OPERATOR'S MANUAL

Metal Working

FOOT SHEAR

MODEL: SF-5216

Baileigh Industrial Holdings LLC
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Rev. 05/2021

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THANK YOU & WARRANTY

Thank you for your purchase of a machine from Baileigh Industrial Holdings LLC. 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 an 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 10 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 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 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 attorney 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 Holdings LLC 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 Holdings LLC 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 Baileigh-Service@jpwindustries.com

INTRODUCTION

The quality and reliability of the components assembled on a Baileigh Industrial Holdings LLC 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
- Setup 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 Holdings LLC 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 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.

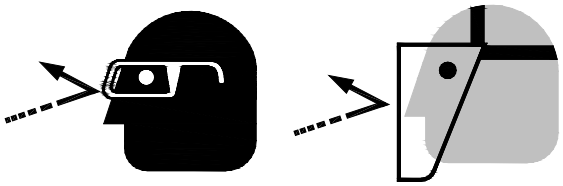
CAUTION: Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

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.

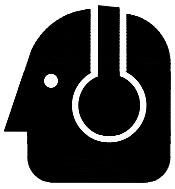
PROTECT EYES

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



PROTECT AGAINST NOISE

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

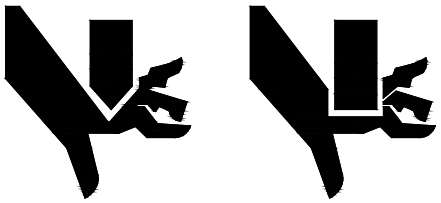


CALIFORNIA PROPOSITION 65

WARNING: Cancer and Reproductive Harm.
www.P65Warnings.ca.gov

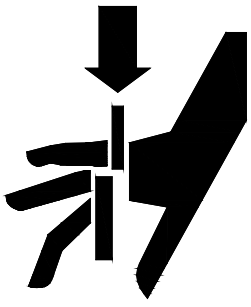
BEWARE OF SHEAR, PINCH, AND CRUSH HAZARD

NEVER place your hands, fingers, or any part of your body in the die area of this machine. Keep hands and fingers away from the shear blade and the punching and notching dies when the machine is in operation.



BEWARE OF SHEAR HAZARD

Keep hands and fingers clear from under the blade.
NEVER place your hand or any part of your body in this 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 will not 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 protection**. Always wear ISO approved protective eye wear when operating machinery. Wear a full-face shield if you are producing metal filings. Eye wear shall be impact resistant, protective safety glasses with side shields which comply with ANSI Z87.1 specification. Use of eye wear which does not comply with ANSI Z87.1 specification could result in severe injury from breakage of eye protection.
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.
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.

Hazard Signs

TECHNICAL SPECIFICATIONS

Maximum Shear Length	52” (1321mm)
Maximum Material Thickness	16 ga. (1.52mm) mild steel* 20 ga. (.912mm) stainless steel**
Minimum Material Thickness	24 ga. (0.607mm)
Front Gate Length	24” (609mm)
Back Gate Length	24” (609mm)
Blade Angle	1°
Power Requirements	Manual
Shipping Dimensions (L x W x H)	67” x 32” x 53” (1702 x 813 x 1346mm)
Shipping Weight	996 lbs. (454 kg)
Based on a material tensile strength of	*65000 PSI – mild steel **100000 PSI – stainless steel

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: Baileigh-Service@jpwindustries.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.

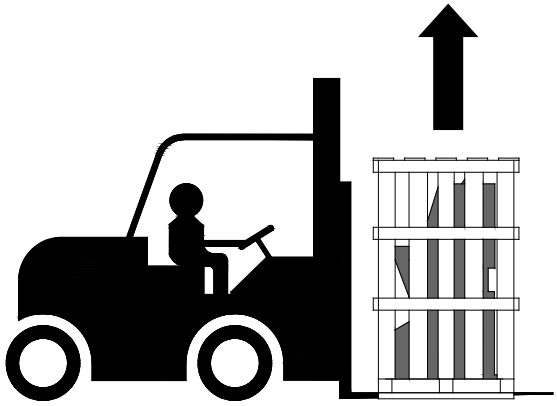
Important: *This waxy coating is **NOT** a lubricant and will cause the machine to stick and lose performance as the coating continues to dry.*

TRANSPORTING AND LIFTING

NOTICE: *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.*

Follow these guidelines when lifting with truck or trolley:

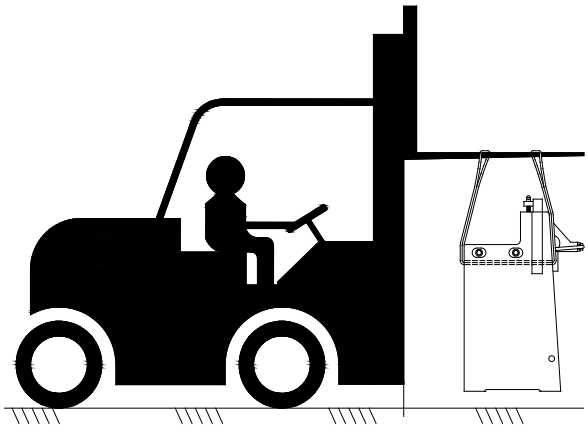
- The lift truck must be able to lift at least 1.5 – 2 times the machines gross weight.
- Make sure the machine is balanced. While transporting, avoid rough or jerky motion, and maintain a safe clearance zone around the transport area.
- Use a fork lift with sufficient lifting capacity and forks that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

Follow these guidelines when lifting crane or hoist:

- 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.



INSTALLATION

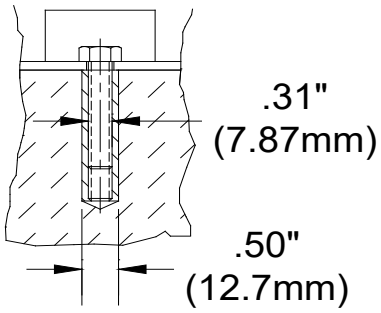
IMPORTANT:

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

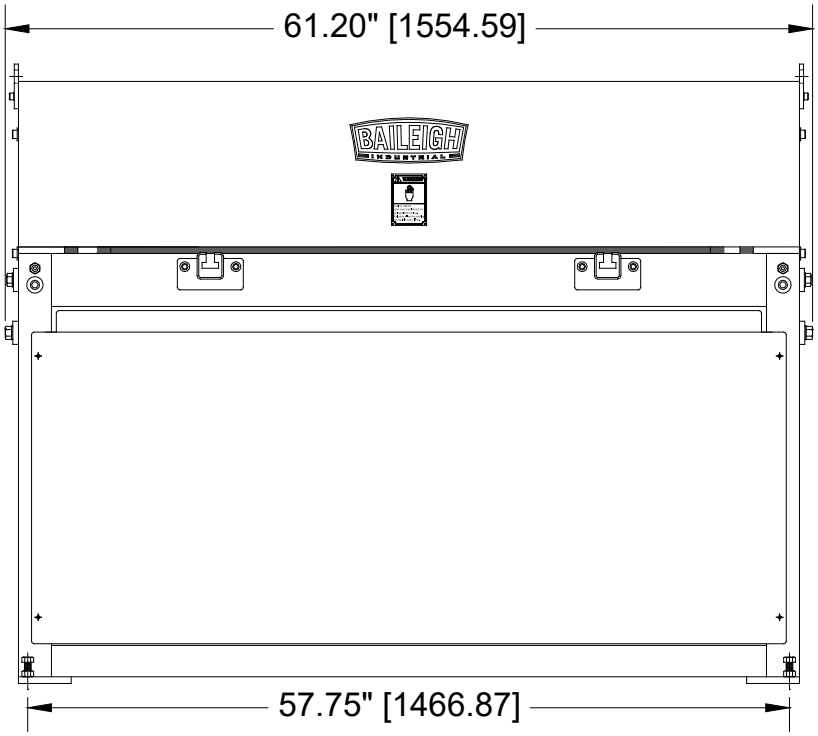
- Overall weight of the machine.
- Weight of material being processed.
- Sizes of material to be processed through the machine.
- Space needed for auxiliary stands, work tables, or other machinery.
- Clearance from walls and other obstacles.
- Maintain an adequate working area around the machine for 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.

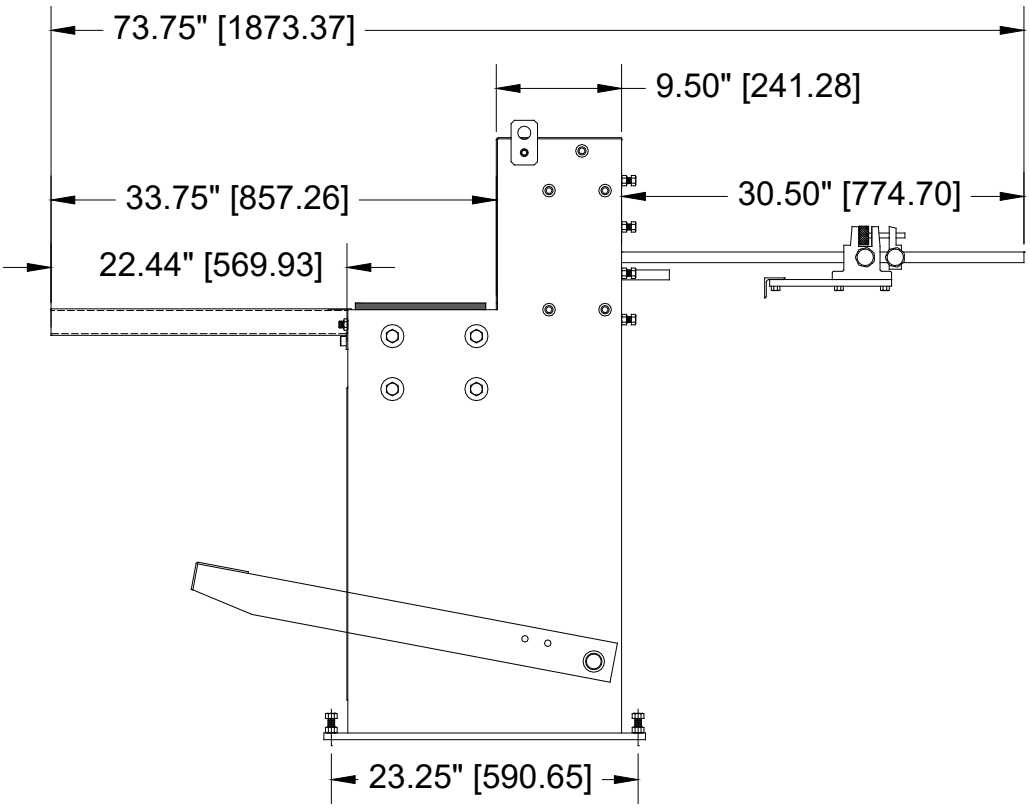
Anchoring the Machine

- 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.

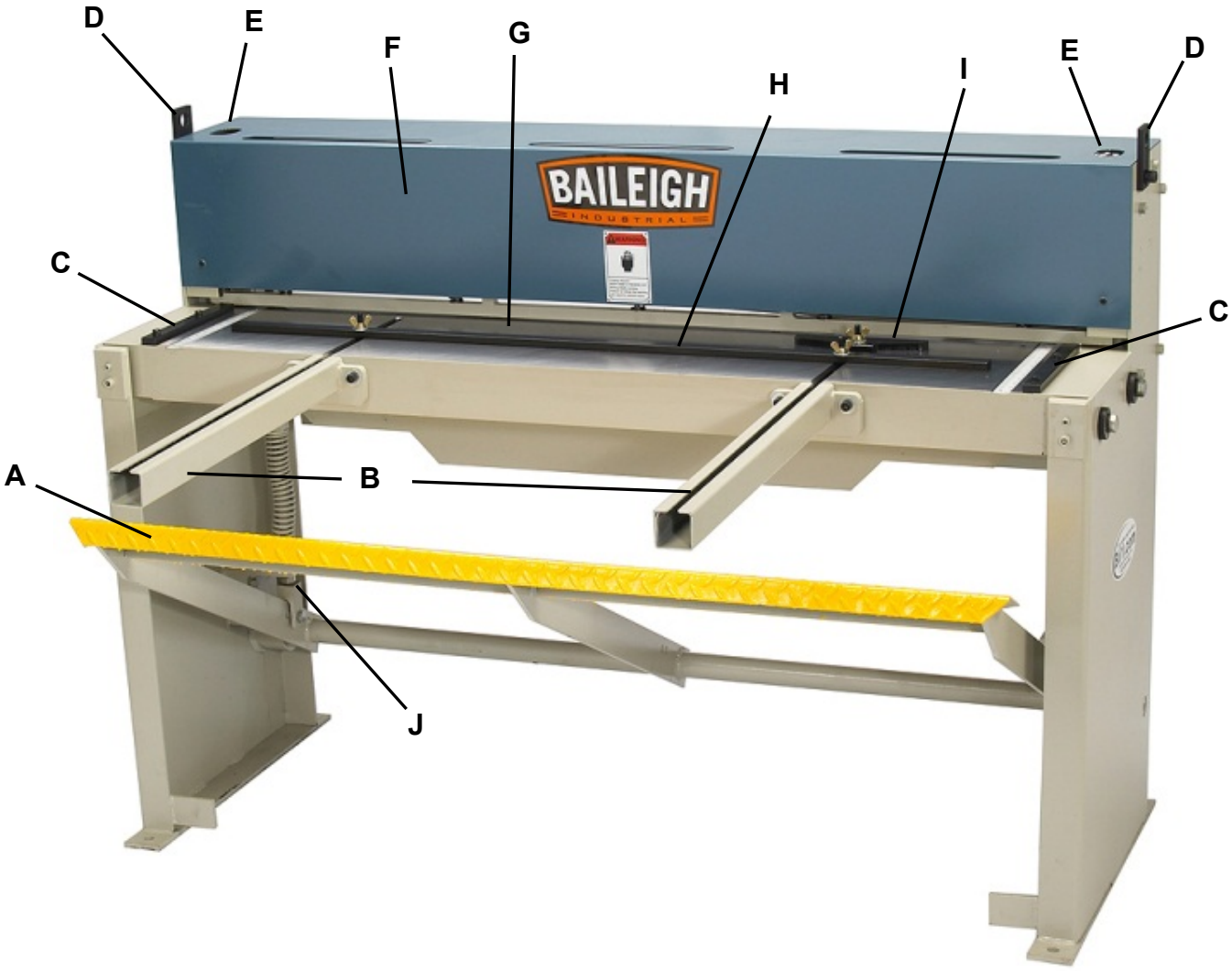


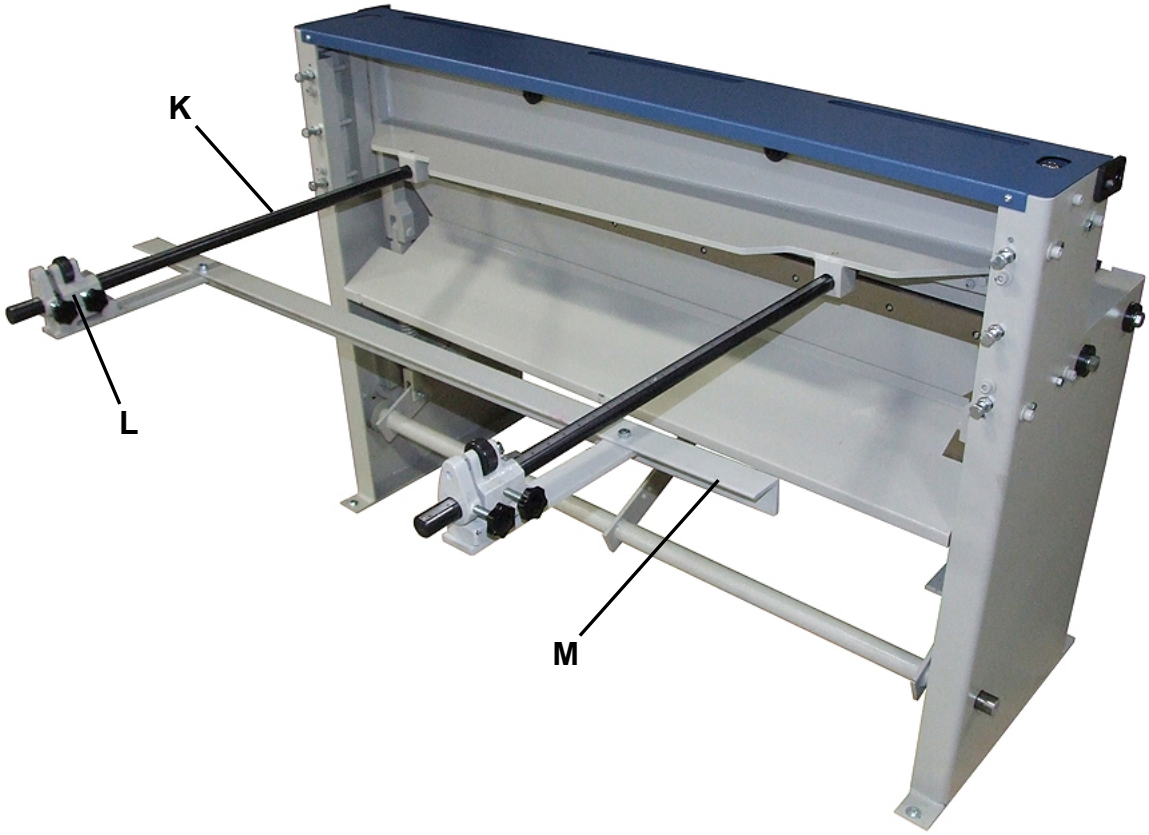
OVERALL DIMENSIONS





GETTING TO KNOW YOUR MACHINE

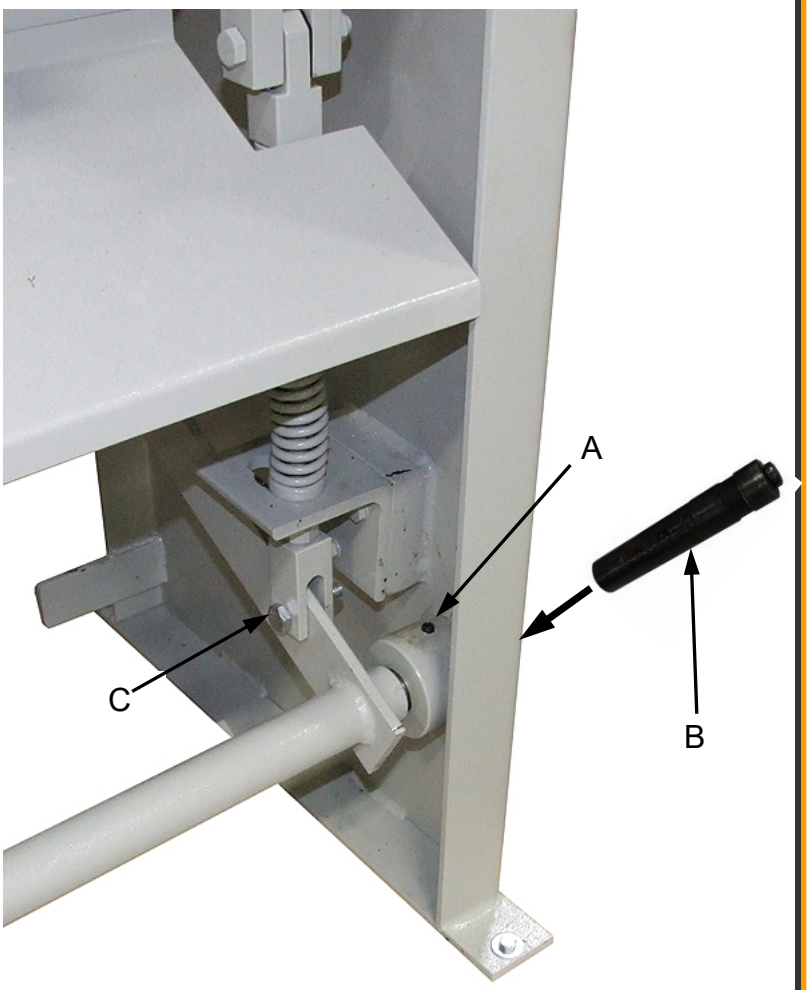




Item	Description	Function
A	Foot Pedal	Step on the pedal to complete the cut
B	Material Support Arm	Supports larger sheets of material
C	Graduated Side Gauge	Keeps material perpendicular to blade
D	Lifting Brackets	Used for lifting machine
E	Oiling Cap	Access to oiling the top blade slide
F	Hold Down Cover	Covers hold downs and upper blade travel
G	Shear Table	For sliding material into shear blades
H	Front Gauge	Provides a stop for material entering blades
I	Miter Gauge	Provides a stop for material to be cut at an angle
J	Blade Return Spring	Dual springs to raise top blade to up position
K	Graduated Back Gauge Slide Shafts	Used to support micro-adjust and back stop
L	Micro-adjuster	Use to accurately set back stop position
M	Back gauge stop	Set and use for repeat shearing

MACHINE ASSEMBLY

Foot Pedal Installation



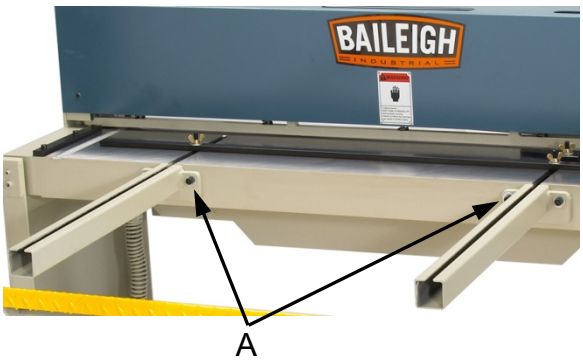
1. Loosen the set screw (A) on each pedal pivot pin (B) and slide the pin out of the pivot block.
2. Lightly grease the inside of the pivot tube on each end of the pedal assembly about 3”-4” (76-101mm) deep.
3. Move the pedal into position between the legs of the shear.
4. Lightly grease the pivot pin and insert the pivot pins on each side until the end of the pin is flush with the outside surface of the frame. Secure the set screws.
5. Raise the foot pedal and using the bolt (C) in the clevis, connect the clevis to the hole closest to the pivot tube and install and tighten the bolt.

***IMPORTANT**: The clevis must be attached to the same holes on each side. Connecting the clevis to different holes will cause the blade to travel at different distances on each end of the blade causing binding and damage to the gibs.*

6. Verify that the table and blade are clear of any obstructions and press down on the foot pedal to test the operation. The pedal should travel to the stops and return smoothly and freely.

Installing Front Extension Rails

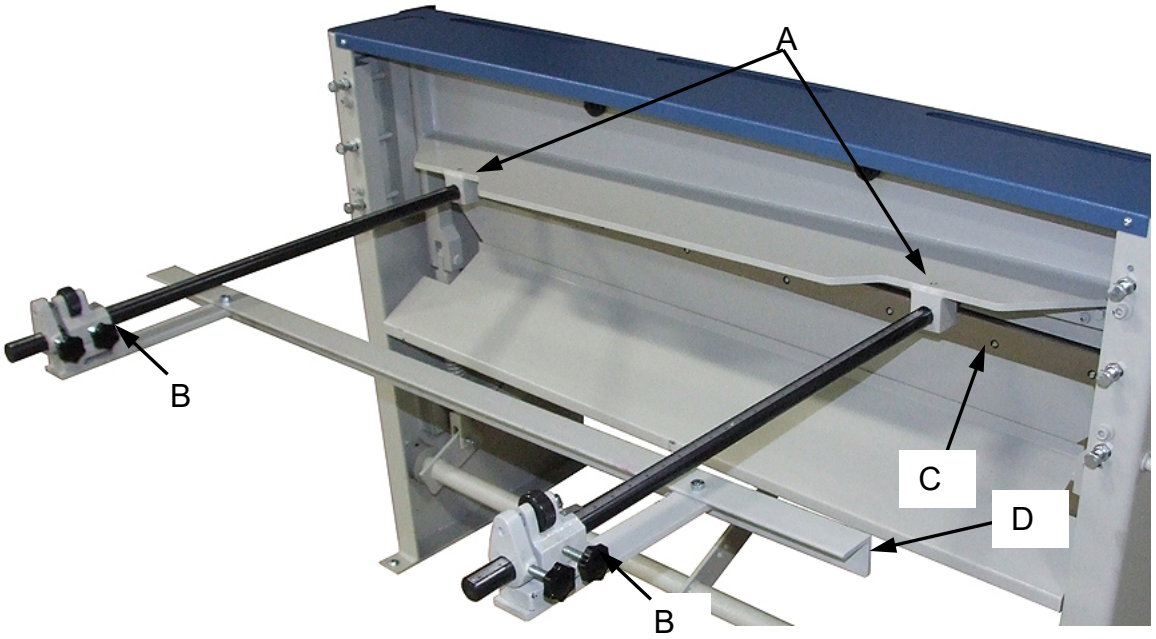
1. Remove the (4) cap screws and flatwashers (A) to the machined rail pads.
2. Position the rail onto the mounting pads and loosely install the capscrews and flatwashers.
3. Line up the rail channel with the channel on the table, making sure the top machined surfaces are flush.
4. Tighten the capscrews making sure the rails stay aligned to the table.

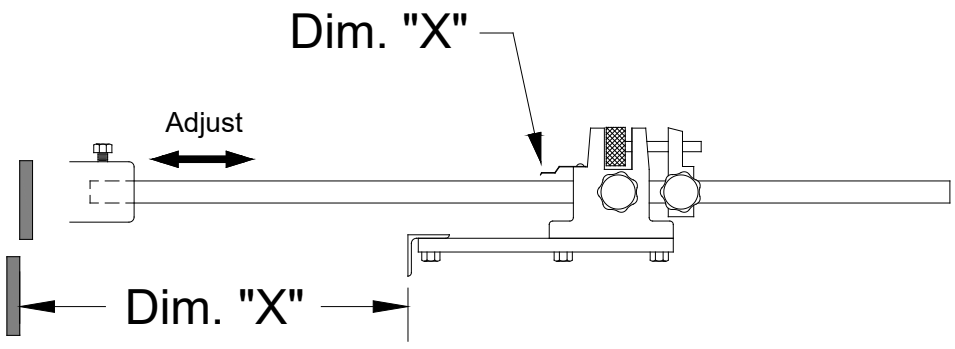


Installing the Rear Gauge Shafts

Note: *When using for the first time, verify the dimension "X" from the face of the lower blade to the front edge of the stop angle.*

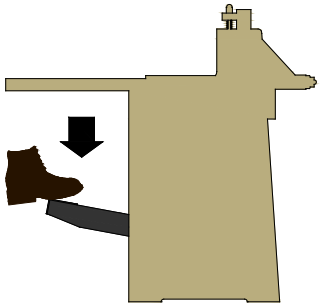
1. Slide the gauge shafts into the housing hole with the scales facing up and lightly tighten each set screw (A).
2. Slide the back stop assembly onto the shafts and using the scale, position them at the same exact location (distance). Secure them to the shaft using the hand knobs (B).
3. Measure from the back of the lower shear blade (C) to the front edge of the back stop (D). This is best if measured directly under the gauge shafts. It should match the dimension shown on the scale indicator.
4. Loosen the set screws (A) just enough to allow the shafts to slide in or out as needed until the measurement is exactly the same as the reading on the scale. Tighten the set screws.





MACHINE FUNCTIONS

Foot Pedal



Stepping down on the foot pedal does two things. First it lowers the hold downs which keep the piece part from moving during a cut. Second it lowers the top blade past the lower blade to shear the material.

Front and Rear Extension Rods

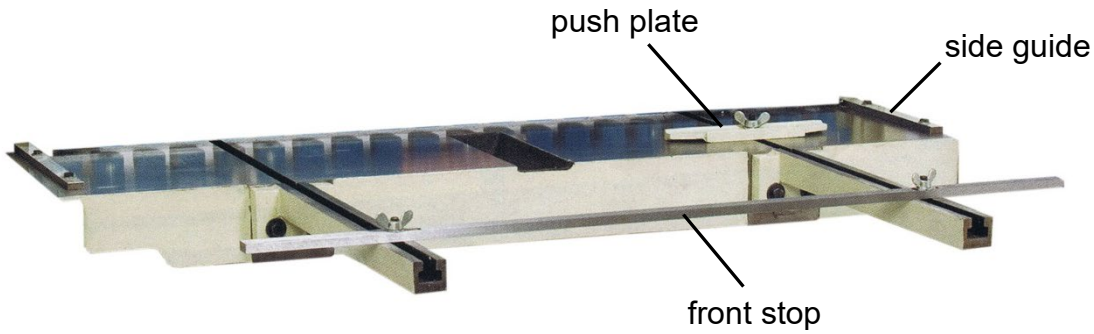
The front extensions help support large sheets of material and the rear extensions provide support for the micro-adjusters.

The Rear Stop Angle

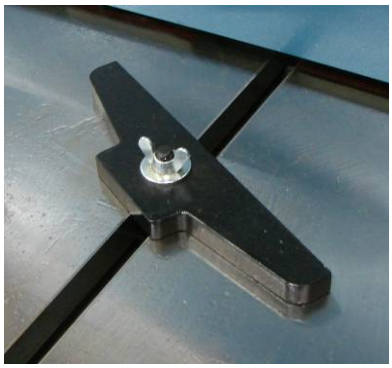
When doing repetitive shearing the stop angle can be set at a precise dimension using the scales and the micro-adjusters. It also helps to keep the piece part aligned to the blades.

Stops and Guides

The front stop and small piece push plate are easily adjusted with wing nuts. The front stop bar is slotted which allows it to be positioned at an angle while in the T-slot. The push plate slides in either T-slot and can be rotated for angle shearing of smaller piece parts.



Miter Angle Guide



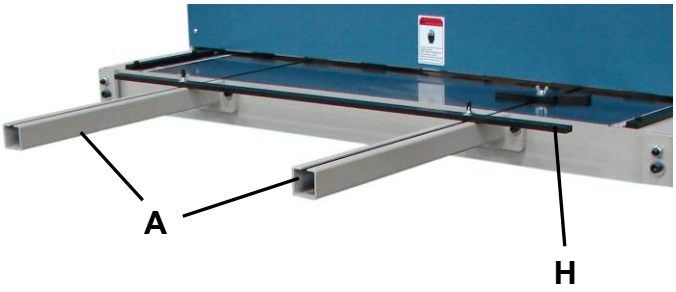
To use the miter angle guide:

- Loosen the wing nut.
- Lay your piece part against the straight edge.
- Position the miter guide at the angle and distance you required from the shear blades.
- Make the cut.

Material Support Arm

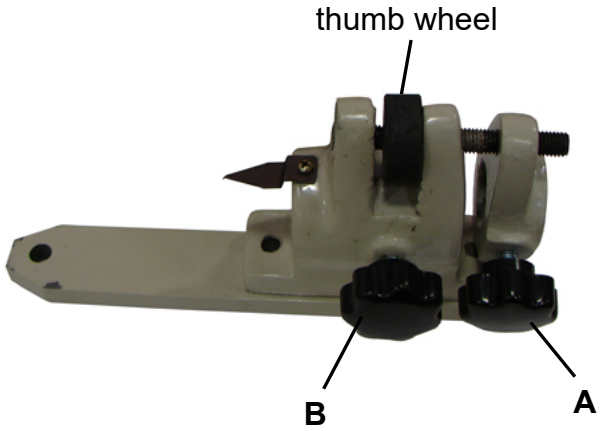
CAUTION: When handling large piece parts, you may require assistance in handling the piece as it exits the blades. Failure to adequately support the piece part may result in the piece falling and causing bodily injury.

The two material support arms (**A**) attach to the front of the shear. Remove the capscrews and washers, Position each arm and secure with the washer and capscrew. (Make sure the arms are centered to the table slots and are flush with the top of the table.) The front gauge (**H**) can now be inserted in the arm slots.



Micro-Adjusting Stop

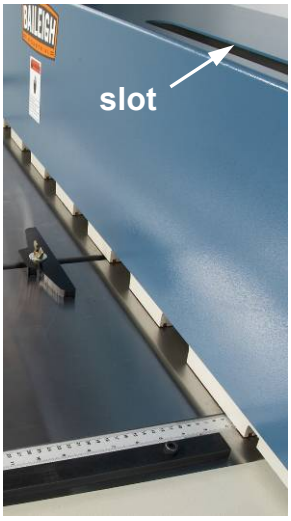
These adjustable stops allow for accurate placement of the stop angle. Set the stop close to where you need to be on the graduated scale. Finger tighten knob “A” to secure the back housing to the shaft. Make sure knob “B” is loose. Turn the thumb wheel to position the front half of the housing which has the indicator. Turn knob “B” (**cw**) clockwise to hold in position. Repeat for the other side.



SHEARING CYCLE

⚠ WARNING: Always wear proper eye protection with side shields, safety footwear, and leather gloves to protect from burrs and sharp edges.
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.

1. When planning your cut, either scribes a line on the material or use the side scale which measures the distance to the blade.
2. The scale is graduated in both inches and millimeters.
3. If you have a scribed line, use the slot (shown) to sight the line to the edge of the blade.
4. In both instances, use the side guide to square the material to the blade.
5. After the material is lined up, step on the foot pedal to make the cut.
6. If you are making multiple pieces of the same length, set the rear stop to the length needed.
7. If the material exceeds the length of the extension arms, be sure and provide additional support.



Shearing Tips

1. To achieve the best results, never shear a piece narrower than 8 times the thickness of the material. An example would be a 1/2” (12.7mm) strip of 16ga. (.059”) (1.5mm) mild steel.
2. Keep the blade gap as narrow as possible. The blade gap is the space between the blades passing each other during a stroke. Tighter blade gaps cut material without rolling it over. Using a blade gap too narrow for thicker material prevents the material from moving between the blades and stalls the cut. On the other hand, a gap too wide will cause the material to fold over. The wide gap for thinner material does not set the blades close enough to cleanly cut the material.

LUBRICATION AND MAINTENANCE

⚠ WARNING: Make sure the air supply 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

- Inspect the airline.
- Check the foot switch hose for any loosening or damage.
- Check that all bolts and nuts are secure.
- Keep area around machine clear of debris.

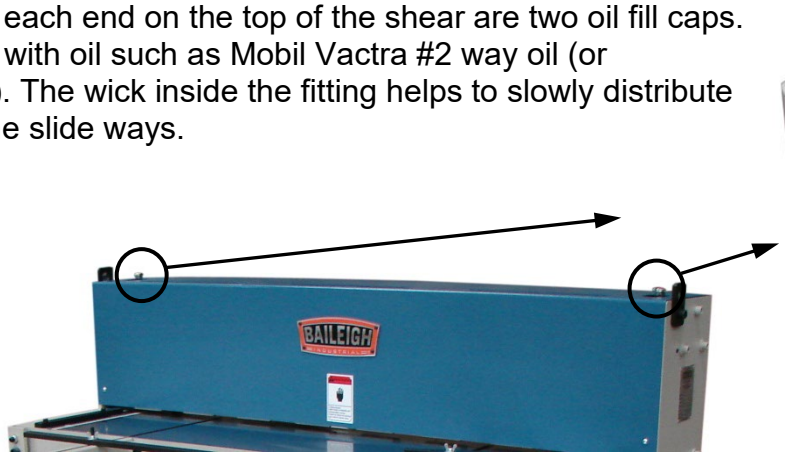
Weekly Maintenance

- Make sure limit switches are secure and adjusted properly.
- Check hydraulic hoses and fittings for leakage.
- Make sure grease fitting locations are kept lubricated.
- Check back gauge components for lubrication.

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

Lubrication Locations

Located at each end on the top of the shear are two oil fill caps. Keep filled with oil such as Mobil Vactra #2 way oil (or equivalent). The wick inside the fitting helps to slowly distribute the oil to the slide ways.



REPLACING THE SHEAR BLADES

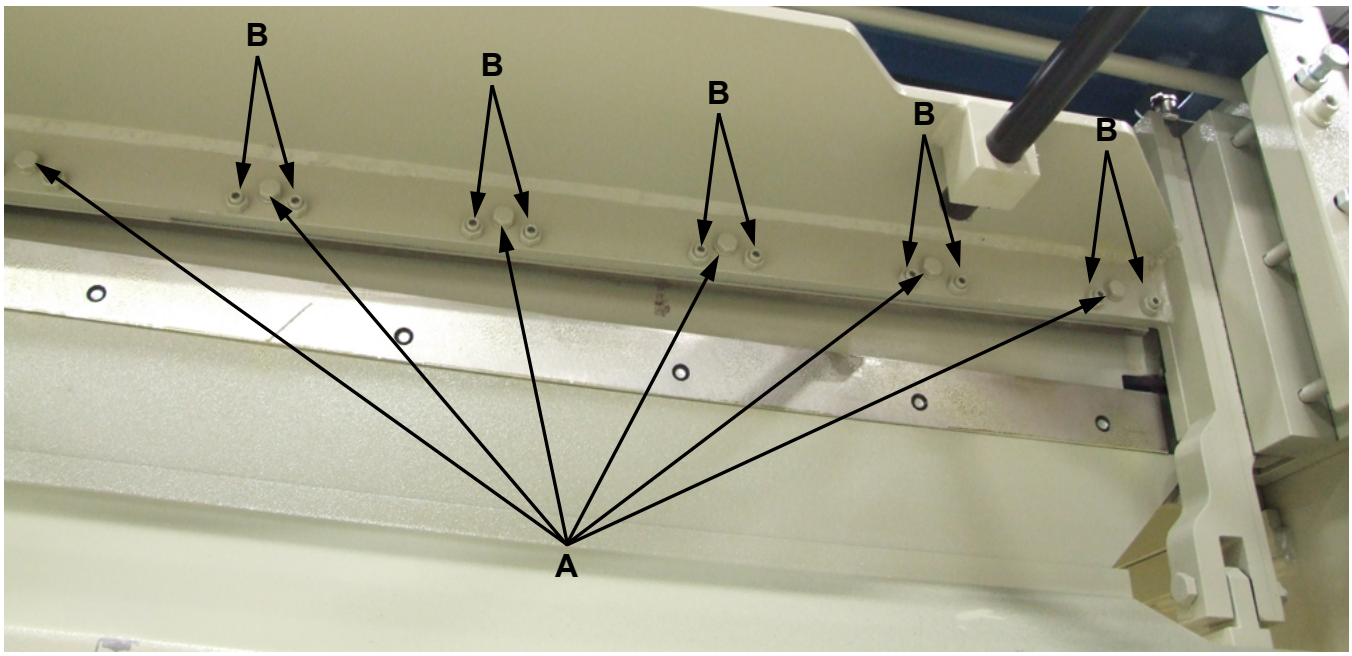
The blades on the Baileigh SF-5216 have multiple usable edges. If you have not already used both cutting edges on the top blade you can rotate it end for end to expose a sharp edge. The bottom blade has four usable edges. After all edges have been used, the blade can be reground or replaced.

IMPORTANT: Removing and installing the shear blades is a two-person operation. Make sure there is someone available to assist in handling the blade, so it does not fall and get damaged.

To Rotate or Replace the Top Blade:

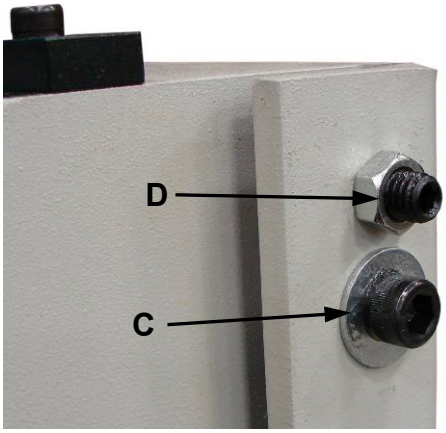
WARNING: The shearing blades pose an amputation hazard. Always wear proper safety footwear and leather gloves to protect from burrs and sharp edges. Failure to follow this warning could result in severed or crushed fingers.

1. Raise the top blade to the up position.
2. Ensure that the pedal cannot be moved down while servicing the blades.
3. Remove the 9 capscrews and washers (A) that hold the blade in place.



4. Turn the blade end for end if the other side is sharp or replace the blade.

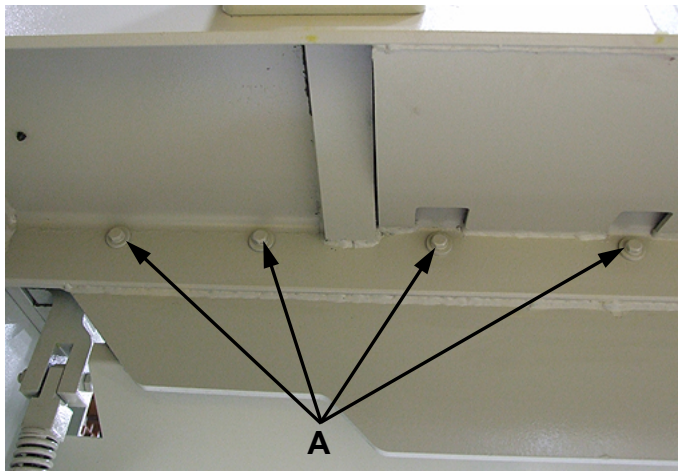
5. When the blade is in position, secure with the bolts and washers that were removed previously.
6. Set the gap to .005” (.12mm) making sure the blades are parallel along the entire length.
7. The blade gap adjustment screws (B) were preset at the factory. **ADJUST ONLY IF ABSOLUTELY NECESSARY.**
8. To adjust, loosen the hex nut and turn the setscrew clockwise (**cw**) to close the blade gap and counterclockwise (**ccw**) to open the gap.
9. After adjustment re-tighten the hex nut.
10. Blade clearances can also be adjusted by moving the table IN or OUT.
11. To push the table IN (closing the blade gap); loosen bolts on the side of the table (not shown) and then loosen the socket bolt (C).
12. Loosen the nut on socket screw (D) and turn the setscrew clockwise (**cw**). To pull the table back (opening the blade gap), back-off setscrew (D) and turn socket bolt (C) clockwise (**cw**).
13. Check clearances after tightening the table bolts (not shown).



To Rotate or Replace the Bottom Blade:

WARNING: The shearing blade poses an amputation hazard. Always wear proper safety footwear and leather gloves to protect from burrs and sharp edges. Failure to follow this warning could result in severed or crushed fingers.

1. Raise the top blade to the up position.
2. Ensure that the pedal cannot be moved down while servicing the blades.
3. To remove the blade, take out the (nine) hex bolts (**A**) and washers as shown below.
4. Turn the blade if you have not already used all four cutting edges, or replace the blade with a new one.
5. When in position, secure the blade with the bolts and washers. The bottom blade has no adjustment.
6. Check that the clearance between the upper and lower blades is at .005” (.12mm) and that the blades are parallel to each other along the full length.
7. The blade gap adjustment screws (**Y**) were preset at the factory. **ADJUST ONLY IF ABSOLUTELY NECESSARY.** To adjust, follow the steps listed in the instruction for replacing the top blade.



BLADE CARE

The blades are made from High Carbon / High-Chrome Alloy tool steel. The multiple shearing edges available will prolong blade life considerably. NEVER allow the blades to contact one another. Lubricate the blade with lite oil when shearing stainless steel or galvanized material. Brush oil on the lower blade as the upper blade will pick up oil during the shearing cycle. It is very important to keep the blades sharp. Turn or change the blades when you begin to notice a burr on the sheared piece part. It is a good idea to keep a spare set of blades on hand so as not to hold up your operation.

RAM WAYS ADJUSTMENT

The ram ways are adjustable to compensate for wear which can be expected after years of service. Premature wear can occur if the machine is not properly leveled which causes a twisting action.

The proper running clearance should be from 0.001” - 0.002” (0.038mm - 0.050mm). This clearance should be checked periodically and maintained to extend blade life and to hold accuracy of the shear.

Adjustment Procedure

1. Shut down and lockout power to the machine.
2. Loosen the jam nuts on all four hex bolts.
3. Turn in the two center hex bolts clockwise (**cw**) to take up any excess play.
4. Turn in the top and bottom hex bolts clockwise (**cw**) until they strike the wear plate, and then back off 1/16 of a turn counterclockwise (**ccw**).
5. Back-off on the two center hex bolts until they come in line with the top and bottom hex bolts.
6. Tighten all four jam nuts.
7. Using a feeler gauge between the wear plate and the ram guide check for a clearance of .001” - .002” (.038mm - .050mm). Adjust if necessary.
8. Repeat this procedure for the opposite side of the shear.

FINGER GUARD

⚠ WARNING: DO NOT remove the finger guard under any circumstances. It is provided to keep your fingers away from the blades. NEVER put any part of your body under or behind this guard and in the path of the hold downs which can crush.

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.

MATERIAL EQUIVALENCY CHART

	16 Ga.	18 Ga.	20 Ga.
Mild Steel	.060" (1.52mm)	.048" (1.22mm)	.036" (.91mm)
Stainless Steel	—	—	.031" (.78mm)
Cold Rolled Steel	.048" (1.22mm)	.035" (.89mm)	.030" (.76mm)
Aluminum	.100" (2.54mm)	.090" (2.28mm)	.063" (1.60mm)
Soft Brass	.072" (1.83mm)	.064" (1.63mm)	.051" (1.29mm)
Half Hard Brass	.064" (1.62mm)	.051" (1.29mm)	.036" (.91mm)
Hard Brass	.054" (1.37mm)	.051" (1.29mm)	.036" (.91mm)
Bronze, Annealed	.064" (1.62mm)	.051" (1.29mm)	.040" (1.02mm)
Soft Copper	.072" (1.83mm)	.064" (1.62mm)	.051" (1.29mm)
Hard Copper	.064" (1.62mm)	.051" (1.29mm)	.040" (1.02mm)

BLADE CLEARANCE

The blade gap on the shear was set at the factory. At this setting it will shear mild steel up to 16ga. (1.52mm) and stainless steel up to 20ga. (.912mm). To measure the blade gap, gradually lower the top blade and measure the gap going from left to right while facing the rear of the machine. The gap should be .005” (.12mm) with the blades perfectly parallel all the way across the cutting edges. The chart below shows the suggested blade clearances with .005” (.13mm) as the average between .002” (.05mm) and .009” (.23mm).

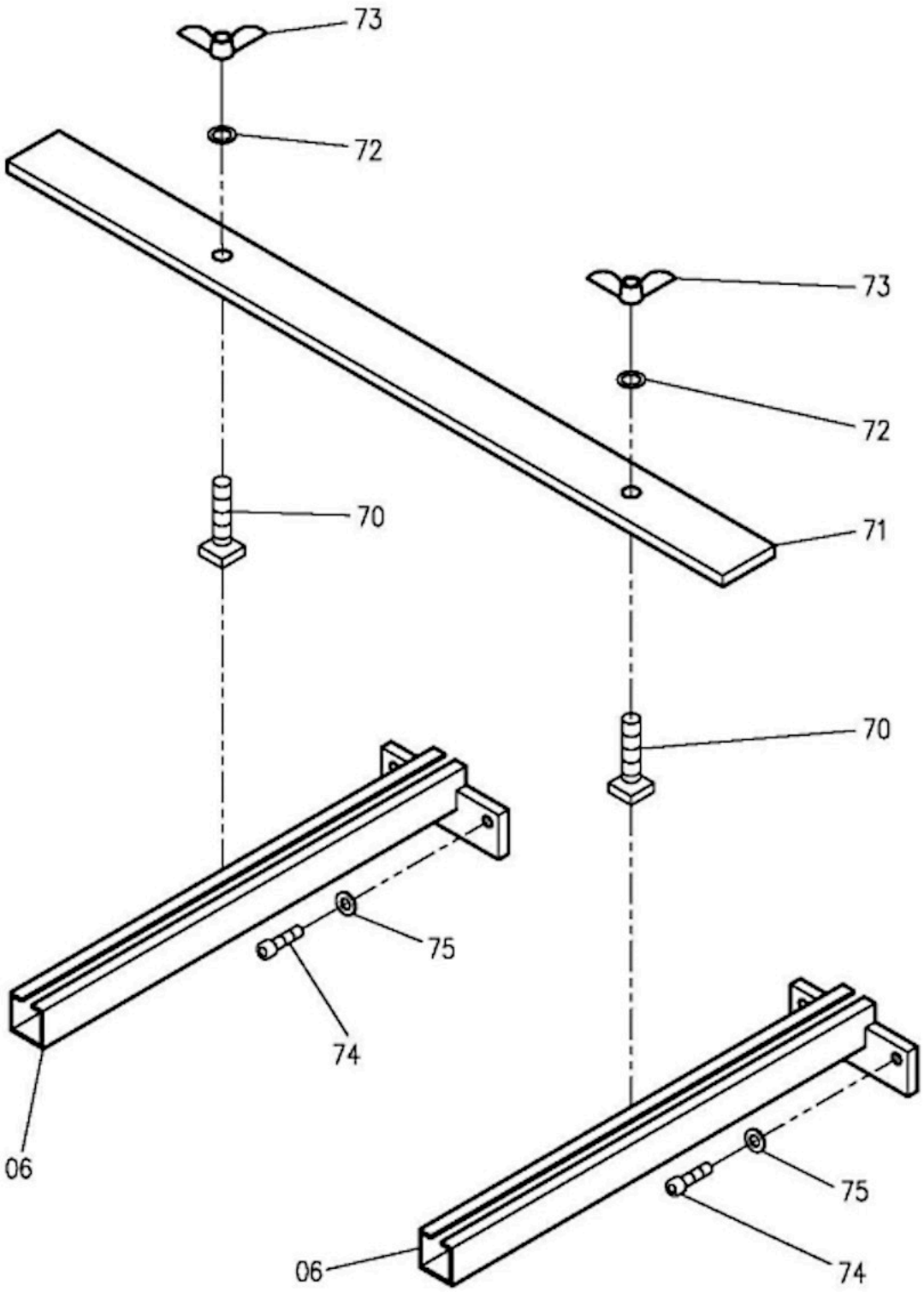
SUGGESTED BLADE CLEARANCE	
METAL THICKNESS	BLADE CLEARANCE
Up to 16 ga	.002" - .005" (.05mm - .13mm)
14 ga.	.003" - .006" (.07mm - .15mm)
12 ga.	.004" - .008" (.10mm - .20mm)
10 ga.	.006" - .009" (.15mm - .23mm)

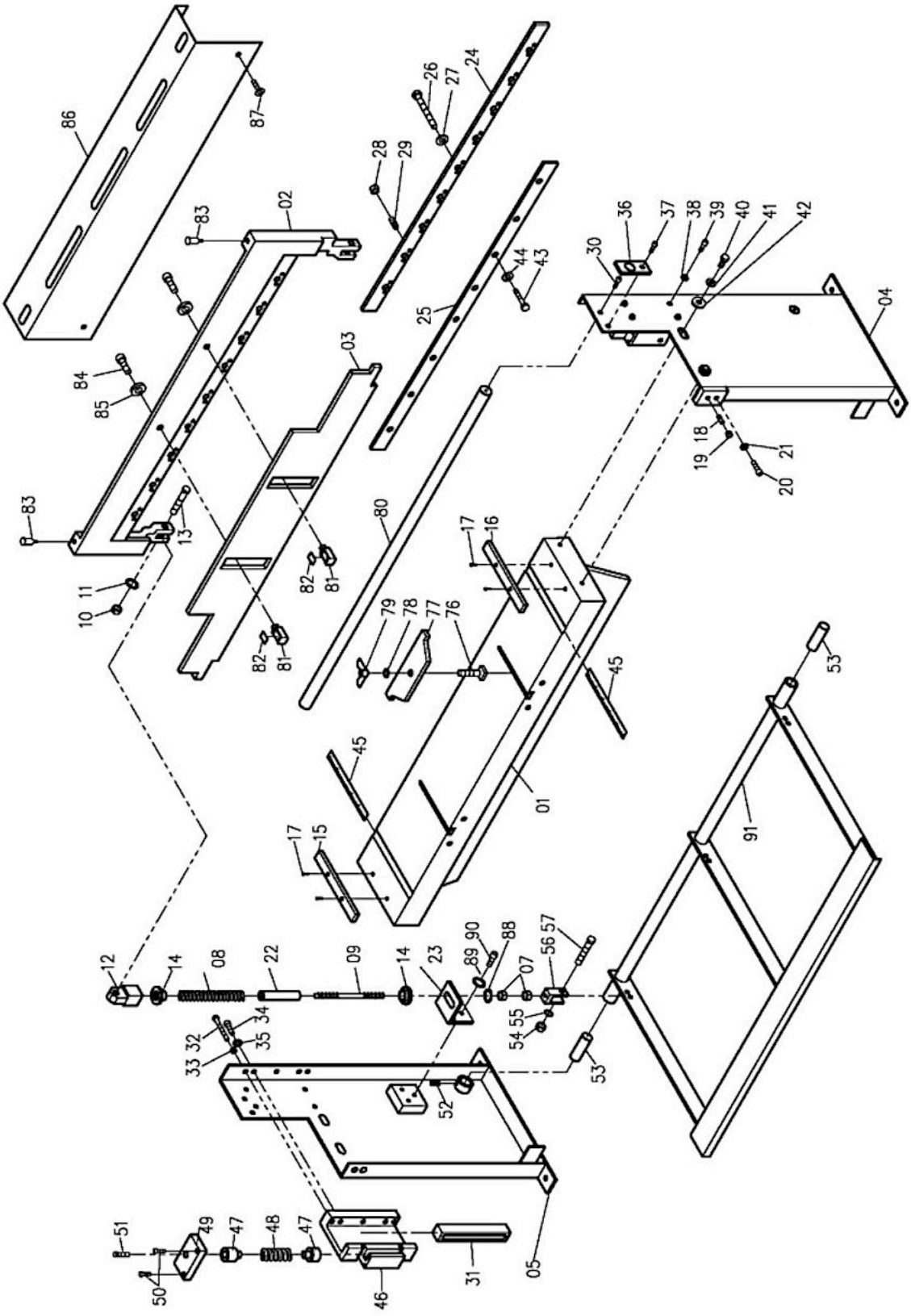
Under no circumstances do you want the blades making contact with each other as this can cause blade breakage as well as premature dulling of the cutting edges.

SHEARING STRENGTH OF MATERIALS		
MATERIAL	TONS/SQ. IN.	FACTOR
Mild Steel (.25 Carbon)	25	1.00
Mild Steel (.50 Carbon)	30	0.83
Stainless Steel	38	0.65
Boiler Plate	30	0.83
Spring Steel (1.99 Carbon)	42	0.60
Tool Steel - Not Tempered (1.20 Carbon)	45	0.56
Tool Steel - Tempered (1.20 Carbon)	95	0.26
Nickel Steel (0.5% Nickel)	41	0.61
Aluminum Sheet	10	2.50
Brass	13	1.92
Copper	12.5	2.00
Lead	1.5	16.67
Tin - Coated Sheet Steel	25	1.00
Zinc	8.5	2.94
Galvanized Steel Sheet	25	1.00

***Note**: **How to use this table:** The shear is rated 16 ga. (.0598”) in mild steel. What thickness can it cut of other materials?*
(0598) x (material factor) = materials thickness.

PARTS IDENTIFICATION DRAWING

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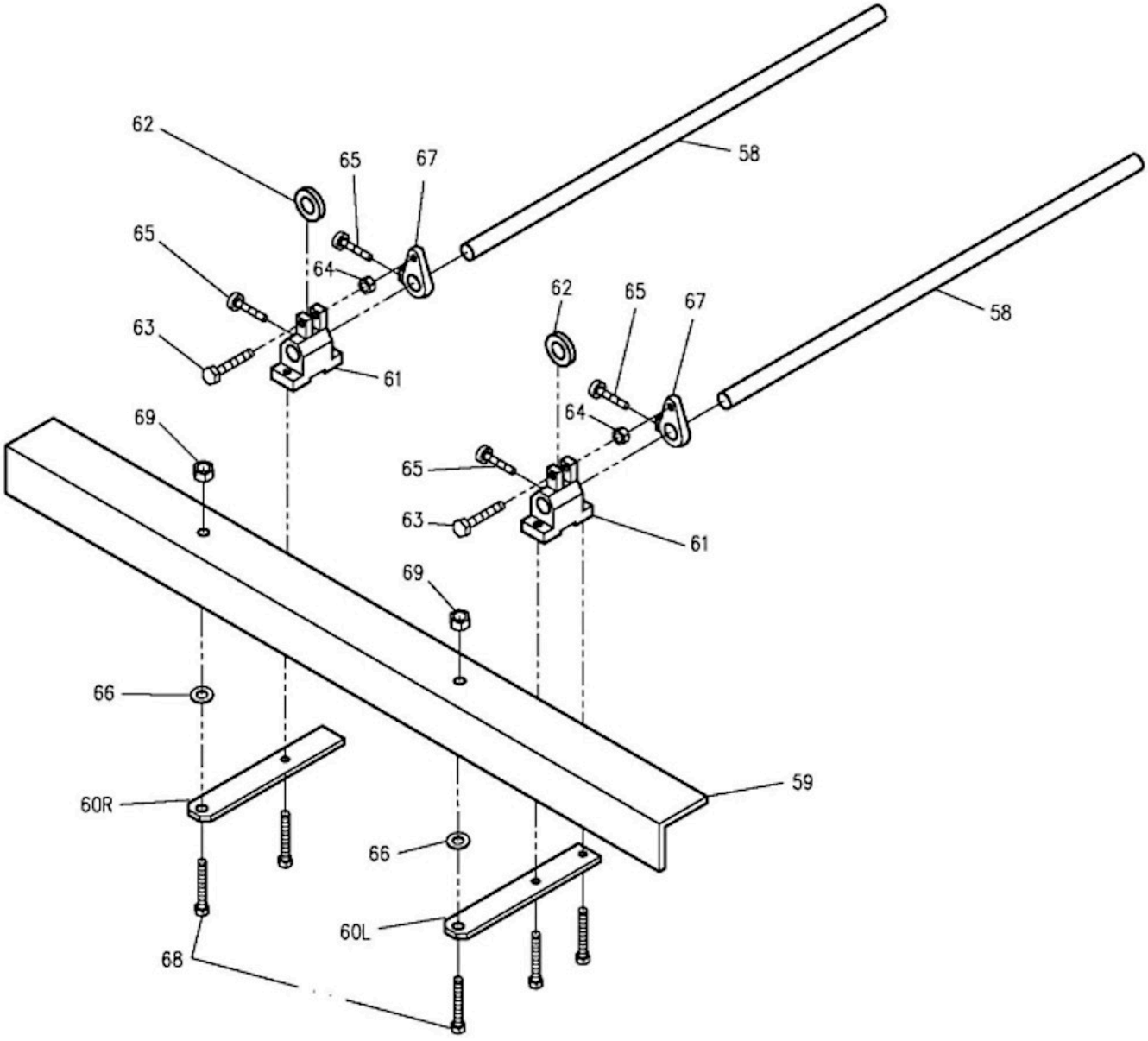
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Parts List

Item	Part No.	Description
1	SF5216-1	Table
2	SF5216-2	Cutter Bar
3	SF5216-3	Hold Down
4	SF5216-4	Right-Hand Slide Panel
5	SF5216-5	Left-Hand Slide Panel
6	SF5216-6	Front Arm Extender
7	SF5216-7	5/8" Nut
8	SF5216-8	Spring (602635)
9	SF5216-9	Stud 5/8"
10	SF5216-10	1/2" Nut
11	SF5216-11	1/2" Washer
12	SF5216-12	I Connection
13	SF5216-13	1/2" x 3" HHCS
14	SF5216-14	Spring Positioning Bushing
15	SF5216-15	Scale, Left -Hand Table
16	SF5216-16	Scale, Right -Hand Table
17	SF5216-17	5/16" x 1" SHCS
18	SF5216-18	3/8" x 1-1/2" SSS
19	SF5216-19	3/8" Nut
20	SF5216-20	3/8" x 1-3/4" SHCS
21	SF5216-21	3/8" Washer
22	SF5216-22	Bushing
23	SF5216-23	Spring Base
24	SF5216-24	Knife, Upper
25	SF5216-25	Knife, Lower
26	SF5216-26	3/8" x 1" HHCS
27	SF5216-27	3/8" Washer
28	SF5216-28	M10 Nut
29	SF5216-29	M10 x 25 SSS
30	SF5216-30	3/8" x 1" SHCS
31	SF5216-31	Slide Block
32	SF5216-32	M12 x 110 HHCS
33	SF5216-33	M12 Nut

Item	Part No.	Description
34	SF5216-34	M10 x25 SHCS
35	SF5216-35	DB10-2 Washer
36	SF5216-36	Hook Ring
37	SF5216-37	4" x 1" SHCS
38	SF5216-38	DB10-2 Washer
39	SF5216-39	M10 x 25 SHCS
40	SF5216-40	5/8" x 1-3/4" HHCS
41	SF5216-41	DB16 Washer
42	SF5216-42	Ø50 x Ø16 x 25 Washer
43	SF5216-43	3/8" x 1" HHCS
44	SF5216-44	3/8" Washer
45	SF5216-45	Table Ruler
46	SF5216-46	Slide Block Base
47	SF5216-47	Spring Positioning Bushing
48	SF5216-48	Spring (16 x 9.5 x 60)
49	SF5216-49	Cover
50	SF5216-50	M6 x 10 SHCS
51	SF5216-51	3/8" x 1-1/4" HHCS
52	SF5216-52	3/8" x 3/4" SSS
53	SF5216-53	Center Axle
54	SF5216-54	1/2" Nut
55	SF5216-55	1/2" Washer
56	SF5216-56	Y Connection
57	SF5216-57	1/2" x 1-3/4" HHCS
58	SF5216-58	Rod, Back Gauge
59	SF5216-59	Stop, Back Gauge
60R	SF5216-60R	Extender, Bar, Back Gauge Extended
60L	SF5216-60L	Extender, Bar, Back Gauge Extended
61	SF5216-61	Adjusting, Block, Back Gauge
62	SF5216-62	Adjusting, Dial, Back Gauge
63	SF5216-63	3/8" x 2-1/2" HHCS
64	SF5216-64	3/8" Nut
65	SF5216-65	Knob, Lock
66	SF5216-66	3/8" Washer
67	SF5216-67	Adjusting, Bracket

Item	Part No.	Description
68	SF5216-68	3/8" x 1" HHCS
69	SF5216-69	3/8" Nut
70	SF5216-70	"T" 3/8" Screw
71	SF5216-71	Stop, Front Material
72	SF5216-72	3/8" Washer
73	SF5216-73	3/8" Wing Nut
74	SF5216-74	3/8" x 1-1/2" SHCS
75	SF5216-75	3/8" Washer
76	SF5216-76	"T" 3/8" Screw
77	SF5216-77	Angel Gauge
78	SF5216-78	3/8" Washer
79	SF5216-79	3/8" Wing Nut
80	SF5216-80	Rod connecting
81	SF5216-81	Hold Down Strut Mount
82	SF5216-82	Hold Down Rubber
83	SF5216-83	1/8" Oil Cup
84	SF5216-84	3/8" x 1-1/4" SHCS
85	SF5216-85	DB10 Washer
86	SF5216-86	Head Cover
87	SF5216-87	M6 x 10 SSS
88	SF5216-88	5/8" Washer
89	SF5216-89	3/8" Spring Washer
90	SF5216-90	3/8" x 1-1/4" SHCS
91	SF5216-91	Running Board

TROUBLESHOOTING

FAULT	PROBABLE CAUSE	REMEDY
BURR ON SHEARED EDGE	Dull blades. Excessive blade clearance. Excessive clearance in ram ways. Poor grade of material.	Turn or sharpen blades. Adjust blade gap. Make adjustment to reduce clearance. Select vendor with better quality material that is consistent.
BLADE CAMBER, TWIST, and BOW	Bottom blade not level with table. Not enough hold down pressure. Dull blade.	Adjust blade with shims after grinding. Check springs and hold down pads. Turn or change blade.
KICK BACK of PIECE PART	Bottom blade not level with table. Not enough hold down pressure. Dull blade.	Adjust blade with shims after grinding. Check springs and hold down pads. Turn or change blade.

NOTES

NOTES

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