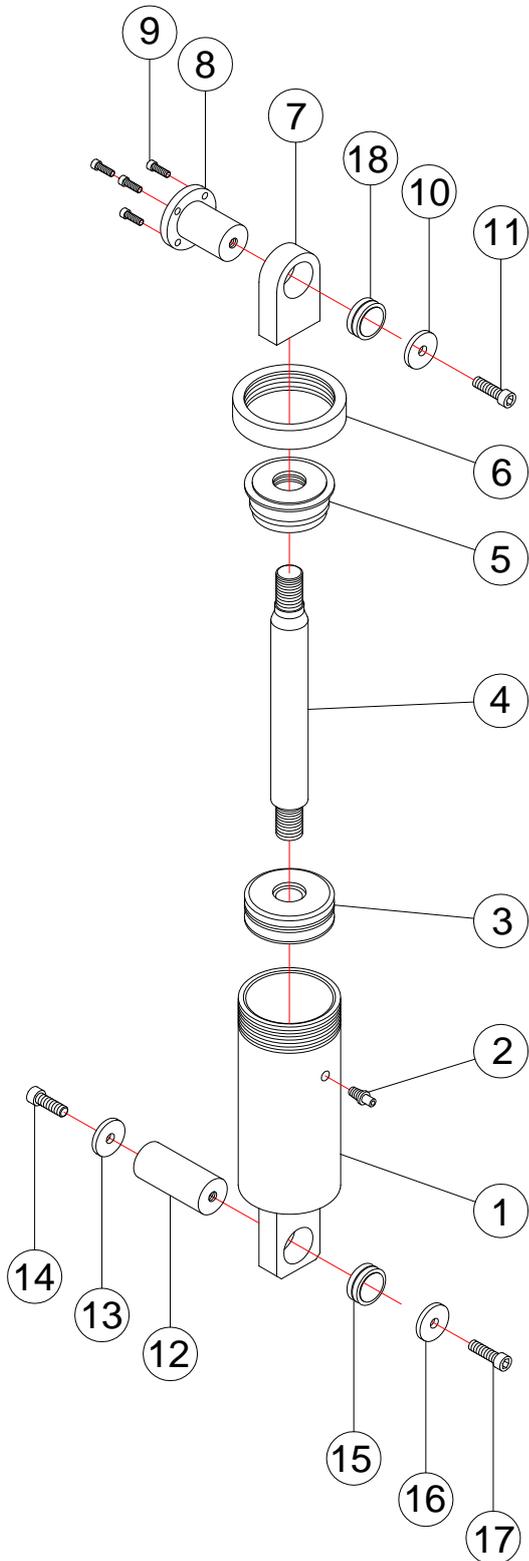


HYDRAULIC COMPONENT IDENTIFICATION

Item	Description	Part No.
1	Motor 7.5hp (5.59kw), 220V, 3ph, 60hz	HPX4P
2	Pump	VQ15-19-F-RRL-03
3	Strainer	MF-08
4	Check Valve	CV13A2050N
5	Relief Valve	RVCA LAN
6	2 Way NO Poppet Solenoid Valve	SV08-21
7	Solenoid Valve	DG4V-3-7C
8	Solenoid Valve	DG4V-3-6C
9	Modular Pilot Operated Check Valve	MPC-02W
10	Logic Valve	LODC XDN
11	Logic Valve	LODC XDN
12	Logic Valve	LOFC XDN
13	Counter Balance Valve	CBEA-LHN
14	Check Valve	COFA-XCN
15	Check Valve	CODA-XCN
16	2 Way NO Poppet Solenoid Valve	SV10-23
17	Pressure Gauge	AT-63mm*280Kg
18	Hydraulic Cylinder	120mm dia.
19	Hydraulic Cylinder	110mm dia.
20	Hold-Down Cylinder	20mm dia.
21	Air Breather	HY-08
22	Oil Level w/Thermometer	LG-5A



HYDRAULIC CYLINDER-EXPLODED VIEW



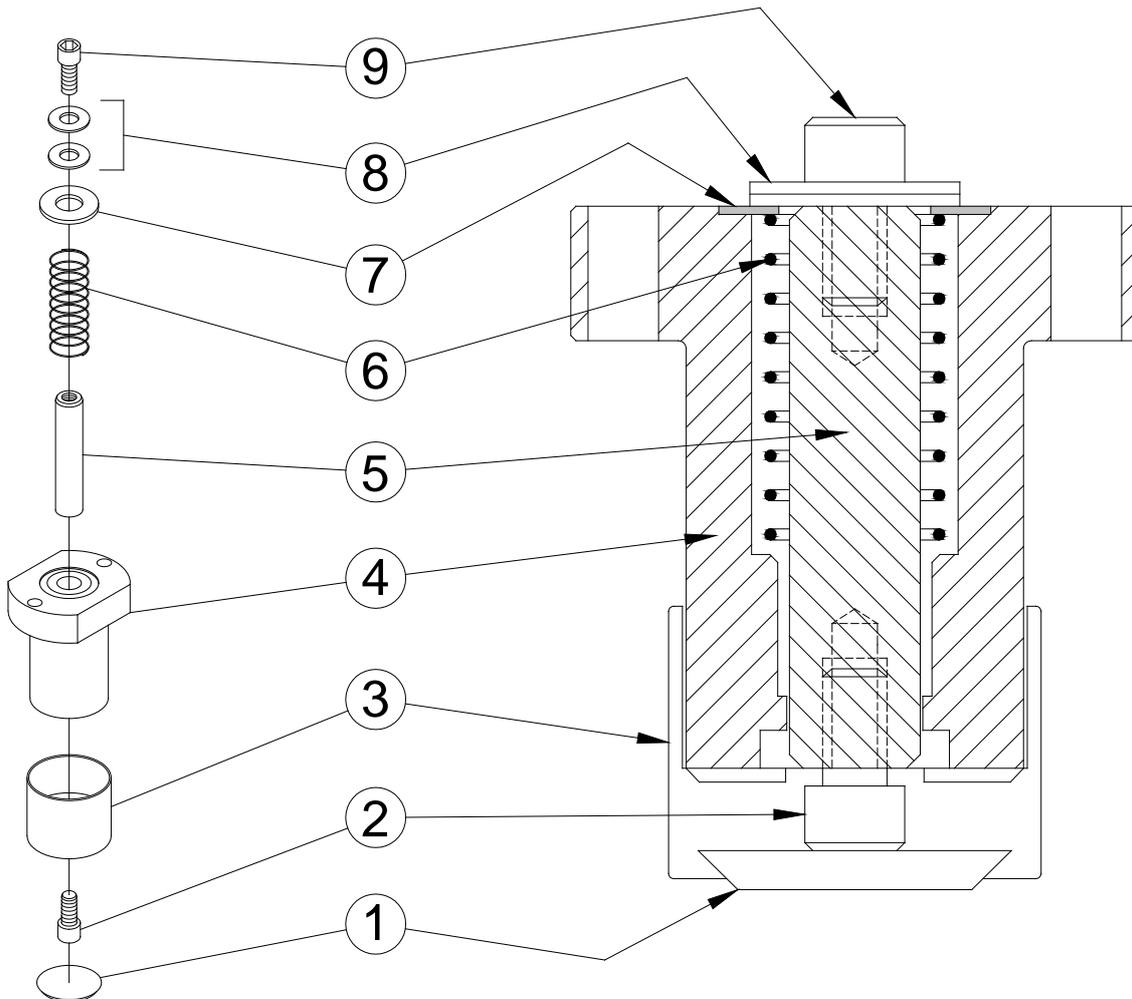


HYDRAULIC CYLINDER PARTS IDENTIFICATION

Item	Description
1	Cylinder Body
2	Air Bleed Screw (large cylinder only)
3	Piston
4	Inner Rod
5	End Gland
6	Nut
7	Clevis (Rod End)
8	Link Shaft (Up)
9	Socket Head Screw 5/16 x .75" Long
10	Washer
11	Socket Head Screw 3/8 x 1.00" Long
12	Link Shaft (Down)
13	Washer
14	Socket Head Screw 3/8" x 1.00" Long
15	Bearing (Fish Eye Type)
16	Washer
17	Socket Head Screw 3/8" x 1.00" Long
18	Bearing (Fish Eye Type)
19	Wiper
20	Rod Seal
21	Wear Ring
22	Rod Seal
23	"O"-Ring
24	Piston Seal

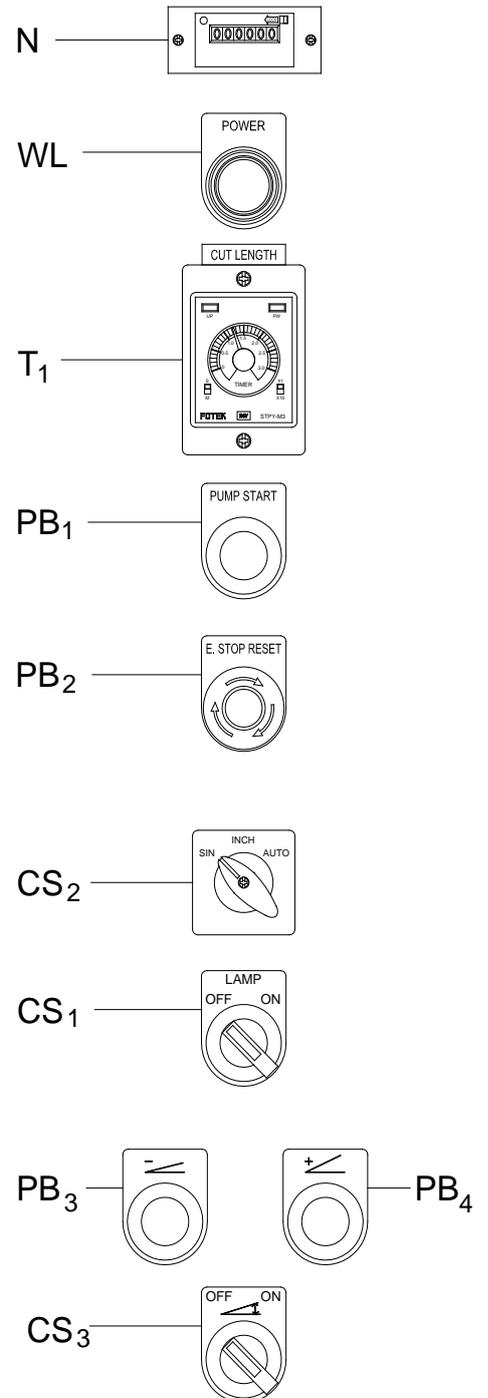
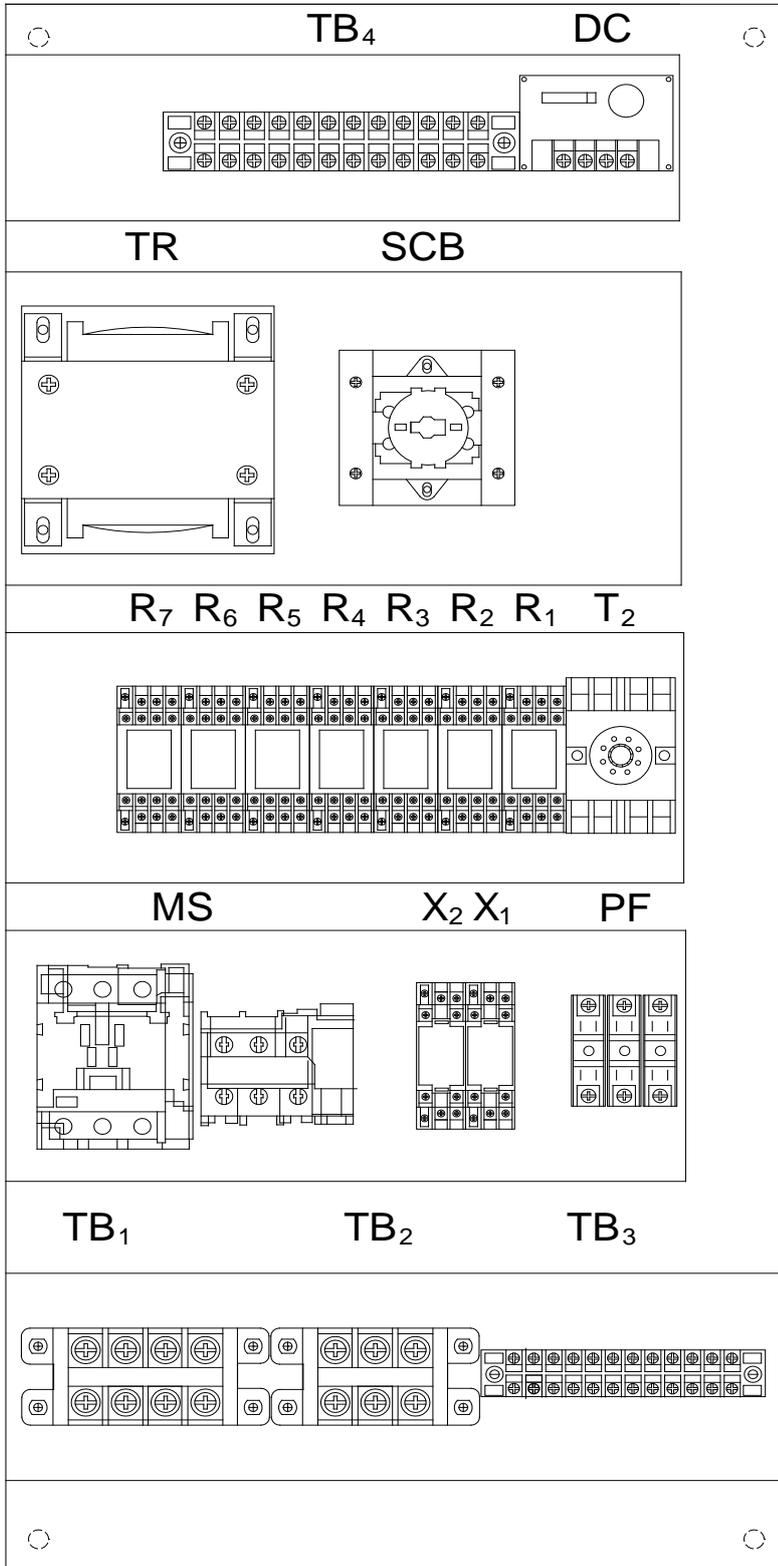


HOLD DOWN CYLINDER PARTS IDENTIFICATION



1	Rubber Pad	6	Spring
2	Hex Screw 5/16 x .75	7	Washer
3	Cover	8	Washer
4	Cylinder Body	9	Hex Screw 5/16 x .75
5	Inner Rod		

ELECTRICAL COMPONENT IDENTIFICATION





ELECTRICAL PARTS LIST

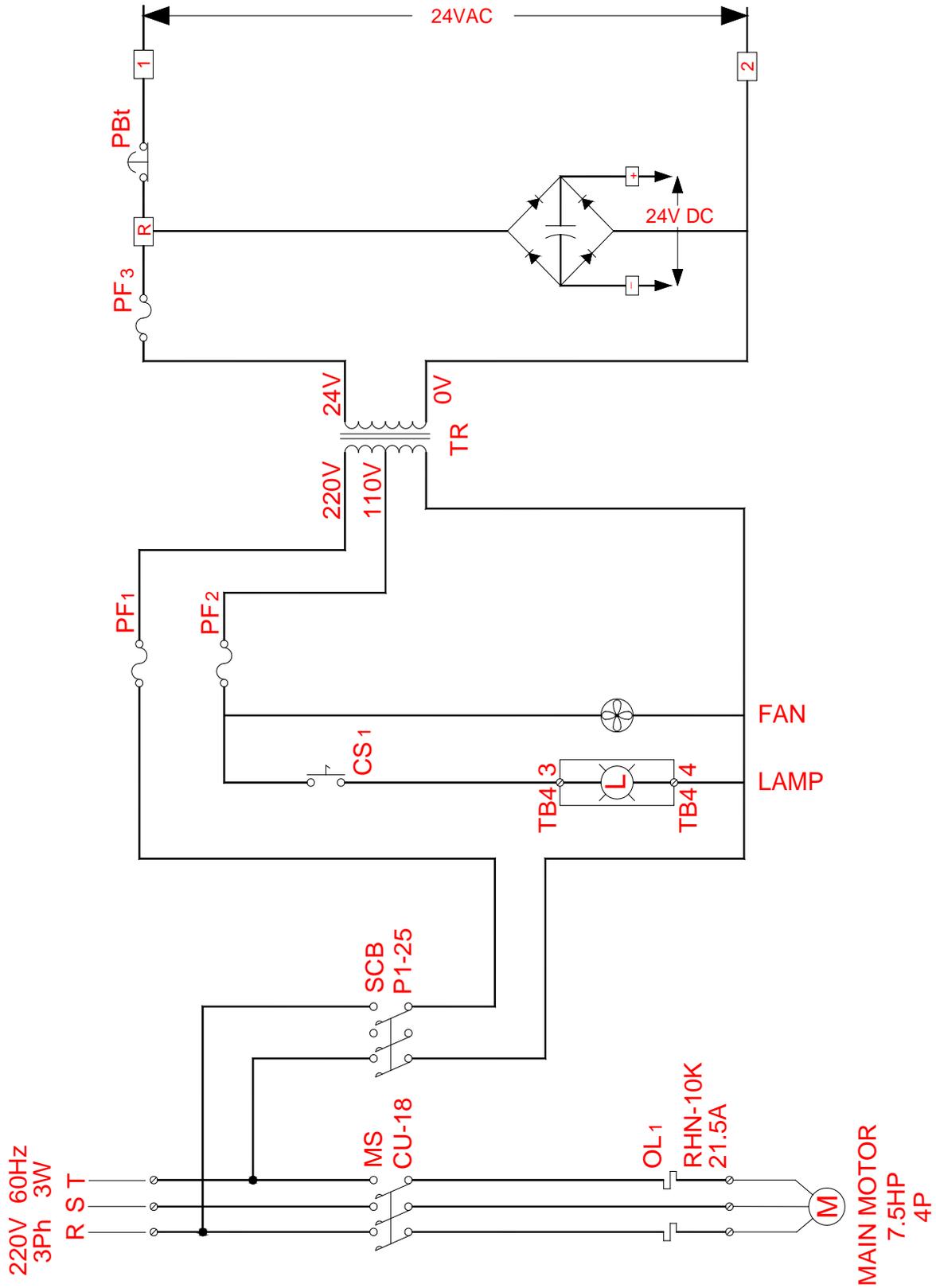
Item	Description	Part No.
SCB	Main Switch	P1-25
MS	Magnetic Switch	CU-18 24VAC 24A
OL	Over Circuit Relay	RHN-10K 21.5A
TR	Transformer	1Ph, 220-440 / 110-24V
PF	Fuses	10 x 38mm @2A, 1A, 10A
DC	Power Supply	DC 24V 8A 2000uf
RF	Fan	4" 110VAC
R1 - R7	Power Relay	MY-4 AC 24V
X1 – X2	Power Relay	MY-2 DC 24V
T1	On Delay Timer	STPY-M3 AC 24V 3 SEC
T2	On Delay Timer	STPN-M3 AC 24V 3 SEC
TB1	Transfer Bus	4P 30A
TB2	Transfer Bus	3P 30A
TB3, TB4	Transfer Bus	12P 30A
N	Counter	CSK6-Y DC 24V
WL	Pilot Light	30mm, 24V, WHITE
PB1	Pushbutton	30mm, 1A1B RED (LOCK)
PB2	Pushbutton	30mm, 1A, 24V GREEN
PB3, PB4	Pushbutton	30mm, 1A1B, 24V YELLOW
CS1	Selector Switch	30mm, 1A1B
CS2	Selector Switch	30mm, 2A0B

Additional Electrical Components

Item	Description	Part No.
	LIMIT SWITCH	OMRON #D4V-8108Z
	PROXIMITY SWITCH	FOTEK #PM12-04N
	FLUORESCENT LAMP	FL 40G/38

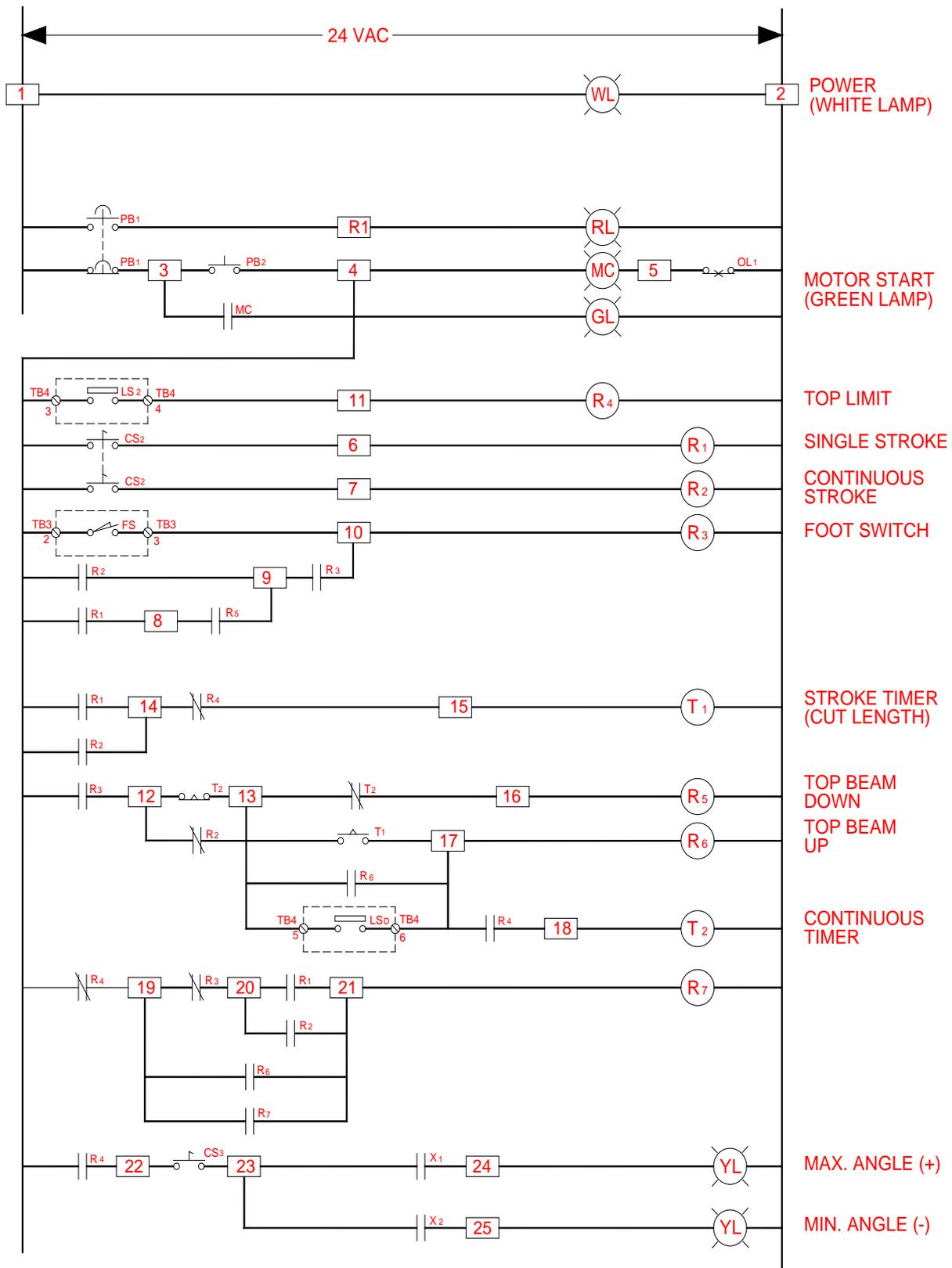


ELECTRICAL SCHEMATIC (Sheet. 1)



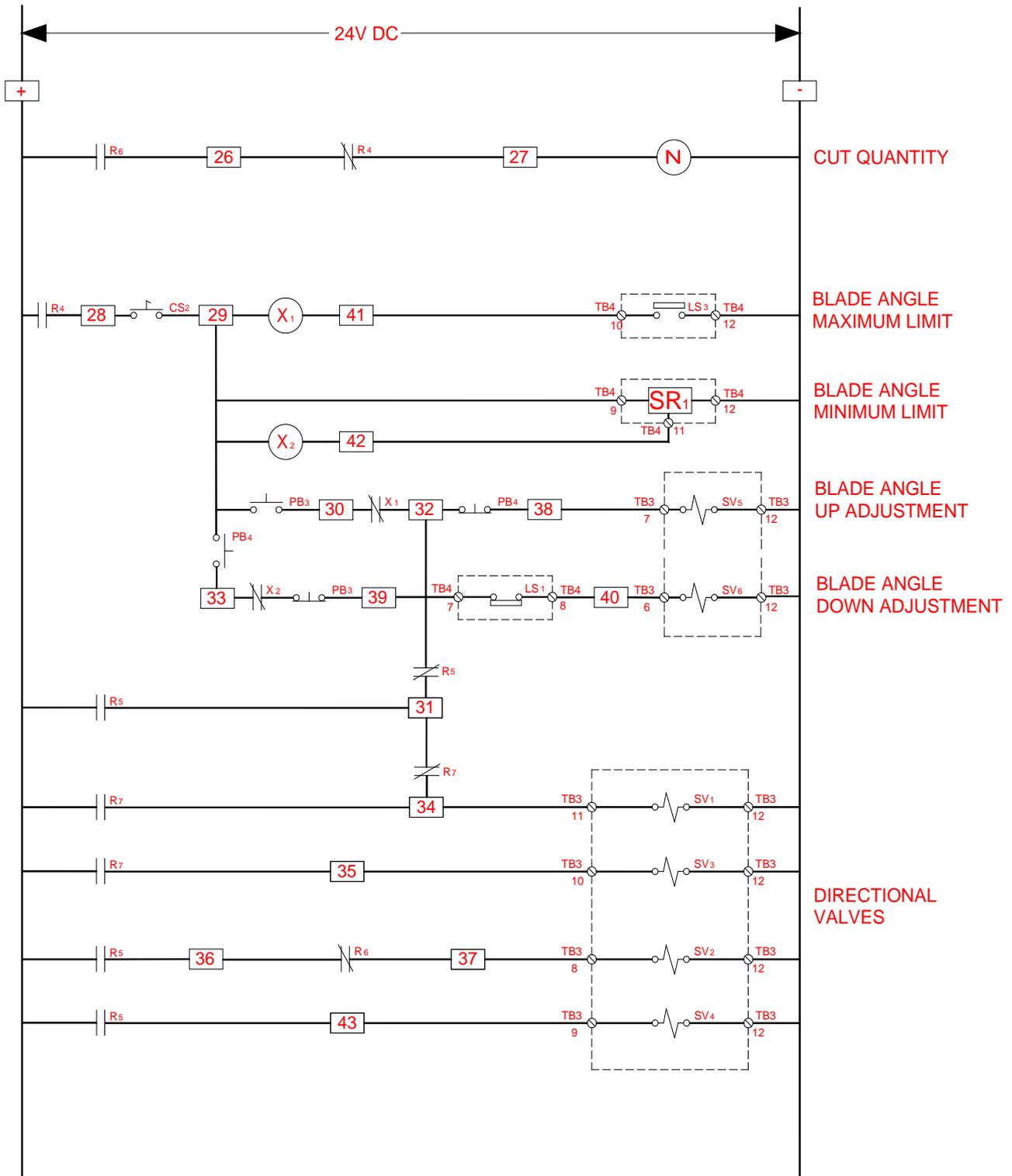


ELECTRICAL SCHEMATIC (Sheet 2)



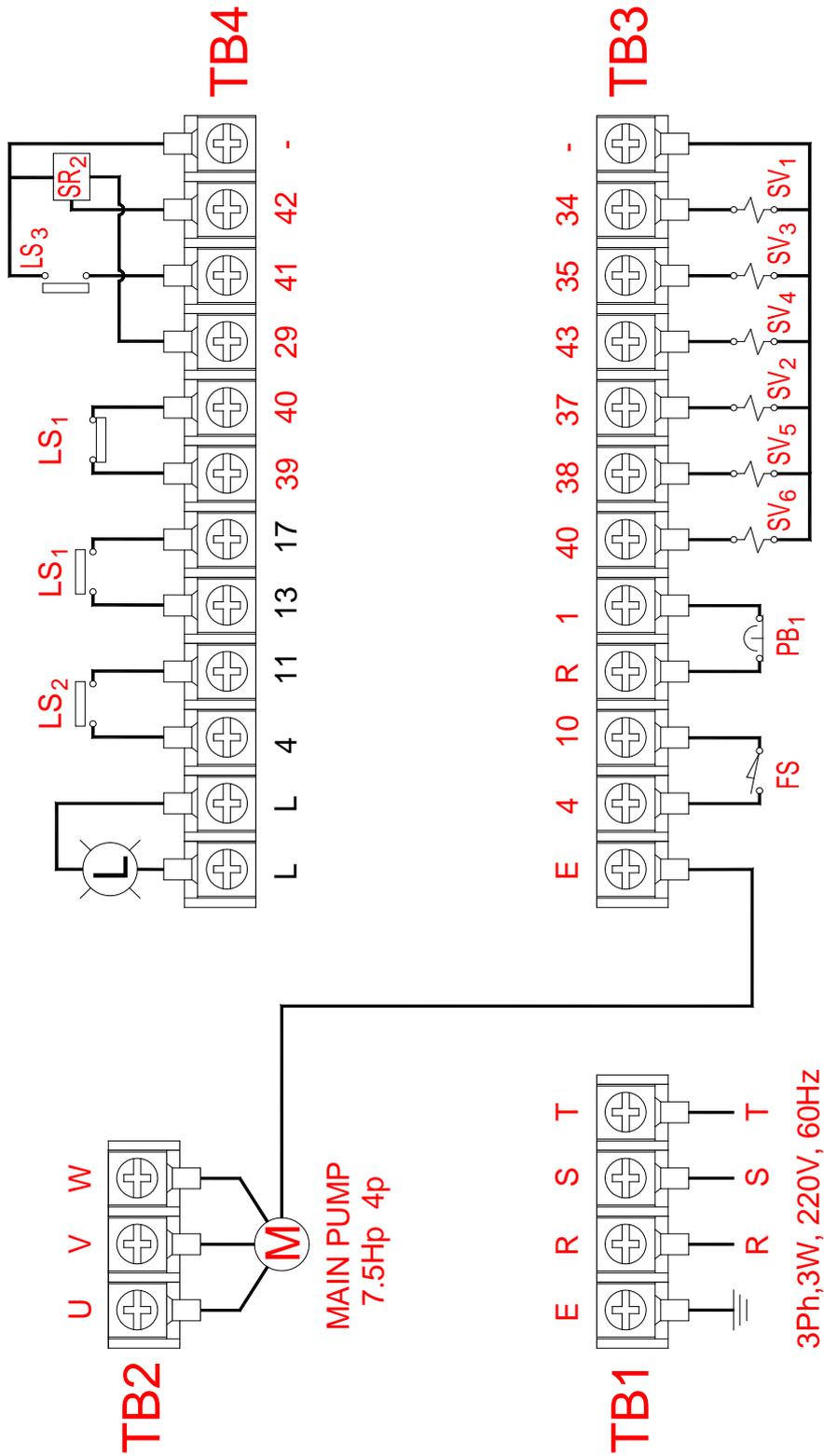


ELECTRICAL SCHEMATIC (Sheet 3)





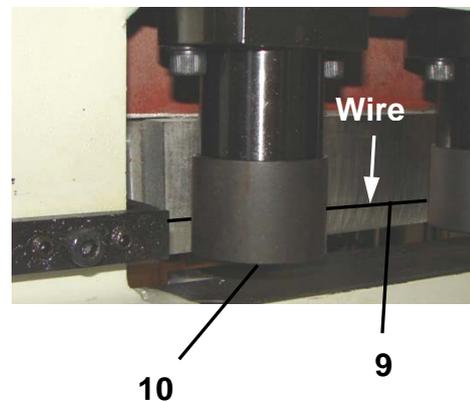
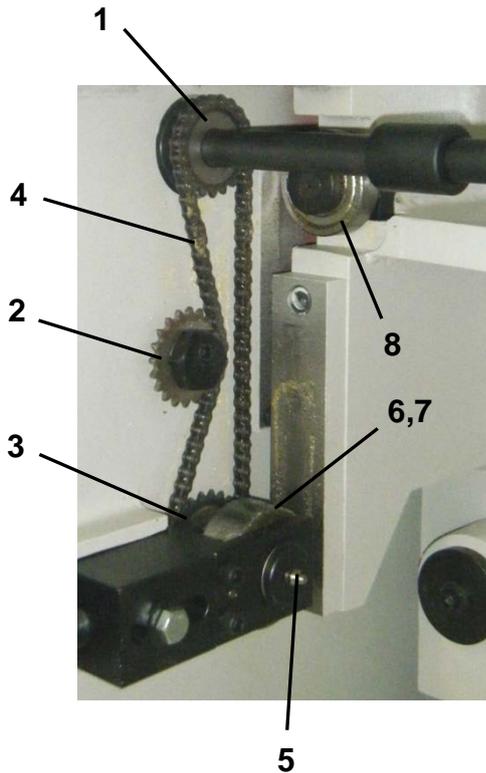
ELECTRICAL WIRE TERMINALS





MECHANICAL REPLACEMENT PARTS

Item	Description	Part No.
1	Top sprocket	Hardened Teeth
2	Idler sprocket	20T Hardened Teeth
3	Bottom sprocket	Hardened Teeth
4	Roller chain	
5	Grease fitting	
6	Roller wheel	
7	Roller wheel bearing	
8	Bearing wheel	
9	Shadow wire	(by the foot)
10	Hold down rubber pad	SH8010



Shown with guards removed.
(For Identification Only!)



TROUBLESHOOTING

⚠ WARNING: Make sure the electrical disconnect is **OFF** before working on the machine.

SYMPTOM	POSSIBLE CAUSE (S)	CORRECTIVE ACTION
Motor Does Not Start	No power.	Check the power source.
	Disconnect switch not turned on.	Turn the switch to ON position.
	Emergency button not reset.	Release the emergency buttons by turning the knob to the right.
	Motor damaged.	Replace motor.
	Motor power cable not connected properly.	Check the cable connection and reconnect cable. Change cable if worn out.
	Motor circuit breaker tripped.	Reset the breaker to ON position.
	Fuse blown.	Check and replace fuse(s).
	Magnetic switch damaged or burned out.	Replace switch.
Motor is ON, but machine will not move.	Transformer damaged.	Replace transformer.
	Motor turning in the wrong direction.	For 3 Phase - Turn machine OFF. Change any two of the three power source wires. Recheck motor direction.
	Not enough hydraulic oil.	Check oil level and add oil if necessary.
	Solenoid valve stuck.	Clean or replace valve.
	Solenoid valve coil burned out.	Replace solenoid valve.
	Foot pedal not sending signal.	Check pedal and replace switch if necessary.
	Relay stuck or burned out.	Replace relay.
Limit switch not set at correct position.	Adjust the limit switch for proper stroke travel setting.	



SYMPTOM	POSSIBLE CAUSE (S)	CORRECTIVE ACTION
Machine moves, but cannot reach capacity.	Relief valve not set correctly. Relief valve damaged. Pump damaged. Internal cylinder leak. Pilot check valve not set correctly.	Check hydraulic pressure and adjust relief valve (tighten to increase pressure). Replace relief valve. Replace pump Contact dealer for service. Adjust the correct pressure setting of the valve.
Excessive hydraulic noise	Motor turning in wrong direction. Pump worn out. Not enough oil. Ball valves on hydraulic tank are closed.	For 3 phase – Turn machine OFF. Change any two of the three power source wires. Re-check motor direction. Replace pump. Check oil level and add oil if necessary. Open valves to allow oil flow.
Hydraulic hold downs do not work	Ball valve is shut off.	Rotate handle 90° counterclockwise (ccw) to open.



NOTES

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