

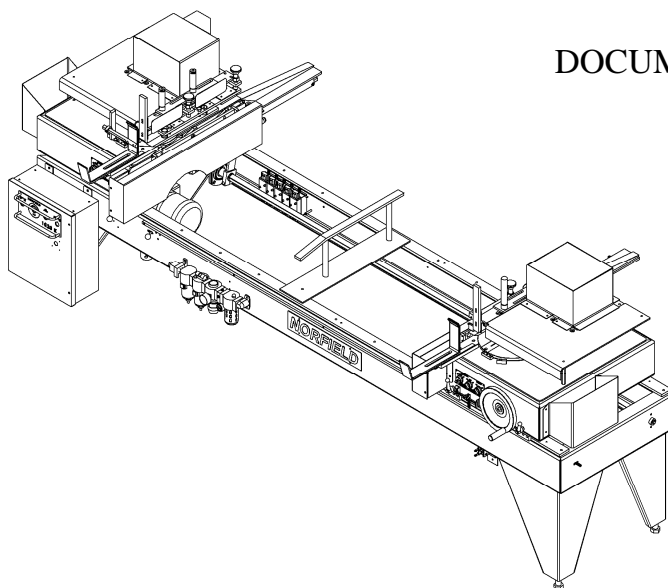
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## **1020/1020K DOUBLE END TRIM SAW**

### **PRODUCT AND OPERATIONS MANUAL**

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Norfield Industries

**P.O. Box 459**

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**Serial No:** \_\_\_\_\_

**Date Sold:** \_\_\_\_\_

*Norfield Industries* is the name that represents Quality, Reliability, Support, Innovation and True Customer Service. We have been dedicated to providing quality products and excellent customer service for more than 40 years. *Norfield Industries* has earned a reputation in the pre-hanging industry for setting standards for reliable machinery, full technical support, machine parts, full line industrial woodworking tools and supplies and a team of customer care representatives to support you! Our factory-trained technical personnel are ready to assist you on the telephone or in your shop.

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## INTRODUCTION

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Congratulations on your purchase of your *Norfield Industries* 1020 Double End Trim Saw. You can be assured that this machine was constructed and assembled to a set of rigid specifications by trained workers who take pride in the quality of their work. To safely operate this machine it is vital that you read and understand all safety and operator instructions.

The *Norfield Industries* 1020 Double End Trim Saw is designed to quickly and efficiently process door casings into the appropriate lengths for the door industry. Settings to adjust length and select miters are quickly made to minimize set-up time. Head or side casings can be processed with ease using front mounted controls. Undercuts of up to 15 degrees can be quickly set if needed to match jamb edge profile. An Infeed Hopper allows standard profile casing to be stacked and fed automatically into the machine. A moveable saw assembly mirrors a stationary saw and is used to cut, simultaneously, both ends of the casing to the desired length. Consistent operation at up to 30 pieces a minute can be sustained increasing the throughput needed for today's high speed machining centers. Add more functionality to the 1020 with the available Kerfing option.

A safety system including guards, saw-motor brakes, and mechanical/electrical E-stop functions are designed to provide operator safety.

Prior to shipment from our factory each *Norfield* machine is put through a series of tests and inspections to insure that you are provided with the highest quality product for your business.

In order for this machine to provide you with a long period of continuous and trouble free service, it is necessary that it be properly installed, operated, and maintained. We urge you to study the contents of this manual and be guided by the suggestions herein. We strongly recommend that a periodic review of the contents of this manual be made to maintain a high level of competency when operating this machine.

## SAFETY INFORMATION

**SAFETY****STOP!****Protect Yourself**

This manual contains information that is important to the safe operation of your Norfield equipment.

## LABEL AND DEFINITIONS



**DANGER** Danger indicates an imminently hazardous situation, which if not avoided, **WILL** result in death or serious injury.



**WARNING** Warning indicates a potentially hazardous situation which, if not avoided, **COULD** result in death or serious injury.



**CAUTION** Caution indicates a potentially hazardous situation which, if not avoided **MAY** result in minor or moderate injury. It may also be used to alert against unsafe practices.



**CAUTION** Caution without the safety alert symbol indicates a potentially hazardous situation which, if not avoided may result in property damage (i.e. not personal injury).



**NOTICE** Notice indicates important information that if not followed may **CAUSE** damage to the equipment.



**Mandatory Action** conveys an action step that should be taken to avoid the hazard.

**SAFETY**

**MUST READ SAFETY INFORMATION!****SAFETY****⚠ WARNING**

Read and understand the operator's manual before using this machine. Failure to follow proper operating instructions could result in death or serious injury.

**⚠ DANGER**

Do not operate this machine unless all guards are in place and working correctly. If any guards or hazard labels are missing or damaged call Norfield's Service department immediately and request a replacement at 800-824-6242.

**⚠ WARNING**

Only trained personal that have read and understand the operator's manual and all the safety precautions may operate this machine.

**⚠ WARNING**

This machine, when in operation, produces wood chips and dust. The operator and all persons in the work area **MUST** wear approved eye protection with permanently attached, rigid plastic side shields. These safety glasses must conform to ANSI Z87.1 standards and will have "Z87" printed on the lens.

**⚠ WARNING**

This machine, when in operation, produces a noise level greater than 85dB. The operator and all persons in the work area **MUST** wear approved hearing protection. OSHA has determined that a noise level in excess of 85dB average in 8 hours can cause permanent hearing damage. We recommend that hearing protection be worn even if the decibel level is below 85dBA.

**⚠ WARNING**

Certain types of wood dust can cause allergic reactions, Sawdust has been determined to be a **Group A** carcinogen by the International Agency for Research on Cancer (IARC). A dust collection system or an approved personal dust mask **MUST** be used during the operation of this equipment.

**⚠ WARNING**

This machine has moving parts that loose clothing and long hair can become entangled in. Take care not to become caught between the work material and the feed mechanisms or any other moving components.

**⚠ WARNING**

Inspect the machine at the beginning and end of each shift for damaged or cracked components such as, but not limited to, saw blades, router bits, drill bits, and boring bits.

**SAFETY**



**MUST READ SAFETY INFORMATION! (CONTINUED)****SAFETY****WARNING**

Never leave this machine unattended while it is in operation. Make sure that all electrical and air is in the off position when the machine is not in use or is unattended and that any cutting blades have come to a complete stop.

**WARNING**

Do not attempt to clean material from this machine until all the cutting blades have come to a complete stop. Even when the machine has been turned to the off position it may take up to several minutes for the blades to coast-down to a complete stop.

**WARNING**

Before beginning any service repairs, general maintenance, or adjustments you **MUST** follow proper Lockout Tag-Out procedures. OSHA regulation 1910.147 establishes a minimal lockout tag-out procedure to assist employers in development of their own procedures.

**WARNING**

Woodworking machinery is inherently dangerous, common sense and good safety practices are your best defense against injury.

**NOTICE**

If you have any questions regarding the correct operation of the machine and safety procedures in this manual call the Norfield Industries Service Department at 800-824-6242.

**SAFETY****S  
A  
F  
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## SPECIFICATIONS

## Electrical Requirements:

AC Line	Phase	Hertz	Amperage	Includes Vacuum
208V	3 $\phi$	60HZ	30 A*	
230V	3 $\phi$	60HZ	30 A*	
460V	3 $\phi$	60HZ	15 A*	
575V	3 $\phi$	60HZ	15 A*	
*Additional 115V-1 $\phi$ 60HZ 20 Amps With Kerfing Option required				

## Motor Specifications:

Application	Motor	HP	Amperage			Norfield P/N
			208V 3 $\phi$	230V 3 $\phi$	460V 3 $\phi$	
Saws	BALDOR M3550T	1.5	4.3	4.2	2.1	0693-016
Vacuum	JET DC1900	3	14.5	14.0	14.0	13-708
Routers	DEWALT DW616	1 3/4	11A @120V			15-174

Note: For 575v Motor Specifications See Electrical Schematic

<b>Air Requirements:</b>	22 cfm @ 90 psi	1/2" I.D. Minimum air line when <b>less than</b> 20 feet from compressor OR 3/4" I.D. minimum air line when <b>more than</b> 20 feet from compressor
<b>Vacuum Requirements:</b>	Min. 1900 cfm - 6" Duct	
<b>Approximate Weight:</b>	1600 lbs.	
<b>Space requirements:</b>	Width 9'6" x Length 18'0"	
<b>Machine Capacity Rate:</b>	30 Pieces Per Minute	

## Machine Capabilities:

<b>1020 &amp; 1020K (CASING &amp; BRICKMOLD)</b>	
Length	1'-6" To 8'-0"
Width	TO 3-1/2"
Thickness	3/8" To 1-1/2"
Undercut Angle	0 To 15 Degrees for square end cuts, 0 to 1 degree for miter cuts
Angle Of Cut	90 And 45 Degrees

## SECTION 1

### INSTALLATION

---

#### 1.1 SHIPPING DAMAGE AND SHORTAGES

Before and after the crated machine is unloaded from the truck the create should be inspected for any signs of damage. If suspected damage is found it must be noted on the bill of lading and signed by the driver and the person receiving the shipment. After the machine has been uncrated inspect it and all other contents of the crate for shipping damage. In the event that damage has occurred in transit notify the freight carrier and *Norfield Industries* immediately. Inspect the complete shipment against the packing slip to make sure all items listed are accounted for. If any shortages are noticed, the freight carrier and *Norfield Industries* should be notified immediately. While any shortages, other than back orders, or freight damages are the complete responsibility of the freight carrier, *Norfield Industries* desires to be notified so that the replacement of lost or damaged parts can be expedited.

#### 1.2 INSTALLATION

The information in this chapter refers to the installation and setup of the *Norfield* 1020 Double End Trim Saw. Since the purchase of the machine includes a startup by a Field Service Technician, the following six items must be accomplished before the Technician arrives:

1. Review the pre-installation packet that was sent prior to the shipment of your new machine.
2. Uncrate the machine and inspect for shipping damage and shortages.
3. Position the machine in its permanent location.
4. Provide the proper electrical supply and make connections.
5. Provide the proper air supply and make connections.
6. Install Lockout/tagout devices on all power sources at the machine.
7. DO NOT TURN ON POWER UNTIL THE SERVICE TECHNICIAN ARRIVES-doing so may VOID your warranty.

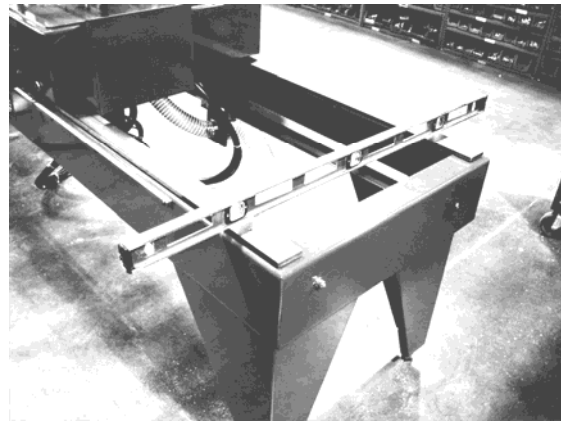
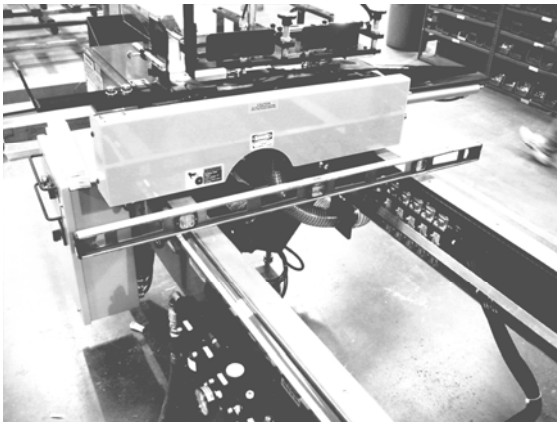
#### 1.3 POSITIONING THE 1020 DOUBLE END TRIM SAW

With the use of a forklift move the machine to its permanent position within your shop. This space should have been predetermined and power and air must be installed prior to the Service Technician's arrival.

## 1.4 LEVELING

It is important to level the machine across the two ends so that there is no twist or strain on the frame rails. This machine will not function properly if the frame is twisted. It is also desirable to level the machine from end to end.

1. Place the level down the length of the front frame rail. Level the machine by adjusting either of the two front leveling feet until the machine is level.
2. Next level the machine across one of its two ends. Place a level across one end of the frame as shown.
3. Adjust the back leveling foot of the end that you are working on until that end of the machine is level.
4. Next move the level to the opposite end of the machine and place the level across the frame as shown.
5. Adjust the back leveling foot of the end that you are working on until that end of the machine is level.
6. Check the entire machine to make sure that it is level across its entire frame.



## 1.5 ELECTRICAL

Before connecting any electrical power to the main electrical enclosure, be sure that the characteristics labeled on the enclosure match those of your service. Refer to the drawing that was included in the pre-installation packet that was sent prior to this shipment or to the electrical schematic in **Appendix B** of this manual.

## 1.6 AIR SUPPLY AND CONNECTION

In order for the machine to perform properly, the quick-disconnect to the machine must be at least 3/8" inside diameter. Refer to specification section for further information.

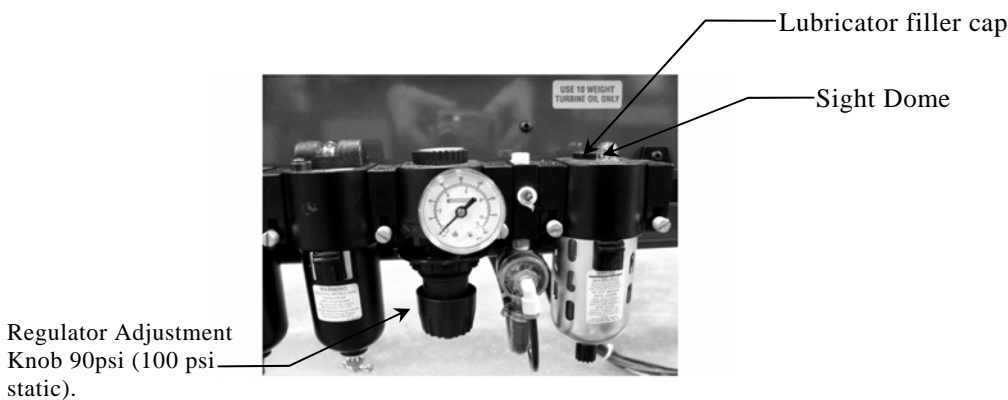
A Filter-Regulator-Lubricator (FRL) unit has been installed on your machine to prolong the life of the machine. The FRL is designed to work with adequate mainline filtration and drainage (refer to **Appendix C**). We also recommend the use of an air drying system to protect all your air tools and equipment.

### NOTICE

Clean Dry Air (CDA) is important. Air operated tools and equipment require CDA for top performance and low maintenance. Foreign material such as dirt, grit and pipe scale generally present in airlines can cause severe abrasive wear in valves and cylinder walls.

## 1.7 FRL SETTINGS AND TYPE OF OIL

Adjust the regulator so that it maintains at least 90 psi during operation of the machine (100-psi static). For approximately every 33 drops of oil observed at the drip tube in the sight dome, only one drop of oil will remain in suspension for down stream lubrication, therefore do not under lubricate. Set the drop-type lubricator so that one drop occurs for every cycle of the machine. Adjustment of the drip rate is accomplished using a small screwdriver. Turn the screw, located next to the lubricator filler cap, counterclockwise to increase drip rate, clockwise to decrease the drip rate. Only use 10WT turbine oil in the lubricator.

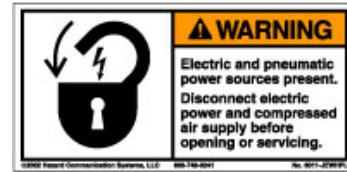


## 1.8 DUST COLLECTOR (OPTIONAL)

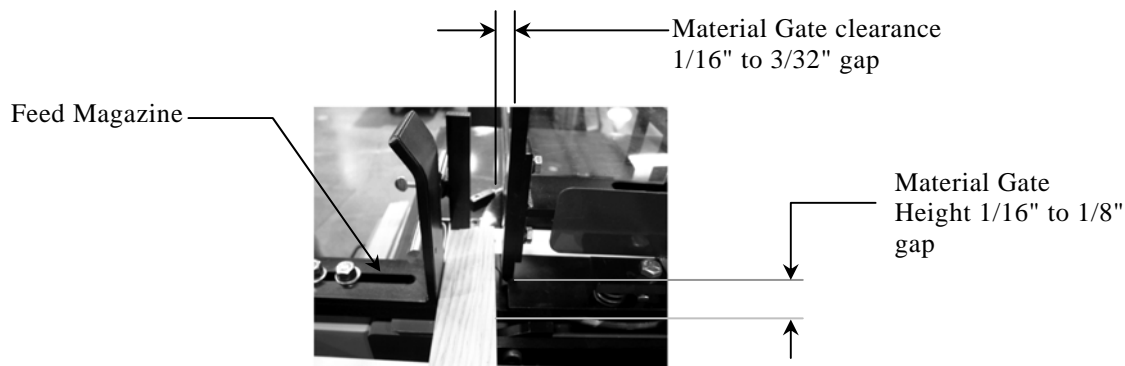
If the dust collection option was purchased with this *Norfield* 1020 Double End Trim Saw, or if you wish to connect this machine to an existing in-house dust collector, an 8 inch diameter hose is required. If the optional dust collector was purchased with this machine refer to electrical schematic in **Appendix B** for additional power requirements.

## 1.9 BASIC INSTALLATION ADJUSTMENTS

Your new *Norfield Industries* machine has been carefully adjusted at the factory prior to shipment, however we recommend that you check the following initial perimeters to insure proper operation before running any material through the machine for the first time.

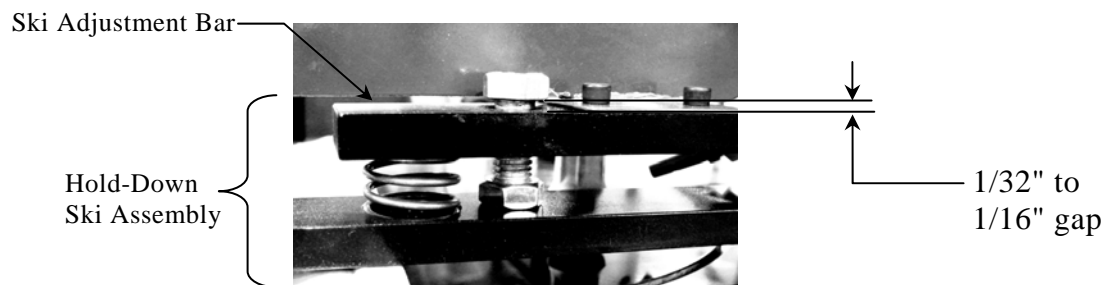


To check the Magazine width, place a piece of material into the Magazine and hold it against the Feed Magazine, measure the distance between the material and the Material Gate; there should be 1/16" to 3/32" clearance. Refer to Section 2 if any adjustment is required.



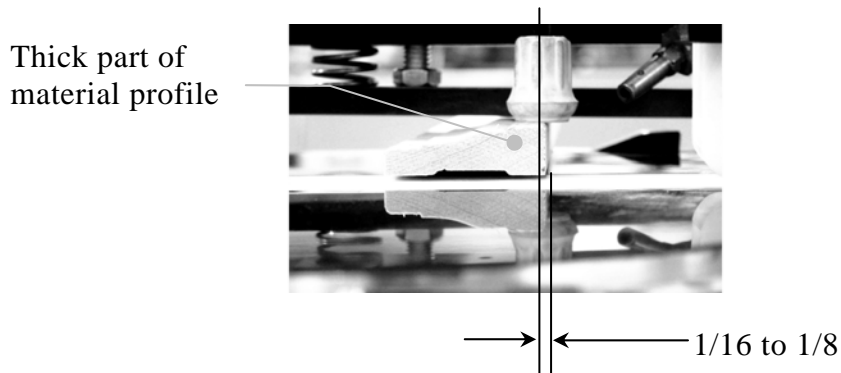
To check the Material Gate height clearance. Manually push the material under the gate opening. Measure the distance from the edge of the gate opening to the thickest part of the material's profile; this distance should be 1/16" to 1/8" max. Refer to Section 2 if any adjustment is required.

Next, check the Hold-down Ski heights. Manually push the material with the two feed assemblies into the Hold-down Ski Assembly. Measure the distance from the bottom of the 1/2" hex head bolt to the top of the Ski Adjustment Bar. This distance should be 1/32 to 1/16" max. Refer to Section 2 if any adjustment is required.



## 1.9 BASIC INSTALLATION ADJUSTMENTS (CONT.)

Next, check the position of the Crutch Tip. To do this, manually raise both Crutch Tips until they stop. Using the two Feed Assemblies manually push the material forward until the feed assembly comes into contact with the stop. Lower the crutch tips so that they contact the material. The center of the Crutch Tip should contact the thickest part of the profile of the material 1/16" to 1/8" in from the leading edge. Refer to Section 2 if any adjustment is required.



After noting and checking all the above items and making any necessary changes, turn the main air on, start the saws, start the kerfing unit (if applicable), and then lift the Cycle Start Lever to begin operation. Let the machine cycle at least 6 times before loading the magazine. Place material into the magazine only during the return stroke of the feed mechanism, or after the feed dog has gone forward away from the magazine. If you wish at any time to stop the machine operation, push the Cycle Start Lever back down to the off position.

Using the **Cycle Start Lever** is the recommended way to stop normal operation of the machine. This is not an Emergency Stop, as the saw will complete the remainder of its present cycle.

The **Emergency Stop** switch is located on the Electrical Enclosure, and when depressed will halt all operations. Both the air and electrical systems will be interrupted until the switch is reset.

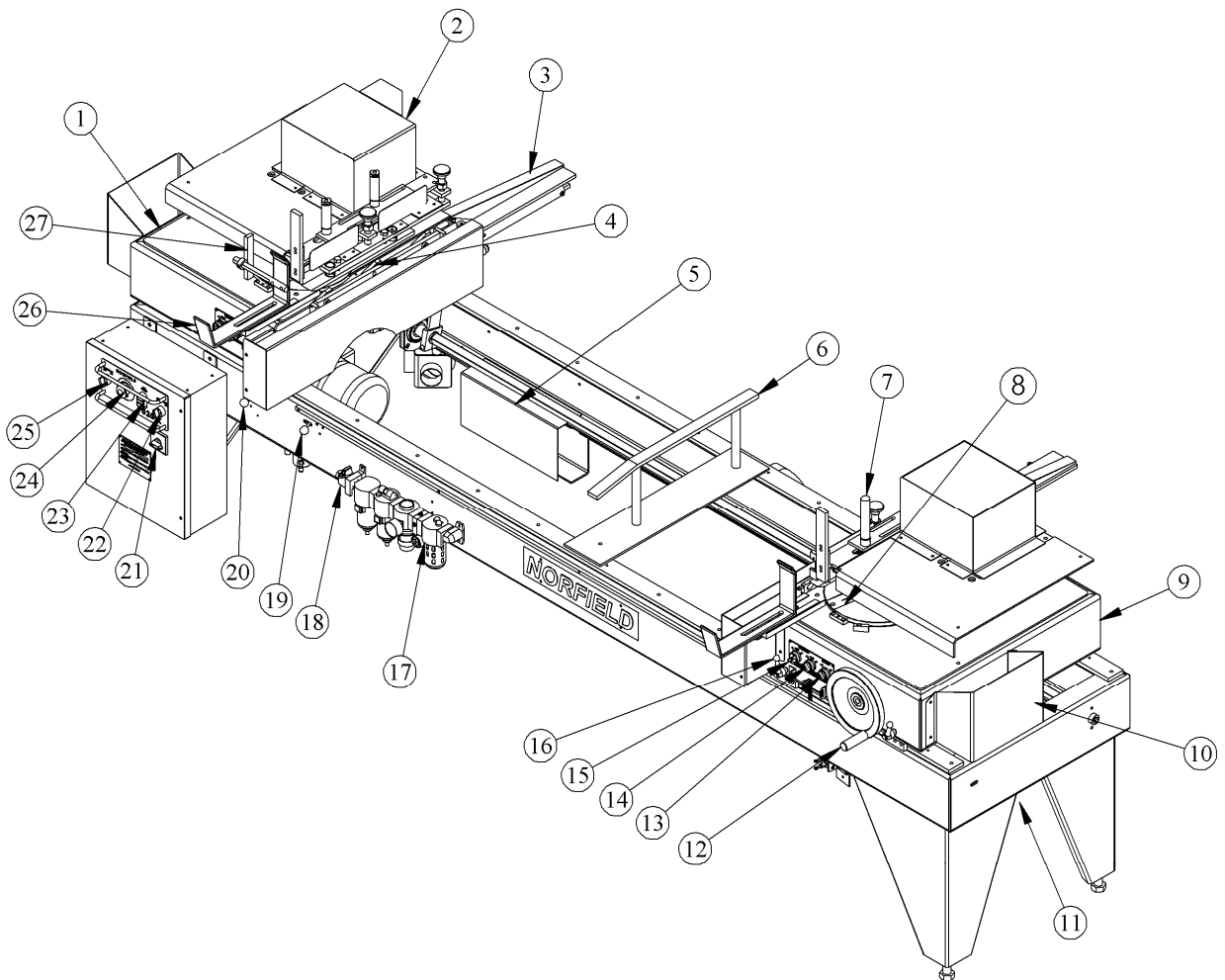
**WARNING**

When re-energizing the machine after the E-Stop has been depressed the assemblies will move back to their home positions if the saw cycle was interrupted in mid cycle.

## 1.10 MAJOR COMPONENTS AND CONTROLS

### Major Controls & Components

- |   |  |
|---|--|
| 1. Stationary Canister                  | 16. Moveable Cannister Lock Lever        |
| 2. Kerfing Assembly                     | 17. Filter/Regulator/Lubricator Assembly |
| 3. Off Fall Ramp                        | 18. Air Shut off, Lock out Tag out Valve |
| 4. Feed Assembly                        | 19. Main Air                             |
| 5. Valve Assembly                       | 20. Cycle Start                          |
| 6. Center Support Ski                   | 21. Electric Disconnect                  |
| 7. Material Clamps                      | 22. Kerfing Motor Right ON/OFF           |
| 8. Turntable                            | 23. Saw Motors START/STOP                |
| 9. Moveable Cannister                   | 24. EMERGENCY-STOP                       |
| 10. Off Fall Deflector                  | 25. Kerfing Motor Left ON/OFF            |
| 11. Undercut Adjustment Crank           | 26. Material Magazine                    |
| 12. Moveable Cannister Adjustment Crank | 27. Material Stop                        |
| 13. Kerfing Plunge                      |  |
| 14. Turntable Lock                      |  |
| 15. Turntable Angle Switch              |  |





## SECTION 2

# OPERATIONAL SETTINGS

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### 2.1 QUICK-START GUIDE

The *Norfield Industries* 1020 DOUBLE END TRIM SAW consists of two saw canisters supported on a common frame. The left or stationary saw canister is fixed and the right saw canister is adjustable to allow setting for the desired length of cut. The following instructions are intended to familiarize the operator with the normal operating settings. Individual adjustments are covered in greater detail following this section.

1. Before removing any of the Lock-out Tag-out devices on either the main electrical panel or air supply do the following 3 items:
  - I. Depress the Emergency Stop Button on the 1020's Electrical Enclosure.
  - II. Make sure that the Cycle Start Lever and Main Air Lever are in the off position.
2. Remove the lock-out/tag-out devices.
3. Turn on the air valve located at the Filter/Regulator/Lubricator to supply air to the machine.
4. Turn the Disconnect Switch to the on position
5. Release the two Head Lock Levers on the right Saw Canister, using the scale provided set the right saw canister to cut the material to the desired length.
6. Retighten the Head Lock Levers.
7. Next, determine the miter cut needed. For headstock both saws are adjusted to 45 degrees. To cut side trim, one saw will be 45 degrees and the other 90 degrees. The appropriate hand is achieved using the adjustments knobs located on the front of the corresponding saw canister.
8. Turn the Turntable Lock Switch to the off position.
9. Select the desired cut, 45 or 90 degrees
10. After the saw has rotated to the set location, change Turntable Lock Switch to the ON position.

## 2.1 QUICK-START GUIDE (CONT.)

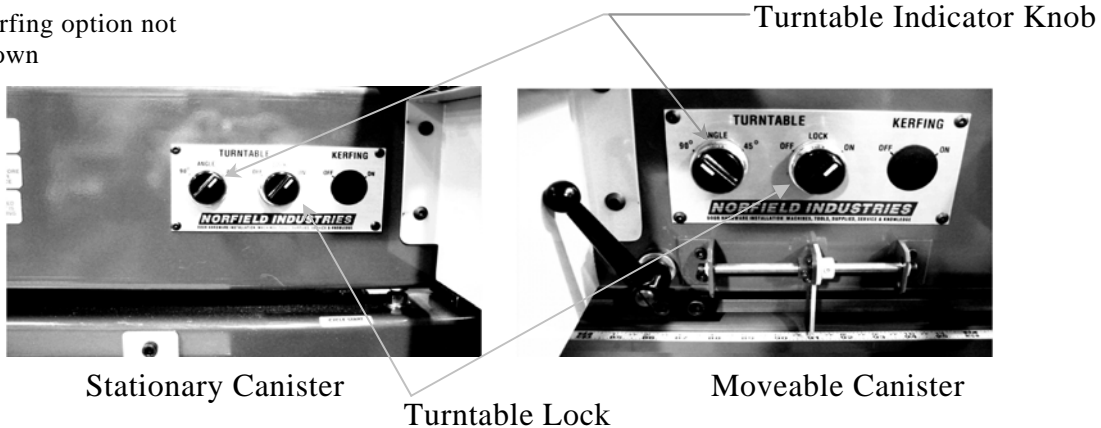
11. Turn the Main Air Lever to the ON position by moving the lever to the left. Stay clear of the saw and feed assemblies as they may move unexpectedly when air is applied.
12. Set the Material Stop on the left side for the appropriate position based on that saws rotational position.
13. If kerfing is desired, and your machine is equipped with this option, the appropriate selector switch should be turned to the ON position on the Electrical Enclosure. Once the Saw Motor Start Button is depressed the kerfing motors will start automatically.
14. Rest the Emergency Stop Switch by pulling it out.
15. Start the saw motors by depressing the Saw Motor Start Button on the Electrical Enclosure.
16. Lift upwards on the Cycle Start Lever, this will activate the saws and the Feed Assemblies will begin cycling.
17. Load one piece of material into the Magazine. Place material into the Magazine only when the feed mechanism is returning to pick up material, or after the Feed Dog has gone forward away from the magazine.
18. Once the material is cut and has passed through the machine return the Cycle Start Lever to the off position.
19. Turn off the saw motors by depressing the Stop Button located on the electrical enclosure.
20. Measure the length of material and check the miter for accuracy. If the material does not meet your specification please proceed to the adjustment section of the manual.
21. Once these checks have been made and you are satisfied with the specifications you are ready to begin using your new Norfield 1020 double end trim saw.

## 2.2 SETTING THE MACHINE TO DO MITTER CUTS OR END CUTS

To adjust the saws to perform a 45-degree miter cut or a 90-degree end cut:

1. Unlock the turntable by turning the Turntable Lock Switch to the off position.
2. Switch the Turntable Indicator Knob to either 45 or 90 degrees. The turntable will automatically rotate the selected angle as soon as the turntable has stopped so that the spiral pin is in contact with the corresponding adjusting screw.
3. Change the Turntable Lock Switch back to the on position.
4. This completes the change over.

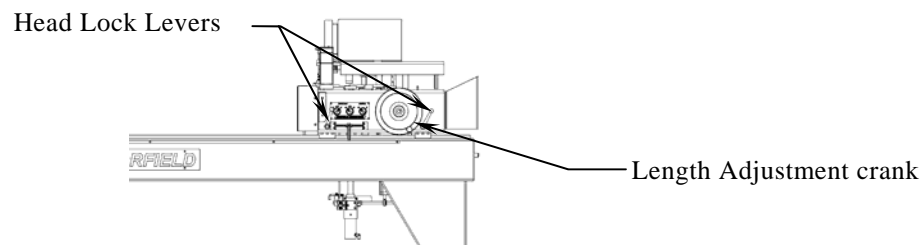
Kerfing option not shown



## 2.3 SETTING UP TO CUT DIFFERENT LENGTHS OF MATERIAL

To set the machine at any given length from 1'6" to 8' you must:

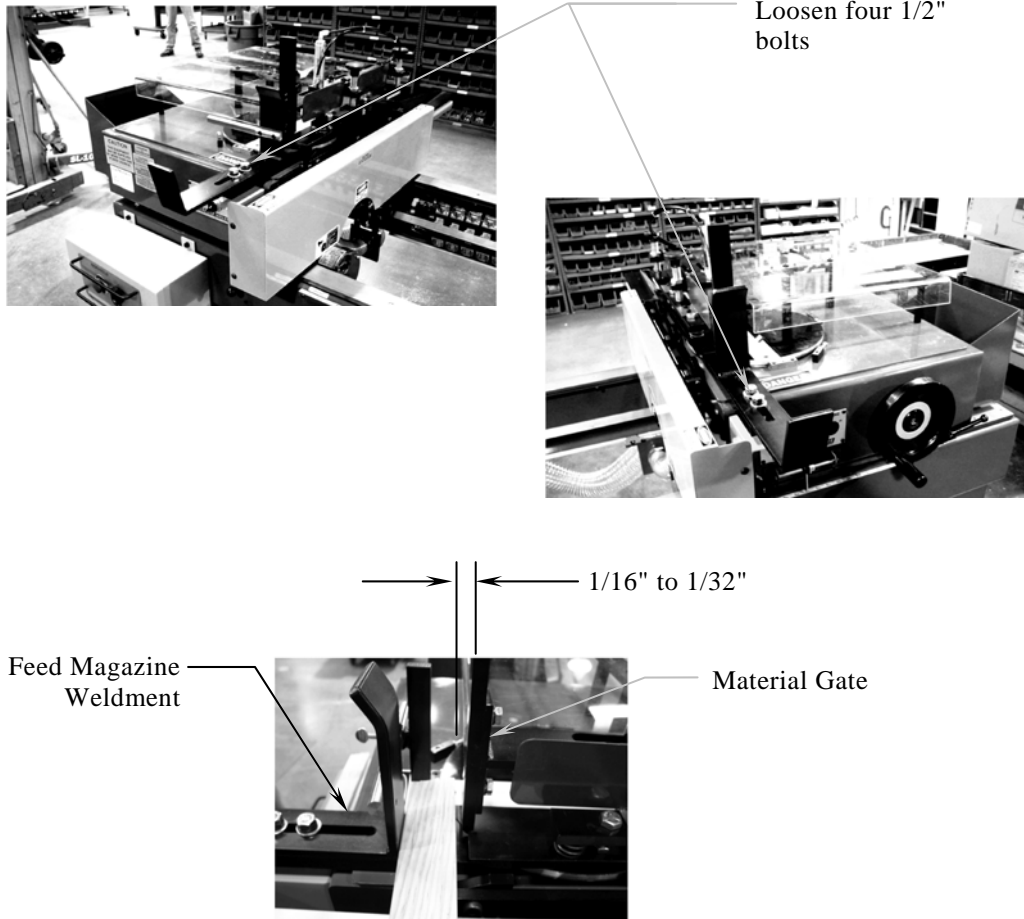
1. Loosen the two Headlock-levers.
2. Turn the adjustment crank clockwise for longer lengths of material, or counterclockwise for shorter lengths of material.
3. Retighten the two Headlock-levers.



## 2.4 SETTING UP TO CUT DIFFERENT WIDTH MATERIALS

If the thickness of the material does not change there are only two adjustments to make when setting the machine for different widths of materials, Please refer to the following:

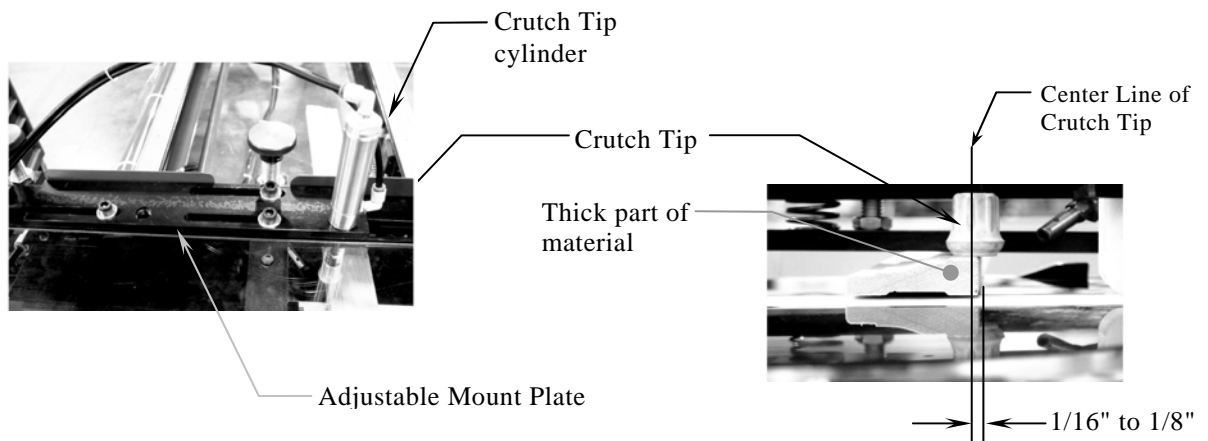
1. Turn the Disconnect to the off position.
2. Loosen the four 1/2 inch bolts that hold down the Feed Magazine Weldment
3. Insert a piece of material into the magazine.
4. Holding the material against the back of the magazine.
5. Adjust the Feed Magazine Weldment such that the magazine opening has 1/16" to 3/32" clearance between the material and the Material Gate as shown.
6. Tighten bolts and recheck the clearance at both ends of the machine.



## 2.5 RESETTING THE CRUTCH TIPS FOR DIFFERENT WIDTH MATERIAL

To adjust the Crutch Tips for different widths of material so that the material is held correctly while being cut refer to the following procedure:

1. Turn off the air supply at the FRL unit and Lock and Tag out.
2. Turn the Disconnect Switch to the off position and Lock and Tag out.
3. Return the Main Air Lever and the Cycle Start Lever to the off position.
4. Remove the two guards covering the Feed Assemblies.
5. Manually raise the Crutch Tips until they stop.
6. Insert the desired material in to the magazine.
7. Using the two Feed Assemblies manually push the material forward until the Feed Assembly comes in contact with the stop.
8. Lower the Crutch Tips so that they are just above the material.
9. Adjust the Crutch Tips by loosening the 3 socket-head cap screw on top of the Adjustable Mount Plate.
10. Slide the Adjustable Mount Plate such that the center of the Crutch Tip contacts the thickest part of the profile of the material 1/16 to 1/8 inch in from the leading edge.
11. Tighten the 3 socket-head cap screws and check that the centers are still in alignment.
12. To ensure correct operation this procedure must be completed on both sides of the machine.
13. Replace both Feed Assembly Guards.
14. The machine is now ready to resume normal operations.



## 2.6 SETTING UP TO CUT MATERIAL OVER 3" WIDE

If the material you wish to cut is over 3 inches wide, up to a maximum of 5-3/8 inches, it is necessary to reposition the Feed Assembly so that the material will feed into the machine correctly. At the factory, the material is setup to be cut 1/2 inch past the centerline of the blade, this is the optimum position for material 3 inches or less in width. The instructions listed below will assist you when repositioning your feed assembly for material over 3 inches in width.

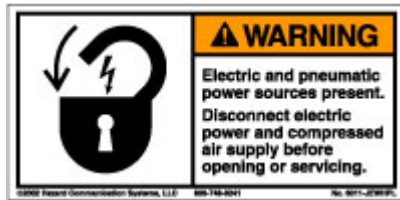
Compute the length of shift by subtracting 3 inches from your desired material width.

Example: for material that is 3-3/4 inches wide

$$\text{Width of material} - 3" = \text{shift}$$

$$(3-3/4) - 3 = 3/4$$

In this case the amount of shift is 3/4 of an inch. Cut a block of wood to this dimension and use it as a jig when repositioning the Bottom Stop Clamps.



### Note: Never change the position of the Top Stop Clamps!

Lock and tag-out both the electrical power and the air supply. Remove the two guards covering the feed assembly by removing the two button head cap screws located on each end of the guards.

### On the left hand Feed Assembly (Stationary Side)

1. Loosen the screw in the Stop Clamp Block on the Feed Assembly.
2. Insert the jig between the Rubber Washer of the Top Stop Clamp and the Bushed Plate.
3. Push the Feed Assembly forward to compress the jig tightly between the Rubber Washer and the Bushed Plate.
4. Push the Stop Clamp Block forward until the rubber washer is compressed against the Bushed Plate.
5. While holding the Stop Clamp Block in position retighten the screw.
6. Remove the Jig.
7. With the Feed Assembly against the stops adjust the Shock Absorber.
8. Loosen the nut holding the shock absorber.

## 2.6 SETTING UP TO CUT MATERIAL OVER 3" WIDE (CONT.)

9. With the nut loose adjust the shock absorber until it bottoms out against the Feed Drive Plate. Then back the shock absorber out until there is 1/4 inch of the shaft exposed.
10. Retighten the nut holding the shock absorber.

### **On the right hand Feed Assembly (Moveable Side)**

1. Loosen the screw in the Bottom Stop Clamp on the Feed Assembly.
2. Insert the jig between the Rubber Washer of the Top Stop Clamp and the Bushed Plate
3. Push the Feed Assembly forward to compress the jig tightly between the Rubber Washer and the Bushed Plate.
4. Push the Bottom Stop Clamp forward until the Rubber Washer is compressed against the Bushed Plate.
5. While holding the Bottom Stop Clamp in position retighten the screw.
6. Remove the Jig.
7. With the Feed Assembly against the stops adjust the Shock Absorber.
8. Loosen the nut holding the shock absorber.
9. With the nut loose adjust the shock absorber until it bottoms out against the Feed Drive Plate. Then back the shock absorber out until there is 1/4 inch of the shaft exposed.
10. Retighten the nut holding the shock absorber.
11. Do a quick recheck that all the screws have been tightened, replace all guards and secure them using the button head cap screws.
12. The machine is now ready to resume normal operations.

## 2.7 SETTING UP FOR DIFFERENT THICKNESS MATERIAL

Following this procedure will allow you to adjust both the Material Gate and the Ski Assembly for any thickness of material up to 1-1/2 inches thick.

1. Beginning on the left side, or the stationary side, loosen the two bolts holding the Material Gate.
2. Place a piece of material in the feed magazine such that the thickest part of the material profile is under the Material Gate.
3. Adjust the Material Gate such that there is 1/16 to 1/8 of an inch clearance between the top of the material and the bottom of the Material Gate.
4. Tighten the two bolts.
5. Repeat the above process for the right hand side Material Gate.
6. Next adjust the Ski Assembly

## 2.7 SETTING FOR DIFFERENT THICKNESS MATERIAL (CONT.)

7. Place two pieces of the desired material into the Ski Assembly, position one of the pieces of the desired material under the rears spring in the Ski Assembly and position the other piece of material under the front springs of the Ski Assembly.
8. Loosen the four lock nuts, two per side, located on the Ski Adjustment Knobs.
9. Adjust the knobs such that the distance from the bottom of the 1/2 inch hex head bolt to the top of the Ski Adjustment Bar is 1/32 to 1/16 of an inch.
10. Tighten the four lock nuts.

## 2.8 SETTING THE UNDERCUT ANGLE OR SILL BEVEL

This machine is equipped with an adjustment so you can achieve a maximum of 15 degrees of undercut for a 90-degree end cut, or a maximum of 1 degree of undercut for a 45-degree miter cut. By adjusting the crank this will give you the added versatility of beveling the bottom of exterior door and window molding.

Some customers use this feature at a maximum of 1 degree for back-cutting standard casings, this causes the face side of the joint created by two mitered pieces to close tightly and leaves the backside of the joint slightly open. When the metal spine nail is driven into this joint, the back closes and results in a tight miter and gives added adjustment in hanging the door unit in a wall that is a little under-width. To adjust the undercut:

1. Turn off the disconnect Switch.
2. Turn the Bevel Crank to adjust the amount of undercut. Turning the Bevel Crank clockwise decreases the number of degrees of the undercut; counterclockwise increases the number of degrees of the bevel.

## 2.9 OPERATING THE KERFING UNIT

To activate the Kerfing unit the following procedure is provided. The two kerfing units can be operated either individually or simultaneously.

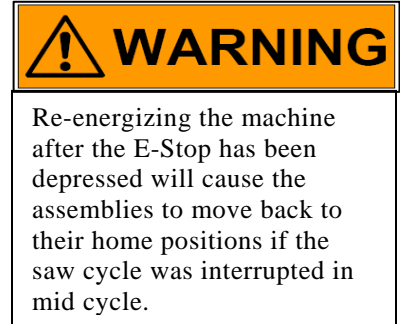
1. Depress the Stop Button on the Electrical Enclosure.
2. Turn the Main Air Lever to the off position.
3. Make sure that the Cycle Start Lever is in the off position.
4. On each of the Saw Canisters is the Kerfing Cycle Switch, turn the desired unit to the on position.
5. On the Electrical Enclosure turn the desired Kerfing Power Switch to the on position.
6. Turn the Main Air Lever to the on position.
7. Depressing the Saw Start Button on the Electrical Enclosure will start the Kerfing motor.
8. Normal operation of the 1020 Double End Trim Saw may begin.



## 2.10 RESETTING THE EMERGENCY STOP SWITCH

If depressed, the Emergency Stop will halt all operations. Both the pneumatic and electrical systems will be interrupted. Before resetting the Emergency Stop Switch the following steps must be taken.

1. Depress the Stop Button on the Electrical Enclosure.
2. Turn the Cycle Start Lever to the off position.
3. Turn the Main Air Lever to the off position.
4. Remove the all the material that is in the machine.
5. Reset the Emergency Stop Switch by pulling it out.
6. The machine is now ready for normal operation.



## SECTION 3

### ADJUSTMENTS

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#### 3.1 ADJUSTING THE MACHINE BACK TO FACTORY SETTINGS

**⚠ DANGER** The Following adjustments require that the Safety Guards be removed while the machine is in operation. All persons operating the machine or assisting in this adjustment must take extreme caution to avoid injury.

At some point it may be desirable to completely re-set the 1020 Double End Trim Saw back to its factory setting. This section will also assist the user in synchronizing the Saw and Kerfing Assemblies to one another as well as synchronizing the Feed Assemblies.

1. Set saw length between 20 & 30 inches then set the Turntables to 90 degrees.
2. Turn off the Disconnect Switch located on the Electrical Enclosure; it **MUST** be Locked and Tagged out before beginning this procedure
3. Reset the Main Air Lever and the Cycle Start lever to the off position.
4. Turn the air off to the machine using the air shut-off valve located on the FRL unit; it **MUST** be Locked and Tagged out before beginning this procedure.
5. Remove the two guards that cover the Feed Assemblies by removing the two button head cap screws located at each end of the guards and set them aside.
6. Disconnect both Connecting Rods from the two Feed Assemblies by removing the 5/8-inch shoulder bolts at the front of the Feed Assembly. Allow the connecting rods to hang at the rear of the machine.

Remove the  
connecting rod from  
both Feed Assemblies



Feed Sync  
Assembly

7. Manually lift the crutch tips until they stop to get them out of the way.
8. Place a straight piece of trim in the feed hopper. (The trim should be long enough to reach past both saws.)

### 3.1 ADJUSTING THE MACHINE BACK TO FACTORY SETTINGS (CONT.)

9. Locate the factory scribed center marks at the center of the Turntable. 1/2 inch past the center mark is a shorter scribed line. This is the factory setting on which the rear edge of the material to be cut should rest. If these scribed marks are no longer visible refer to **Section 3-2**.
10. Push the feed assemblies forward by hand until they stop against the Rubber Washers.
11. If the rear edge of the material does not line up with the second scribe line adjust the upper 3/4 inch Clamp Collars on each of the Feed Assemblies until the material rests on this mark when fed into the machine by hand. Refer to Section 3-4 for this adjustment if necessary.
12. Adjust the position of the shock absorbers so that they are being depressed approximately 3/4 of an inch. If required refer to **Section 3-3** for adjustment procedure.
13. Remove the Lockout/Tagout device on the air valve located at the FRL unit.
14. Remove the Lockout/Tagout device on the Disconnect Switch. Turn the Disconnect Switch to the on position.
15. Reapply the air to the machine turn that Main Air lever to the on position.
16. Start the machine cycling by lifting up on the Cycle Start Lever.
17. Adjust the flow control for the stationary saw assembly such that it requires approximately 1 to 1.5 seconds for the saw to complete a single up stroke and approximately 3/4 of a second on the down stroke. To increase the speed of the up stroke of the saw assembly turn the upper control knob counter-clockwise, to decrease the speed turn the upper control knob clockwise. To increase the speed of the down stroke of the saw assembly turn the lower control knob counter-clockwise, to decrease the speed turn the lower control knob clockwise.
18. In the same manner as the Stationary Saw Assembly adjust the flow controls for the Moveable Saw Assembly to match the up and down stroke timing.
19. Adjust the flow controls located at each end of the Feed Cylinder on the stationary side Feed Assembly so that it feeds the material in at a rate of 24 cycles per minute, approximately 1 cycle every 2.5 seconds. The rate of the forward stroke should be equal to the rate of the return stroke. The front flow control valve is used to adjust the rate of the return stroke and the rear flow control valve is used to adjust the rate of the forward stroke. (**NOTE:** The feed assemblies should return and stop just before both of the saws complete their cycle.)
20. Adjust the flow controls on the moveable side feed cylinder to match the stationary side.



Upper control knob

Lower control knob

### 3.1 ADJUSTING THE MACHINE BACK TO FACTORY SETTINGS (CONT.)

21. If the Kerfing option is installed steps 21 and 22 are required, if the Kerfing option is not installed skip to step 23.
22. Turn on both kerfing valves.
23. Adjust the flow controls on the kerfing cylinders such that the Kerfing Assembly will be fully extended when the Saw blade is at the top of the up stroke. Refer to **Section 3-5** if adjustment is required.
24. Adjust Jet Air Flow Control by turning the adjustment knob clockwise to increase the duration of the air pulse, or counter-clockwise to decrease the air pulse duration.

Jet Air Flow Control



25. Turn off Cycle Start Lever and Main Air Lever.
26. Turn off the air valve located at the FRL unit, lock and tag out.
27. Measure the length of the Connecting Rods; their lengths should be equal to within 1/32 of an inch. If not, loosen the 1/2-20 hex jamb nut and turn the Rod End as required adjusting the lengths. Retighten the hex jamb nut.
28. Reconnect the Connecting Rods that attach the Feed Assemblies to the Feed Sync Assembly
29. Loosen the bolt that holds the Feed Drive Arm, on the stationary side, where it clamps to the Square Feed Synchro Shaft. Refer to the drawing in Appendix A, Feed Sync Assembly.
30. Push the movable side Feed Assembly all the way to the stops while holding the stationary side Feed Assembly at about half way.
31. Lightly tighten the clamp bolt on the stationary side Feed Drive Arm. The Feed Drive Arm should be snug on the Square Feed Synchro Shaft but you should still be able to move it by hand.
32. Insert a penny between the feed stop and the Rubber Washer on the movable side and hold the Feed Assembly forward. Slowly push the stationary side Feed Assembly forward until it contacts the stop. While holding the stationary side Feed Assembly tighten the clamp bolt on the Feed Drive Arm.
33. Remove the penny. Hold the stationary side Feed Assembly against the stop and attempt to pull the movable side Feed Assembly back towards you. It should move the thickness of the penny.
34. Hold the movable side feed assembly against the stop and pull the stationary side feed assembly back towards you. There should be 1/4 to 1/2 inch of movement.

### 3.1 ADJUSTING THE MACHINE BACK TO FACTORY SETTINGS (CONT.)

35. Turn the main air on but do not start the saw cycle. Loosen the Head Lock Levers on the movable canister and change the cut length. The canister should move freely. If it does not move freely with the air on but will with the air off, repeat steps 28 through 33 until the Saw Canister will move freely with the air on.
36. Set the undercut angle to either 1/2 of a degree or to 1 degree which ever is desired.
37. Cut a piece of trim 3 feet long, 90 degrees at both ends. Check the cut angle and adjust turntable stop bolts if necessary.
38. Cut a piece of trim 3 feet long, 45 degrees at both ends. Check the cut angle and adjust the turntable stops as necessary.
39. Cut a piece of trim 3 feet long, 45 degree on the right and 90 degrees on the left.
40. Without adjusting the previous cut length, cut another piece 90 degrees on the right and 45 degree on the left.
41. Place the two pieces back to back on a flat surface and compare the 45 and 90 degree angles. If the angles do not match, repeat step 36 through 39 as necessary.
42. Compare the length of the short side of the last two pieces of trim cut in step 24. They should be the same. If they are not the materials is not being positioned squarely in the machine. If the piece with the 45 on the right is longest, the feed stop on the moveable side feed assembly needs to be moved closer to the out feed side of the machine half of the difference in the two pieces of trim. If the piece with the 45 on the left is the longest, the feed stop on the stationary side feed assembly needs to be moved closer to the out feed side of the machine half of the difference in the two pieces of trim. To Adjust the Feed Stops Refer to Section 3-4, steps 28 through 41 will need to be repeated.

### 3.2 REESTABLISHING THE CENTER-MARK SCRIBE LINE

If the center mark scribe line has worn away or is difficult to read it may be necessary to reestablish the center-mark scribe line as well as the material position reference mark scribe line.

1. Turn the Disconnect switch to the off position and lock and tag out.
2. Reset the Main Air Lever and the Cycle start Lever to the off position
3. Turn the air valve located at the FRL unit to the off position and lock and tag out.
4. Remove the two Blade Guards covering the Saw Turntables.
5. Remove the two guards that cover the Feed Assemblies.
6. Start on the Stationary side. Place 1 inch wide masking tape the length of the wear surface of the left-hand turntable parallel to and about 1/8" away from the saw guard insert.

**3.2 REESTABLISHING THE CENTER-MARK SCRIBE LINE (CONT.)**

7. Measuring from the front edge of the turntable measure 6-1/4 inches parallel to the saw blade and scribe a line on the wear surface perpendicular to the insert.
8. Make this scribe mark about 3/4 of an inch long.
9. Make a second scribe mark 1/2 of an inch toward the out-feed side of the saw approximately 5/8 of an inch long. The first mark is the center point and the second is the material position reference mark scribe line.
10. Clamp a framing square to a straight piece of material that is long enough to bridge the two slide bars.
11. Position a straight-edge on the center scribe mark on the left-hand turntable and temporarily place the other end six and one-quarter inches by measure from the rear edge of the right hand turntable.
12. Place the jig on the Frame rails, move it to the left as far as possible. Sliding the tongue of the square against the rear of the straight edge. Read the markings on the blade of the square, at the edge of the slide bar closest to the Magazine Feed side of the machine.
13. Now move the jig to the right as far as it will go stopping against the right hand feed assembly.
14. Again slide the square forward until it touches the rear edge of the straight edge and note the reading on the blade of the square. Both sides should be the same, if not, move the straight-edge on the right hand turntable until they are the same.
15. Once satisfied the trim on the left-hand side is on the center mark, and both ends are the same distance from the front rail, scribe a line 3/4 of an inch long at the backside of the trim on the right hand turntable. Move the trim aside and scribe a line 5/8 of an inch long one-half inch past the center mark (the side opposite the operator) on the right hand turntable.
16. Position the straight edge on the two marks that are one-half inch forward of the centerlines.
17. Loosen the clamp bolt on the feed stops and move the feeds forward until the feed dogs closest to the operator are just touching the material.
18. Take care not to move the trim off the marks.
19. Adjust the feed stops so the Rubber Washers are compressed against the bushed reference plates and tighten the clamp bolts.
20. Raise the clamp cylinders to get them out of the way.
21. Replace the trim into the hopper, pull the Feed Assemblies back, and push them forward against the stops again. The material should be sitting exactly on the two shorter scribed lines. Adjust if necessary. This is the factory setting for trim up to three inches wide, however, this can be changed to accommodate wider trim.

### **3.2 REESTABLISHING THE CENTER-MARK SCRIBE LINE (CONT.)**

22. Replace the two guards that cover the Feed Assembly.
23. Replace the two Blade Guards.
24. This machine is now ready to resume normal operation.

### **3.3 ADJUSTING THE SHOCK ABSORBER**

To correctly adjust the position of the shock absorbers so that they are being depressed approximately  $\frac{3}{4}$  inches follow the procedure below.

1. Turn the Disconnect Switch to the off position and Lock and Tag out.
2. Reset the Main Air Lever and the Cycle Start Lever to the off position.
3. Lock and tag out the air valve located on the FRL unit.
4. Remove any material in the machine at this time.
5. Remove the two guards that cover the Feed Assemblies by removing the two button head cap screws located at each end of the guards.
6. Manually push the Feed Assemblies forward until they stop against the Rubber Washers.
7. Loosen the lock nut holding the shock absorber.
8. With the nut loose adjust the shock absorber until it bottoms out against the Feed Drive Plate.
9. Then adjust the shock absorber out until there is  $\frac{1}{4}$  inch of the shaft exposed.
10. Retighten the lock nut.
11. Replace the guards.
12. The machine is now ready to resume normal operation.

### **3.4 ADJUSTMENT OF THE FEED ASSEMBLY STOPS**


If it is necessary to adjust the Feed Assembly stops you will need to follow the following procedure.

1. Turn off the Disconnect switch and lock and tag out.
2. Return the Main Air Lever and the Cycle Start Lever to the off position.
3. Turn the air valve off located at the FRL unit and lock and tag out.
4. Remove the two guards covering the Feed Assemblies by removing the two button head cap screws located at each end of the guards.
5. Note the location of the second set of scribe marks, approximately  $\frac{1}{2}$  inch forward of the center on the Turntable.
6. Place a straight piece of material that is approximately  $2\frac{1}{4}$  to  $2\frac{3}{4}$  inches wide into the Feed Magazine.
7. Raise the material clamp assemblies so they are out of the way.

### 3.4 ADJUSTMENT OF THE FEED ASSEMBLY STOPS (CONT.)

8. Manually push the Feed Assembly forward until they stop.
9. On the Stationary Saw Canister Feed Assembly loosen the two 3/4 inch Clamp Collars and the Stop Clamp Block.
10. On the Moveable Saw Canister Feed Assembly loosen the two 3/4 inch Clamp Collars.
11. Adjust the Upper 3/4 inch Clamp Collars on each of the Feed Assemblies such that the rear edge of the material is lined up with the second scribe mark.
12. Tighten the two upper 3/4 inch Clamp Collars.
13. On the Stationary Saw Canister Feed Assembly push the Stop Clamp Block against the Reference Bushed Plate and tighten.
14. On the Moveable Saw Canister push the lower 3/4 Inch Clamp Collar against the Reference Bushed Plate and tighten.
15. Replace the guards.
16. The machine is now ready for normal operation.

### 3.5 ADJUSTING THE CYCLE RATE OF THE KERFING MOTORS.

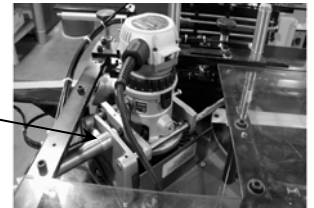
** DANGER** The Following adjustments require that the Safety Guards be removed while the machine is in operation. All persons operating the machine or assisting in this adjustment must take extreme caution to avoid injury.

If adjustment of the Kerfing Assemblies is required, it will be necessary to synchronize the Kerfing cycle such that the position of the Kerfing Assembly is fully extended when the Saw Blade Assembly is at the top of its up stroke and fully retracted at the bottom of its down stroke. Refer to the following procedure.

1. Turn off the Disconnect Switch and lock and tag out.
2. Return the Main Air Lever and the Cycle Start Lever to the off position.
3. Turn the air valve located at the FRL unit to the off position and lock and tag out.
4. Remove the two Blade Guards covering each of the Saw Turntables.
5. Remove the two Kerfing Guards.
6. Remove the Lockout/tagout device on the Disconnect Switch. Turn the Disconnect switch to the on position.
7. Remove the Lockout/tagout device on the air valve located at the FRL unit and re-supply the machine with air.
8. Turn the Main Air Lever to the on position.
9. On each of the Saw Canisters turn the Kerfing Switch to the on position.

Return cycle flow  
control valve

Forward cycle flow  
control valve






### 3.5 ADJUSTING THE CYCLE RATE OF THE KERFING MOTORS (CONT.)

10. Locate the two flow control valves at each end of the pneumatic cylinder on the Kerfing Assemblies. The flow control valve at the front of the cylinder controls the forward stroke rate of the assembly. The flow control valve at the rear of the cylinder controls the return stroke rate.
11. Begin the machine cycling by lifting up on the Cycle Start Lever.
12. Time the forward rate of the Kerfing Assembly such that the Kerfing Assembly is fully extended at the top of the up-stroke of the saw blades. Adjusting the flow control valve knob, at the front of the cylinder, counter-clockwise to increase the forward stroke cycle rate. Turning the flow control valve knob clockwise will decrease this rate.
13. Time the return rate of the Kerfing Assembly such that the Kerfing Assembly is Fully retracted when the Saw Blade is at the bottom of its downward stroke. Adjusting the flow control valve knob, at the rear of the cylinder, counter-clockwise to increase the return stroke cycle rate. Turning the flow control valve knob clockwise will decrease this rate.
14. Repeat the procedure for the opposite Kerfing Assembly
15. Once the Kerfing Assemblies are in time with the Saw Blade Assemblies return the Cycle Start Lever to the off position and turn off the machine.
16. Return the Main Air Lever to the off position.
17. Turn off the Disconnect Switch and lock and tag out.
18. Turn the air valve located at the FRL unit to the off position and lock and tag out.
19. Replace the Kerfing Guards
20. Replace the Polycarbonate Blade Guards covering the Saw Turntables.
21. The machine is now ready to resume normal operation.

### 3.6 ADJUSTING THE FEED ASSEMBLY CYCLES PER MINUTE

 **The Following adjustments require that the Safety Guards be removed while the machine is in operation, all persons operating the machine or assisting in this adjustment must take extreme caution to avoid injury.**

There are two ways one can speed up or slow down cycling of the trim saw. The procedure recommended first involves only the shock absorbers mounted under the feed cylinders.

#### PROCEDURE 1

Turn off the Disconnect Switch

1. Place the Main Air Lever and the Cycle Start Lever in the off position.
2. On the shock absorber locate the set screw and loosen it, do not remove it. The adjusting knob can be set from 0 to 8, 0 being the softest.

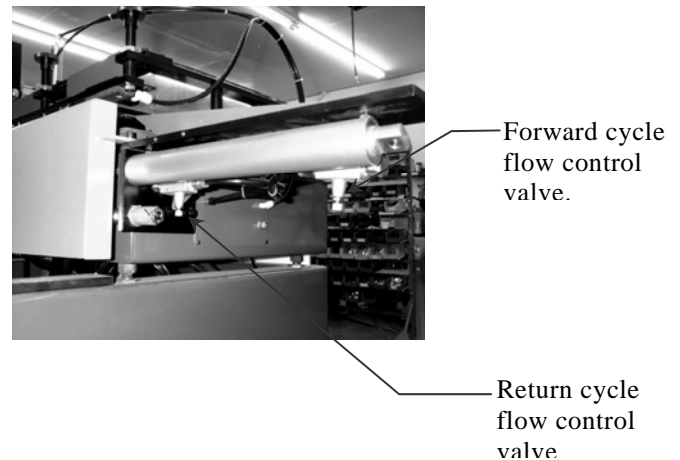
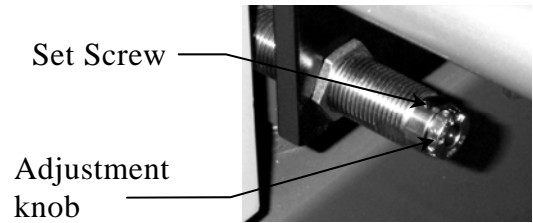
### 3.6 ADJUSTING THE FEED ASSEMBLY CYCLES PER MINUTE (CONT.)

3. By turning the knob until the groove aligns with 0 on both shock absorbers will cause the cycling of the Feed Assembly will increase. Turning the knob to a higher number will cause the shock absorber to increase the damping effect and cause a slower cycling rate.

#### PROCEDURE 2

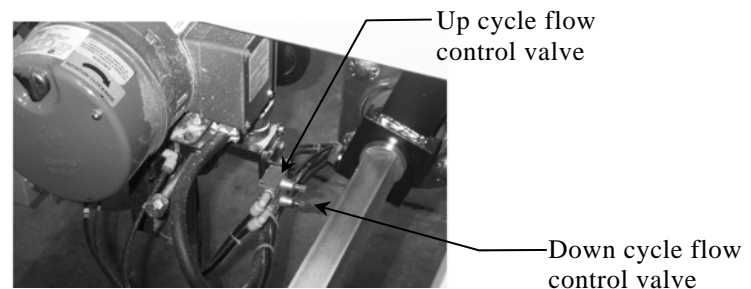
To adjust the cycles per minute:

1. Turn the Disconnect Switch to the off position and lock and Tag out.
2. Place the Main Air Lever and the Cycle Start Lever in the off position.
3. Turn the air valve located at the FRL unit to the off position and lock and tag out.
4. Turn the adjusting knob located on the shock absorbers until the groove aligns with 0 on both.
5. Remove the two guards that cover the Feed Assembly by removing the 2 button head cap screws located at each end of the guards
6. Release the Headlock Levers and position the moveable saw canister in towards the Stationary canister so you can reach both units.
7. Tighten the Headlock Levers.
8. Remove the connecting rods that attach the Feed Assemblies to the Feed Drive arms.
9. Loosen the lock nut to the 12 flow control valves, there are 2 flow control valves located on each Feed Assembly Cylinder, Saw Drive Cylinder and Kerfing cylinder.
10. Open all four flow control valves, located on the Feed Assembly Cylinders fully by turning them counter-clockwise, closing the flow control valves will slow the cycling of the Feed Assemblies. Then close the 2 flow control valves connected to the backside of the cylinder, or the end opposite the shaft, 1/2 of a turn. These valves control the forward cycle rate on the Feed Assembly
11. Remove the lock-out/tag-out device from the Disconnect Switch.
12. Turn the Disconnect Switch to the on position
13. Remove the lock out tag out device form the air valve located at the FRL unit.
14. Turn on the Main Air Lever.
15. Turn on the Cycle Start Lever to start the machine cycling.



### 3.6 ADJUSTING THE FEED ASSEMBLY CYCLES PER MINUTE (CONT.)

16. If necessary, close one or both of the valves located on the end of the Feed Assembly Cylinder so the two Feed Assemblies strike their respective shock absorbers simultaneously, usually no more than 1 additional turn will be required.
17. Adjust the two Flow control valves located at the shaft end of the Feed Assembly cylinder such that the bounce at the end of the stroke is no longer noticeable and both Feed assemblies complete their stroke together.
18. Tighten all four lock nuts on these valves. Check to see that no change in adjustment occurred as you tightened them.
19. Turn the Cycle Start Lever to the off position.
20. Turn off the Main Air Lever.
21. Turn the Disconnect Switch to the off position and lock and tag out.
22. Turn the air valve located on the FRL unit to the off position and lock and tag out.
23. Reattach the two Connecting Rods that attach the Feed assemblies to the Feed Drive Arms.
24. Replace the two guards that cover the Feed Assemblies.
25. Remove the lock out tag out device from the air valve and re-supply air to the machine.
26. Remove the lock-out/tag-out device from the Disconnect Switch. Turn the Disconnect Switch to the on position.
27. Turn the Main Air Lever to the on position.
28. Start the machine cycling.
29. Adjust the saw cylinder flow controls valves such that both saws reach the top of the up stroke simultaneously without "banging" at end of the stroke. Retighten the lock nut on the flow control valves.
30. Reset the Cycle Start Lever to the off position.
31. Turn on the two Kerfing Switches located on each of the Saw Canisters.
32. Lift up on the Cycle Start Lever to begin the machine cycling.
33. Adjust each Kerfing Cylinder such that it matches the rate of the Saw Assembly. Refer to **Section 3.5**.
34. After the above adjustment has been made return the Cycle Start Lever to the off position.
35. Reset the Main Air Lever to the off position.
36. Turn off the air valve that is located at the FRL unit and lock and tag it out.



### 3.6 ADJUSTING THE FEED ASSEMBLY CYCLES PER MINUTE (CONT.)

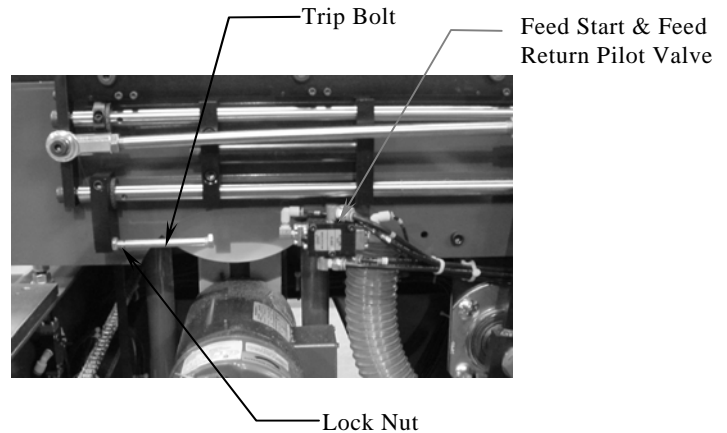
37. Replace all the guards that were previously remove to make these adjustments.

38. This machine is now ready to begin normal operation.

### 3.7 FEED START AND FEED RETURN PILOT VALVE ADJUSTMENT

The feed pilot valves are located just below the feed assembly on the stationary saw canister. Adjustment of these valves is important to maintain consistent performance of your machine.

1. Turn the Disconnect Switch to the off position, lock and tag out.
2. Rest the Main Air Lever and the Cycle Start Lever to the off position.
3. Turn the air valve located at the FRL unit to the off position and lock and tag out.
4. Remove the guards that cover the Feed Assembly by removing the two button-head cap screws located at each end of the guards.
5. Push both Feed Assemblies forward until they stop
6. Loosen the lock nut located on the Trip Bolt
7. Adjust the Trip Bolt to bottom out the Pilot Valve Plunger.
8. Then back off the Trip Bolt 1/32 of an inch.
9. Retighten the lock nut on the Trip Bolt.
10. Pull both Feed Assemblies back to the home position, nearest the operator.
11. Loosen the second Trip Bolt Lock Nut located on the opposite end of the feed assembly.
12. Adjust the second Trip Bolt to bottom out the Pilot Valve Plunger.
13. Then back off the second Trip Bolt 1/32 of an inch.
14. Retighten the lock nut on the Trip Bolt.
15. Recheck the adjustments by moving the Feed Assembly back and forth.
16. Reinstall the Feed Assembly Guards.
17. This machine is now ready to resume normal operation.



### 3.8 ADJUSTING HEIGHT OF KERFING BLADES (OPTIONAL EQUIPMENT)

Each kerfing motor is housed in its original casting that includes their standard adjustment mechanism. Each division on the ring represents 1/64 of an inch height adjustment.

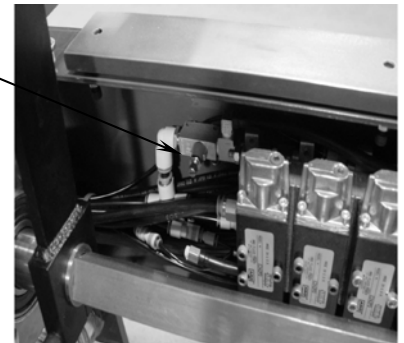
1. Turn the Disconnect Switch to the off position, lock and tag out.
2. Reset the Main Air Lever and the Cycle Start Lever to the off position.
3. Turn the air valve located at the FRL unit to the off position and lock and tag out.
4. Remove the Polycarbonate Saw Blade Guard that covers the Turntables.
5. Remove the Kerfing Motor Guards that cover each of the Kerfing Motors.
6. Open the Locking Lever located on each router motor.
7. Turn the depth adjusting ring clockwise to rise the kerfing blade height, or counter-clockwise to lower the height of the blade
8. Close the Locking Lever once the desired height is achieved.
9. Reinstall the Kerfing Motor Guard.
10. Reinstall the Polycarbonate Saw Blade Guard.
11. This machine is now ready to resume normal operation.

### 3.9 JET AIR PULSE ADJUSTMENT


When processing material that is wider than 3 inches it may be desirable to increase the duration of the Jet Air Pulse.

1. Turn the Disconnect Switch to the off position.
2. Reset the Main Air Lever and The Cycle Start Lever to the off position.
3. Loosen the lock nut on the Jet Air Flow Control Valve.
4. Adjust Jet Airflow Control by turning the adjustment knob clockwise to increase the duration of the air-pulse, or counter-clockwise to decrease the duration of the air-pulse.
5. Tighten the lock nut.
6. This machine is now ready to resume normal operation.

Jet Air Flow Control  
Valve




### 3.10 SAW DRIVE BELT ADJUSTMENT

** DANGER** The Following adjustments require that the Safety Guards be removed while the machine is in operation, all persons operating the machine or assisting in this adjustment must take extreme caution to avoid injury.

The following procedure is provided to assist you in adjusting the Saw Drive Belts. For replacement refer to Section 4-10 Drive belts stretch over time. Belt tension should be checked monthly and the belts should be replaced annually.

Belt tension check:

1. Turn off the disconnect switch and lock out and tag out.
2. Reset the main air lever and cycle start lever to the off position.
3. Turn the air valve located on the FRL unit to the off position and lock and tag out.
4. Remove the belt guard.
5. Grasp the belt midway between the pulleys and move it from side to side.
6. A properly adjusted belt should deflect at least 1/8" overall (1/16" each side of centerline) before any resistance is felt and should deflect no more than another 1/8" overall when 50 pounds of force is applied.
7. In practice, a belt which is too loose will tend to slip a cog or two when the saw motors are first started (listen for a thumping sound), and when too tight will tend to howl.
8. If no adjustment is required reinstall the belt guards and the machine can resume normal operation, if adjustment is required go on to the remaining steps.
9. Loosen the four mounting bolts going through the 4 jacking screws located on the bottom of the saw motor.
10. Turn the four motor jacking screws equally to adjust the belt tension while maintaining motor shaft and saw mandrel alignment. Lowering the motor will tighten the belt.
11. Remove the lockout/tagout device from the electrical disconnect switch and turn the switch to the "on" position.

** DANGER** While staying clear of the saw assemblies, momentarily start the saw motors and observe the belt tracking on the pulleys. If the pulleys are rubbing on the pulley flanges, lock out the electrical disconnect switch and readjust the motor jacking bolts until the belt is centered and correctly tensioned.


12. Once all adjustments are complete on both saw assemblies, tighten the mounting bolts and reinstall the belt guards.
13. Remove the lockout/tagout devices and reapply the air and turn the disconnect switch to the "on" position.
14. The machine is now ready to begin normal operation.

### 3.11 FEED SYNC ASSEMBLY EQUALIZATION ADJUSTMENT

If the Feed Drive Arms have more than a 1/4 of an inch of play in Feed Drive Arm Assemblies. It may be necessary to adjust them so that they equalized when cycling material. This adjustment should improve the overall consistency of the cut material.

1. Turn off the Disconnect Switch and lock and tag out.
2. Reset the Main Air Lever and the Cycle Start Lever to the off position.
3. Turn the air valve located on the FRL unit to the off position and lock and tag out.
4. Remove the guards that cover the Feed Assembly by removing the 2 button head cap screws located at each end of the Feed Guard.
5. Loosen the Headlock Levers and adjust the Moveable Saw Canister to 1'-08", and Tighten the headlock Levers.
6. Push both feed assemblies forward until the Rubber Washers are compressed against the Reference Bushed Plate on each of the two Feed Assemblies.
7. Holding the left Feed Assembly forward pull the right Feed Assembly back. There should be 3/16 to 1/4 inch of end-play. If the end-play is greater than 1/4 inch adjustment will be necessary.
8. Holding the right Feed Assembly forward pull the left Feed Assembly back, there should be 3/16 to 1/4 inch of end-play. If the end-play is greater than 1/4 inch adjustment will be necessary.
9. If one side does not move back at all and the opposite side moves back more than 1/4 inch adjustment is required.
10. If no adjustment is required reinstall the Guards and secure them with the screws previously removed. The machine is ready to resume normal operation.
11. If adjustment is required, push both Feed Assemblies forward until the Rubber Washer is compressed against the Reference Bushed Plate.
12. Using a 3/4 inch box end wrench loosen the clamping bolt that holds the left, Feed Drive Arm to the Square Feed Synchro Shaft.
13. While still holding the right Feed Assembly against the stop, manually cycle the left Feed Assembly from stop to stop.
14. Push the left Feed Assembly forward until the Rubber Washer is compressed against the Reference Bushed Plate.
15. Tighten the clamping bolt.
16. Check the end-play as previously described.
17. If no further adjustment is required reinstall the guards previously removed.
18. Remove the Lock out/tag out devices.
19. This machine is now ready to resume normal operation.

### 3.12 ADJUSTMENT OF MITER OR SQUARE CUTS

 **ANGER** The Following adjustments require that the Safety Guards be removed while the machine is in operation, all persons operating the machine or assisting in this adjustment must take extreme caution to avoid injury.

1. If either the miter cuts or the square cuts are no longer within specification it may be necessary to adjust the stop block bolts.
2. Turn off the Disconnect Switch and lock and tag out.
3. Reset the Main Air Lever and the Cycle Start Lever to the off position.
4. Turn the air valve located on the FRL unit to the off position and lock and tag out.
5. Remove the two Polycarbonate Saw Guards covering the Saw Blade Turn Tables.
6. Loosen the Headlock Levers and adjust the moveable Saw Canister to 3 feet. Tighten the Headlock Levers.
7. Remove the lockout/tag-out device on the air valve located on the FRL unit and re-supply the machine with air.
8. Remove the lock-out/tag-out device on the Disconnect Switch and re-supply the machine with electrical power.
9. Turn the Main Air Lever to the on position.
10. Adjust the stationary Saw Canister to cut at 45 degrees and the moveable Saw Canister to cut at 90 degrees.
11. Start the Machine cycling and run one piece of material through it.
12. Turn the machine off.
13. Adjust the stationary saw canister to cut 90 degrees and the moveable saw canister to cut 45 degrees.
14. Start the Machine cycling and run one piece of material through it.
15. Turn the machine off.
16. Using a framing square check that the angles produced make a 90-degree corner
17. Place the two pieces together and compare the end cuts and the miter cuts that were produced.
18. If the two pieces do not form a 90 degree corner adjust the Saw Table stop bolt as required until the machine is cutting satisfactory. It may be necessary to repeat this process several times until the machine is cutting correctly
19. Turn off the Disconnect Switch and lock and tag out.
20. Reset the Main Air Lever and the Cycle Start Lever to the off position.
21. Turn the air valve located on the FRL unit to the off position and lock and tag out.
22. Replace all guards that were previously removed.



### **3.12 ADJUSTMENT OF MITER OR SQUARE CUTS (CONT.)**

23. Remove the lockout/tagout devices

24. The machine is now ready to resume normal operation

## SECTION 4

### MAINTENANCE

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#### 4.1 MAINTENANCE

It is the machine owner's responsibility to insure that the machine is properly maintained and that personal is adequately trained to safely perform the maintenance function.

A program of routine and preventive maintenance that is strictly adhered to will keep expensive "down time" to a minimum and give maximum life to the machine. Please read and use the following checklist for daily, weekly and monthly procedures. For your convenience, these lists are duplicated in a "checklist" format so they can be copied and kept near the machine available for the operator or maintenance personnel.

**Always lock and tag out the electrical and pneumatic power sources to the machine before starting inspection or performing maintenance.**

#### 4.2 DAILY CHECKS: (EVERY 6-8 HOURS OF OPERATION)

1. Inspect kerfing blades for sharpness and chips.
2. Clean the sawdust and pitch from all chrome slide shafts. First, remove the sawdust, then wipe them down with a non-oil based, nonflammable solvent.
3. Immediately after completing each day's run, remove all loose sawdust from the rest of the machine. If this is not done, the resin in the sawdust will harden and you will be unable to remove it without the use of a solvent.

#### 4.3 WEEKLY CHECKS: (EVERY 30-40 HOURS OF OPERATION)

1. Check the oil level in the lubricator bowl. Refill with 10 wt. Turbine oil as needed. Do not over fill the bowl; oil level must be below the reclassifier.
2. Check the Particulate filter element in the FRL unit. A visible coating of dirt or moisture on the filter element is an indication that cleaning or replacement is necessary. It is necessary to replace this filter once a year
3. Note: the Coalescing element in the filter can be removed and cleaned. Wash it in denatured alcohol or hot soapy water, then tap it out. Replacement elements are available from Norfield.
4. Inspect the machine for loose fasteners (nuts and bolts). Check the pneumatic system for any leaking fitting tubes or hoses.

#### **4.4 MONTHLY CHECKS: (EVERY 100-200 HOURS OF OPERATION)**

1. Lock out and tag out both the electrical and pneumatic power sources
2. Remove the covers from the pneumatic and electrical enclosures and remove any sawdust.
3. Inspect condition of 10" saw blades. If necessary, remove to clean and sharpen.
4. Inspect and adjust the saw drive belts if necessary.

#### **4.5 GENERAL MAINTENANCE COMMENTS**

1. A clean machine is essential for superior performance and reduced maintenance.
2. As the seals in valves and cylinders will take a "set" when not operating, the manufacturers of those components strongly recommend that the valves and cylinders be cycled at least twice before starting the day's work. This pre-cycling allows the seals to regain natural sealing ability and will lengthen the life of the valves and cylinders considerably.
3. With the exception of adding oil to the lubricator and oil reservoirs, and lubrication of the turntable pads, no lubrication is necessary. Never use oil, silicon, or graphite to lubricate any bearing surface or chrome slide rod. Any substances such as those mentioned above will collect fine sawdust and dirt particles that will wear the bushings very quickly. If any assembly is binding and you have kept everything clean, the problem is most likely that the parts have become misaligned or excessively worn.
4. Clean, dry air is a must. Moisture or solid contaminants in the air supply will shorten the life of air components considerably. We recommend you make it a common practice to inspect your compressor and air system regularly. Drain the compressor tank and all moisture traps daily. Keep the compressor's crankcase full and change the oil at the recommended intervals.
5. Maintain an adequate air supply to the machine. Regulator pressure should not drop during operation. If it does, check the condition of the filters. Clean or replace them if necessary.
6. Keep all cutting tools sharp at all times. Dull tools will put undue stress on motors, produce an unsatisfactory finished product and create a safety hazard.
7. A 1020 operating at just over twenty-two cycles per minute will complete 10,000 cycles in seven and one-half hours. Wear on valves and cylinders is going to occur. The valves used in the machine can be rebuilt by installing an inexpensive o-ring kit. One or more valves may require maintenance during the course of normal operation and it is a good idea to keep a couple of the proper valve repair kits on hand.

## 4.6 CHANGING THE SAW BLADES

To change the saw blades in the 1020 Double End Trim Saw the following procedure must be followed:

1. Turn off the Disconnect Switch and Lock and Tag out.
2. Turn off the air supply at the FRL unit and Lock and Tag out.
3. Remove the 7 screws, 5 screws if the kerfing option is installed, holding down the polycarbonate Saw Guard.
4. Remove the 2 screws that hold down the Turntable Guard Insert, remove the insert and set it aside.
5. Using a 7/16 inch open-end wrench remove the two 1/4-20 bolts from the Blade Guard Cover, remove the cover and set it aside.
6. Using a piece of scrap wood bind the blade in such a way that it will not turn when removing the Arbor Nut.
7. On the stationary saw remove the Arbor Nut using a 15/16 box end wrench and turning it clockwise to release it, remove the Arbor Nut on the moveable saw by turning it counter-clockwise.
8. Remove the Arbor Nut Washer
9. Remove the Blade through the top of the Turntable.
10. Install the new blade in the same orientation as the old blade, for reference the teeth at the top of the saw blade will be pointing away from the operator.
11. Replace the Arbor Nut Washer and tighten the Arbor Nut, again use a piece of scrap wood to keep the blade from spinning while tightening the nut.
12. Install the Blade Guard Cover and secure with the two 1/4-20 bolts.
13. Install the Turntable Guard Insert and secure it.
14. Install the polycarbonate Saw Guard.
15. The machine is now ready to resume normal operation.

## 4.7 CHANGING THE KERFING BLADES (OPTIONAL EQUIPMENT)

1. Turn off the Disconnect Switch and lock and tag out.
2. Reset the Main Air Lever and the Cycle Start Lever to the off position.
3. Turn the air valve located on the FRL unit to the off position and lock and tag out.
4. Remove the Kerfing Assembly Guard.
5. Release the locking lever on the router base casting and remove the router motor.

**Note:** If the depth-adjusting ring is kept in the same location, it should not be necessary to readjust the depth after changing the Kerfing Blade.

#### 4.7 CHANGING THE KERFING BLADES (CONT.)

6. Using a 3/4 inch wrench to hold the shaft from moving, remove the nut on located on the end of the arbor with a 1/2 inch end wrench turning counter clock-wise.
7. Before removing the spacer and Kerfing Blade note the direction that the teeth are pointing.
8. Reassemble with the new blade.
9. Install the router motor back into the router base casting, and close the locking lever.
10. Install the Kerfing Assembly Guard
11. Remove the lockout/tagout devices, reapply air and electrical power to the machine.
12. Cycle the machine and check the kerfing cut location in the material. If the kerfing height needs adjustment refer to Section 3-8

#### 4.8 SAW DRIVE MANDREL REPLACEMENT

The following procedure will assist you in the removal and replacement of the Saw Drive Mandrel. Before beginning this procedure it is necessary to note that the mandrel on the stationary Saw Assembly is a "left handed" mandrel, whereas the mandrel on the Moveable Saw Assembly is "right-handed".

1. Turn off the Disconnect Switch and lock and tag out.
2. Reset the Main Air Lever and the Cycle Start Lever to the off position.
3. Turn the air valve located on the FRL unit to the off position and lock and tag out.
4. Remove the Polycarbonate Saw Guard.
5. Remove the two screws that hold the Turntable Guard Insert
6. Remove the Turntable Guard Insert and set it aside.
7. Using a 7/16 inch open-end wrench remove the two 1/4-20 bolts from the Blade Guard Cover, remove the cover and set it aside.
8. Using a piece of scrap wood bind the blade in such a way that it will not turn when removing the Arbor Nut.
9. On the stationary saw loosen the Arbor Nut using a 15/16 inch box end wrench by turning it clockwise, on the moveable saw the Arbor Nut must be turned counter-clockwise to release it
10. Remove the Arbor Nut and the washer
11. Remove the Blade through the top of the Turntable.
12. Loosen the four 1/4-20 nuts on top of the motor mount weldment that hold the motor to the four Saw Motor Jacking Screws.
13. Turn each of the four Saw Motor Jacking Screws, equally, clockwise to lessen the tension on the Saw Drive Belt, it must be loose enough to slip the belt over the pulley.

#### 4.8 SAW DRIVE MANDREL REPLACEMENT (CONT.)

14. From the under side of the machine remove the Belt Guard by removing the two bolts at the top of the guard.
15. Slide the guard down past the pulley on the motor and set it aside.
16. Remove the four bolts that secure the mandrel to the Motor Mount Weldment.
17. Remove the mandrel.
18. Before setting the new mandrel in place first slide the belt over the pulley.
19. Set the mandrel over the two locating pins and secure with the four bolts that were previously removed.
20. From the bottom side of the machine turn each of the four Saw Motor Jacking Screws, equally, counter-clockwise to tension the Saw Drive Belt.
21. Tighten the four 1/4-20 nuts that hold the motor to the Saw Motor Jacking Screws.
22. Replace the Belt Guard and secure it with the two bolts that were previously removed.
23. Install the Saw Blade.
24. Using a piece of scrap wood bind the blade in such a way that it will not turn when tightening the Arbor Nut.
25. Install the Saw Blade Guard and secure with the two bolts that were previously removed.
26. Install Turntable Guard Insert, and secure with the two screws that were previously removed.
27. Install the Polycarbonate Saw Guard and secure it with the screws that were previously removed.
28. The machine is now ready to begin normal operation.

#### 4.9 SAW DRIVE CYLINDER REPLACEMENT

1. Turn off the disconnect switch and lock out and tag out.
2. Reset the main air lever and cycle start lever to the off position.
3. Turn the air valve located on the FRL unit to the off position and lock and tag out.
4. Lift the saw assembly and place a 2-1/2 inch thick block under the motor base.
5. Remove the saw return trip bracket.
6. Remove the two saw return valves from the mounting plate. (Do not disconnect the hoses)
7. Remove the valve mounting plate.
8. Using a 1/2 inch open-end wrench to hold the cylinder shaft, loosen the alignment insert nut with a 1-1/4 inch extra thin open-end wrench (Norfield part number 13-382).

## 4.9 SAW DRIVE CYLINDER REPLACEMENT (CONT.)

Note: There is an aluminum pin holding the alignment insert into the motor mount plate. To avoid breaking this pin be sure to prevent the cylinder shaft from rotating while loosening the 1-1/4" alignment insert nut.

9. Unthread the cylinder shaft from the alignment insert and remove the alignment nut from the cylinder shaft.
10. Remove the large nut holding the cylinder body and disconnect the two hoses.
11. Remove the two air line fittings from the cylinder and install them in new cylinder.
12. Orient the fittings and rout the airlines as they were before removal.
13. Insert the cylinder in the mounting plate and install the large nut, but do not tighten it at this time.
14. Install the alignment nut on the cylinder shaft and thread the shaft into the alignment insert as far as it will go.
15. Hold the cylinder shaft as you tighten the alignment nut against the alignment insert.
16. Tighten the large nut securing the cylinder body.
17. Install the valve mount plate and then the valves.
18. Remove the block and lower the saw assembly. Check the saw return valve actuator bolt for proper adjustment. The bolt must not bottom out the valve plunger. There should be 1/32" to 1/16" of travel left in the plunger when the saw assembly is at the bottom of its stroke. Adjust the bolt if necessary.
19. Reinstall the saw return trip bracket and measure from the heads of the four bolts on the downward facing valve to the inside surface of the return bracket. Then measure from the bottom of the cylinder mounting plate to the top of the stop nut on the redi-thread next to the cylinder/. This measurement should be 1/32" to 1/16" less than the first measurement. Adjust the stop nut on the redi-thread if necessary.
20. Remove the lockout/tagout devices and reapply the air.
21. Turn the disconnect switch to the on position.
22. The machine is now ready for normal operation.

## 4.10 SAW DRIVE BELT REPLACEMENT

The following adjustments require the machine to be operated while some of the safety guards are removed. All persons operating the machine or assisting in this adjustment must take extreme caution.

1. Turn off the disconnect switch and lock out and tag out.
2. Set the main air lever and cycle start lever to the off position.
3. Turn the air valve located on the FRL unit to the off position and lock and tag out.
4. Remove the belt guard.

#### 4.10 SAW DRIVE BELT REPLACEMENT (CONT.)

5. Loosen the four mounting bolts that go through the jacking screws.
6. Remove the two bolts closest to the motor shaft.
7. Lift the shaft end of the motor to release the belt from the pulley.
8. Remove the belt from the top pulley and slip the new belt over it.
9. Lift the motor & install the belt on the bottom pulley.
10. Turn the four motor jacking screws equally to adjust the belt tension while maintaining motor shaft and saw mandrel alignment.
11. A properly adjusted belt should deflect at least 1/8" overall (1/16" each side of centerline) before any resistance is felt and should deflect no more than another 1/8" overall when 50 pounds of force is applied.
12. In practice, a belt which is too loose will tend to slip a cog or two when the saw motors are first started (listen for a thumping sound), and when too tight will tend to howl.
13. Remove the lockout/tagout device from the electrical disconnect switch and turn the switch to the "on" position.
14. **Caution! – While staying clear of the saw assemblies**, momentarily start the saw motors and observe the belt tracking on the pulleys. If the pulleys are rubbing on the pulley flanges, lock out the electrical disconnect switch and readjust the motor jacking bolts until the belt is centered and correctly tensioned.
15. Once all adjustments are complete on both saw assemblies, reinstall the belt guards.
16. Remove the lockout/tagout devices and reapply the air and turn the disconnect switch to the "on" position.
17. The machine is now ready to begin normal operation.



## SECTION 5

### TROUBLE SHOOTING

#### 5.1 TROUBLE CHECK LIST

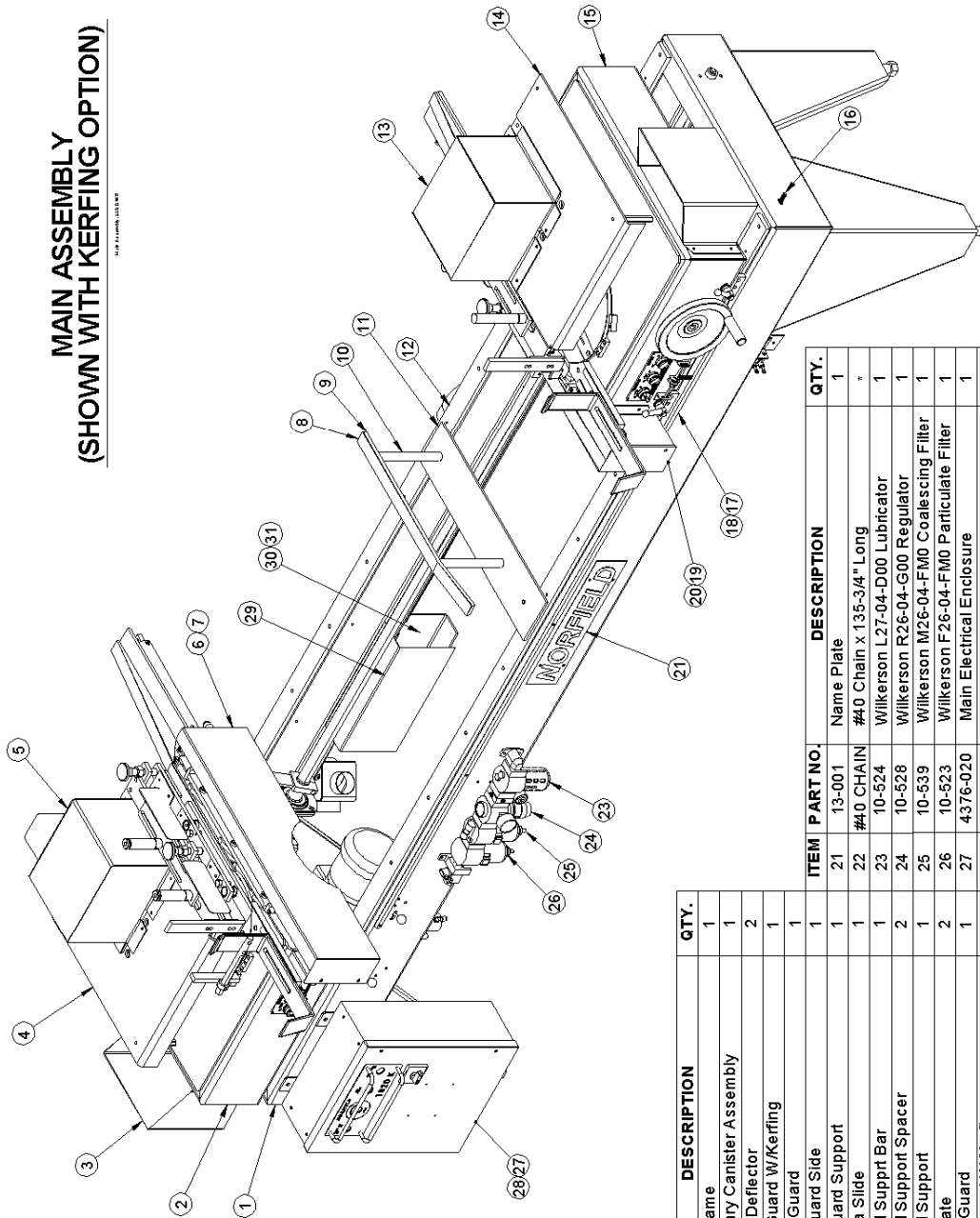
This machine is equipped with a sequencing air system that is designed to give superior performance throughout the life of the machine. This means that one process must be complete before the next sequential process can occur; (i.e.: both of the saws must be down before the feed will activate; then the feed must reach the end of its stroke before the clamps, saws, or kerfing will activate).

Symptom	Probable Cause	Solution
<b><i>Machine Cycling Problems</i></b>		
<b>Trim Saws Cycling</b>	Low air pressure	Adjust air pressure to 90psi, 100psi static
<b>Cycle lever is lifted, but feed will not activate</b>	Main air is off.	Check Main Air Valve.
	One or both saws are not completely down; saw sensor valve trip bolts are not activating sensor valve.	<ul style="list-style-type: none"> <li>• Sticky slide rods</li> <li>• Foreign body</li> <li>• Power valve shift after return valve was tripped.</li> <li>• Plugged flow control</li> </ul>
	The saw sensor valve trip bolts are out of adjustment.	Adjust saw sensor trip bolts.
	Feed sensor valve trip bolts are not properly adjusted.	Adjust feed sensor trip bolts.
<b>Erratic Cycling Or Stopping Mid-Cycle</b>	The feed sensor valve plunger is not being activated properly.	<ul style="list-style-type: none"> <li>• Sticky slide rods</li> <li>• Foreign body</li> <li>• Power valve shift after return valve was tripped.</li> <li>• Plugged flow control</li> </ul>
	A saw sensor valve plunger is not being activated properly.	<ul style="list-style-type: none"> <li>• Sticky slide rods</li> <li>• Foreign body</li> <li>• Power valve shift after return valve was tripped.</li> <li>• Plugged flow control</li> </ul>
	The saws are out of sequence with each other.	Adjust the flow control valves.
	The upward stroke of the saw is being restricted.	Clean the slide rods and remove all obstructions.
	Insufficient air supply.	Check the regulator gauge for a drop in pressure during cycle.

Symptom	Probable Cause	Solution
<b>One saw does not cycle</b>	Possible physical obstructions.	Check and remove obstructions.
	Possible plugged flow control.	Open the flow control momentarily to see if the obstruction will pass, if not remove and clean.
	Saw return pilot valve plunger stuck in depressed position.	<ul style="list-style-type: none"> <li>• Clean and lubricate valve</li> <li>• Replace O-rings</li> <li>• Replace valve</li> <li>• No pilot signal to valve</li> </ul>
	Possible faulty power valve.	Remove valve from the manifold block and switch with the opposite saw power valve. If the problem is on the opposite side, then the valve needs to be repaired.
	None of the above.	The saw cylinder is possibly defective and needs to be replaced.
<b>Clamps or feed will not cycle:</b>	The feed sensor pilot valves are stuck in a depressed position.	<ul style="list-style-type: none"> <li>• Clean and lubricate valve</li> <li>• Replace O-rings</li> <li>• Replace valve</li> <li>• No pilot valve signal</li> </ul>
	Possible faulty power valve.	Switch the clamp and feed valves on the manifold. If the problem changes, repair the valve.
<b>Mechanical Problems</b>		
<b>The saw drive belts make a loud noise when one or both motors are started.</b>	The drive belt is loose.	Adjust drive belt.
<b>One or both saw arbors are noisy with power disconnected, turning the saw blade manually produces a grinding or rough sound from the saw mandrel</b>	Bearings in the mandrel are worn.	Replace the mandrel.
<b>Moveable saw head lock handle spins and will not lock canister to reference rail.</b>	Lock nuts that hold redi-thread to the clamp have loosened.	Tighten the nuts.
<b>Moveable canister lifts off reference rail while changing lengths.</b>	Roller chain has stretched or loosened..	Tighten tension nuts at the end of chain.

Symptom	Probable Cause	Solution
<b>A dramatic change in consistency of lengths occurs.</b>	Aligning insert on moveable end has unscrewed from cylinder shaft.	Tighten aligning insert on cylinder shaft.
	Feed return pilot valve is adjusted improperly.	Adjust pilot feed valve.
	Shock absorbers on the moveable end are set at a higher setting than opposite end.	Adjust both to the same setting.
	Material holds down skis are not adjusted correctly.	Adjust material hold down skis.
	Moveable saw head not locked to reference rail.	Lock both lock levers.
	Feed cylinders are failing	Replace cylinders.
<b>Electrical Problems</b>		
<b>Saw motors will not start.</b>	Power is off.	Restore power.
	Overload within electrical enclosure has tripped.	Reset Overload.
	Saw dust or chips that have filtered into starter enclosure have insulated the start terminals of the pushbutton.	Remove the saw dust or chips.
<b>Neither Kerfing motor will start.</b>	115V Breaker is in off position.	Turn to the on position.
	Motor mounted switches are in off position.	Turn to the on position.
	Both units are unplugged from frame receptacles.	Turn to the on position.

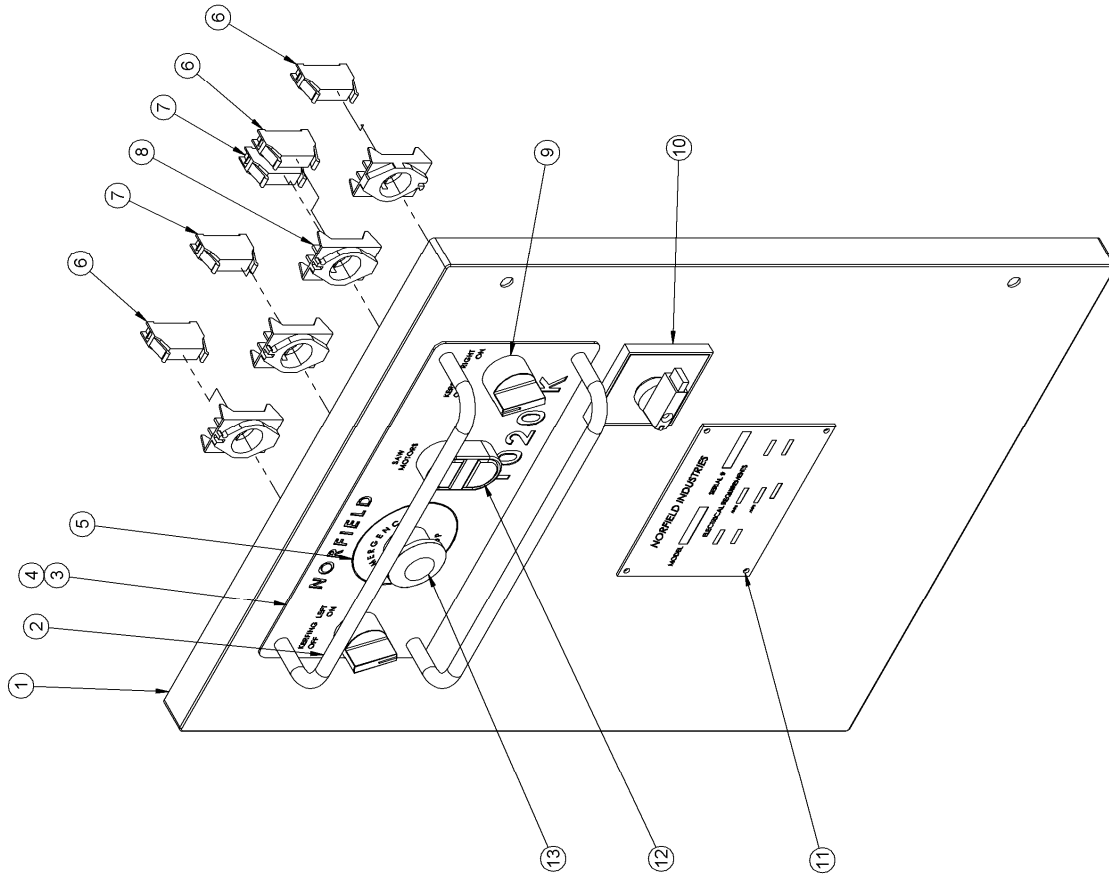
# MAIN ASSEMBLY (SHOWN WITH KERFING OPTION)



ITEM	PART NO.	DESCRIPTION	QTY.
1	0600-100	Main Frame	1
2	*****	Stationary Canister Assembly	1
3	0620-001	Off-Fall Deflector	2
4	4345-035	Blade Guard W/Kerfing	1
5	4345-113	Kerfing Guard	1
6	4345-111	Feed Guard Side	1
7	4345-109	Front guard Support	1
8	0601-007	Formica Slide	1
9	0601-006	Material Support Bar	1
10	0601-005	Material Support Spacer	2
11	0601-003	Material Support	1
12	0600-005	Slide Plate	2
13	4345-114	Kerfing Guard	1
14	4345-036	Blade Guard W/Kerfing	1
15	*****	Movable Canister Assembly	1
16	0610-004	Chain Adjusting Screw	2
17	0692-002	Ruler Bar	1
18	13-490	Rule	1
19	4345-112	Feed Guard Side	1
20	4345-110	Front guard Support	1

ITEM	PART NO.	DESCRIPTION	QTY.
21	13-001	Name Plate	1
22	#40 CHAIN	#40 Chain x 135-3/4" Long	*
23	10-524	Wilkerson L27-04-D00 Lubricator	1
24	10-528	Wilkerson R26-04-G00 Regulator	1
25	10-539	Wilkerson M26-04-FM0 Coalescing Filter	1
26	10-523	Wilkerson F26-04-FM0 Particulate Filter	1
27	4376-020	Main Electrical Enclosure	1
28	9013-100	Spacer	1
29	4345-041	Valve Guard Plate	1
30	4345-042	Valve Mount	1
31	*****	Valve Assembly	1

ITEM	PART NO.	DESCRIPTION	QTY.
1	4376-020	Electrical Enclosure	1
2	13-1009	Reid VPH-61 Pull Handle	2
3	4376-023	Overlay, W/Kerfing	1
4	4376-022	Overlay W/O Kerfing	1
5	8342-002	E-STOP Warning Label	1
6	11-1128	AB 800E-3X10 NO Contact Block	3
7	11-1126	800E-3X01 NC Contact Block	2
8	11-1130	AB 800E-A3I Push Button Base	4
9	11-1429	AB 800EP-SM22 2 Position Switch	2
10	11-964	AB 194L-HE6E-175I Disconnect Actuator	1
11	8090-001	Electrical Requirement Plate	1
12	11-711	AB 800EP-U2B23 START/STOP Switch	1
13	11-1125	AB 800EP-MT4 E-Stop Button	1

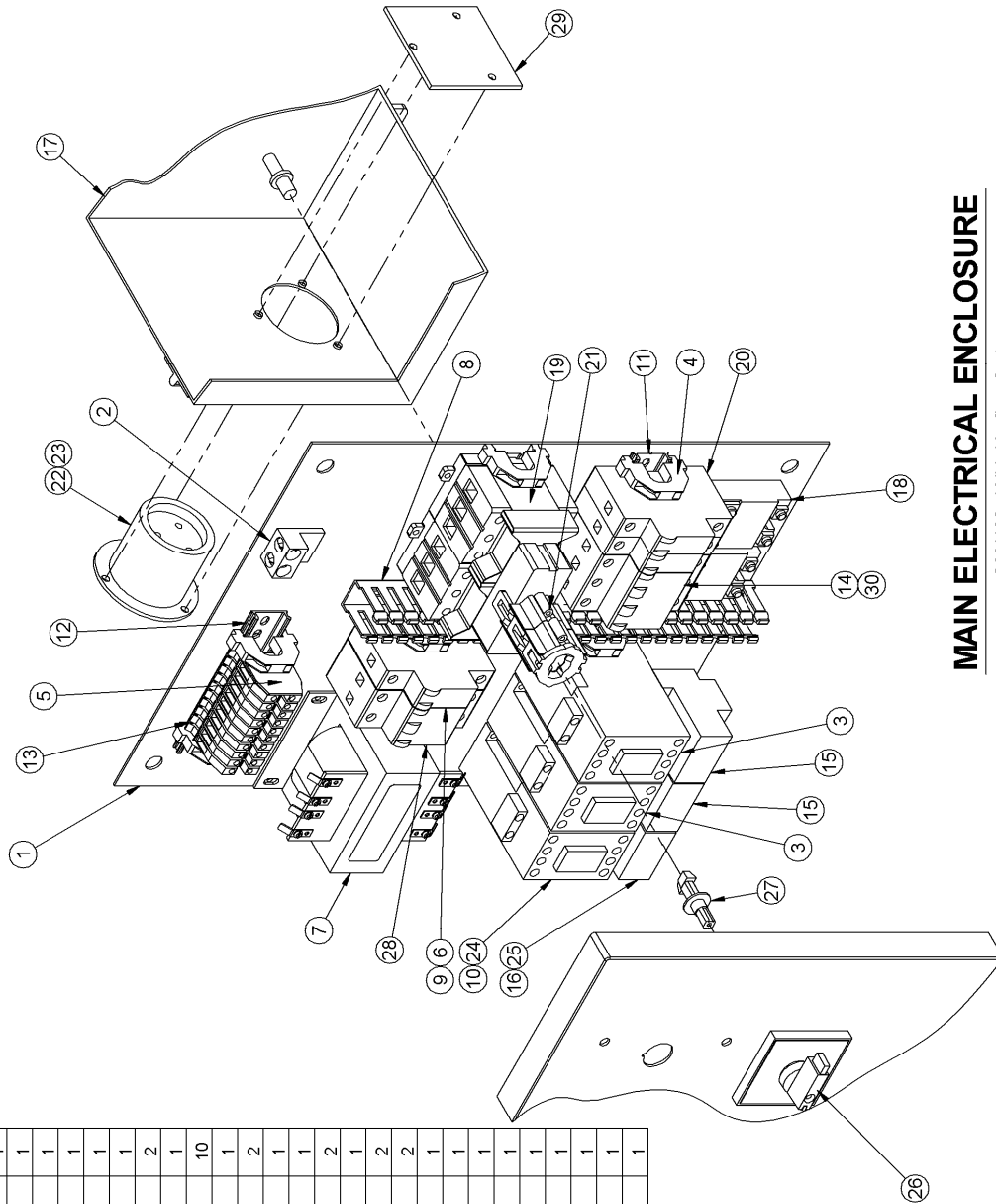


## MAIN ELECTRICAL ENCLOSURE

SHOWN WITH KERFING OPTION

NOTES: ITEM 3 USED WITH KERFING OPTION ONLY  
 ITEM 4 USED WITHOUT KERFING OPTION  
 ITEM 9 USED WITH KERFING OPTION  
 ITEM 6 QTY IS 1 WITHOUT KERFING  
 ITEM 8 QTY IS 2 WITHOUT KERFING

ITEM	PART NO.	DESCRIPTION	QTY.
1	4376-021	Back Panel	1
2	11-055	Penn-Union AU-0 Ground Bar	1
3	11-992	AB 100-C09D10 Contactor	2
4	11-960	AB 1492-EA35 Terminal Block Anchor	10
5	11-969	AB 1492-EB3 Terminal Block End	1
6	11-1037	AB 1492-CB1G-020 1P 2A Circuit Breaker	1
7	11-619	ACME TA-2-81212 Transformer	1
8	*****	Panduit E1X1LG8 Wireway	1
9	*****	Din Rail 3"	1
10	*****	Din Rail x 6-1/2"	1
11	*****	Din Rail x 4-1/2"	2
12	*****	Din Rail x 5-1/8"	1
13	11-887	AB 1492-W4 30A IEC Terminal Block	10
14	11-803	AB 1492-CB3G-200 3P 20A Circuit Breaker	1
15	11-1124	AB 193EA1EB Overload	2
16	11-1155	AB 193EA1GB Overload	1
17	4376-020	Electrical Enclosure	1
18	11-300	Civdcm TA2425 25A 280VAC Relay	2
19	11-935	AB 194E-A63-1756 Disconnect Switch	1
20	11-1461	AB 1492-CB1G-150 1P 15A Circuit Breaker	2
21	11-865	AB 194L-62853 Shaft Extension	2
22	11-783	Bryant 71520-ER Receptacle	1
23	11-771	Bryant 71620-ER Receptacle	1
24	11-989	AB 100-C16D10 Contactor	1
25	11-1156	AB 193EA1FB Overload	1
26	11-864	AB 194L-HE6E-1751 Disconnect Actuator	1
27	11-1204	AB 194E-G3707 52mm Metal End Shaft	1
28	11-881	AB 1492-CB2H-010 2P Circuit Breaker	1
29	6810-012	Cover Plate	1
30	11-797	AB 1492-CB3G-320 3P Circuit Breaker	1



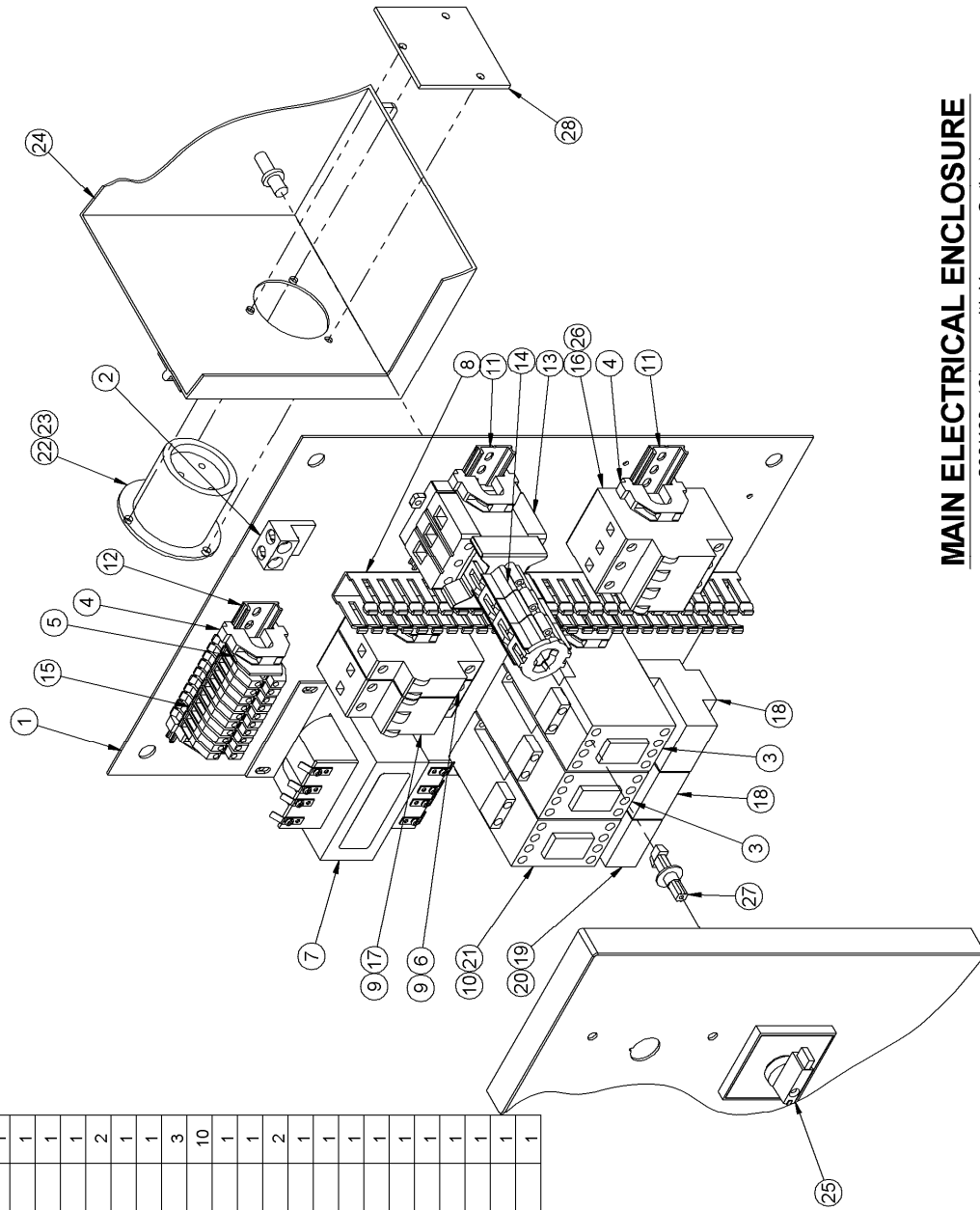
## MAIN ELECTRICAL ENCLOSURE

230/460v With Kerfing Option  
(Shown with Vacuum Option)

NOTES: 1: ITEM 14 FOR 460V ONLY  
ITEM 30 FOR 230V ONLY

- 2: ITEMS 16, 22 AND 24 USED WITH 230V VACUUM OPTION  
ITEMS 23, 24 AND 25 USED WITH 460V VACUUM OPTION  
3: ITEM 29 COVER PLATE USED WITHOUT VACUUM OPTION

ITEM	PART NO.	DESCRIPTION	QTY.
1	4376-021	Back Panel	1
2	11-055	Penn-Union ALU-0 Ground Bar	1
3	11-992	AB 100-C09D10 Contactor	2
4	11-960	AB 1492-EA35 Terminal Block Anchor	10
5	11-969	AB 1492-EB3 Terminal Block End	1
6	11-1037	AB 1492-CB1G-020 1P 2A Circuit Breaker	1
7	11-619	ACME TA-2-81212 Transformer	1
8	*****	Panduit E1X1LC8 Wireway	1
9	*****	Din Rail 3"	1
10	*****	Din Rail x 6-1/2"	1
11	*****	Din Rail x 4-1/2"	2
12	*****	Din Rail x 5-1/8"	1
13	11-938	AB 194E-A63-1753 Disconnect Switch	1
14	11-865	AB 194L-62853 Shaft Extension	3
15	11-887	AB 1492-W4 30A IEC Terminal Block	10
16	11-797	AB 1492-CB3G-320 3P Circuit Breaker	1
17	11-881	AB 1492-CB2H-010 2P Circuit Breaker	1
18	11-1124	AB 193EA1EB Overload	2
19	11-1155	AB 193EA1GB Overload	1
20	11-1156	AB 193EA1FB Overload	1
21	11-989	AB 100-C16D10 Contactor	1
22	11-783	Bryant 71520-ER Receptacle	1
23	11-771	Bryant 71620-ER Receptacle	1
24	4376-020	Electrical Enclosure	1
25	11-864	AB 194L-HE6E-175I Disconnect Actuator	1
26	11-803	AB 1492-CB3G-200 3P 20A Circuit Breaker	1
27	11-1204	AB 194E-G3707 52mm Metal End Shaft	1
28	6810-012	Cover Plate	1



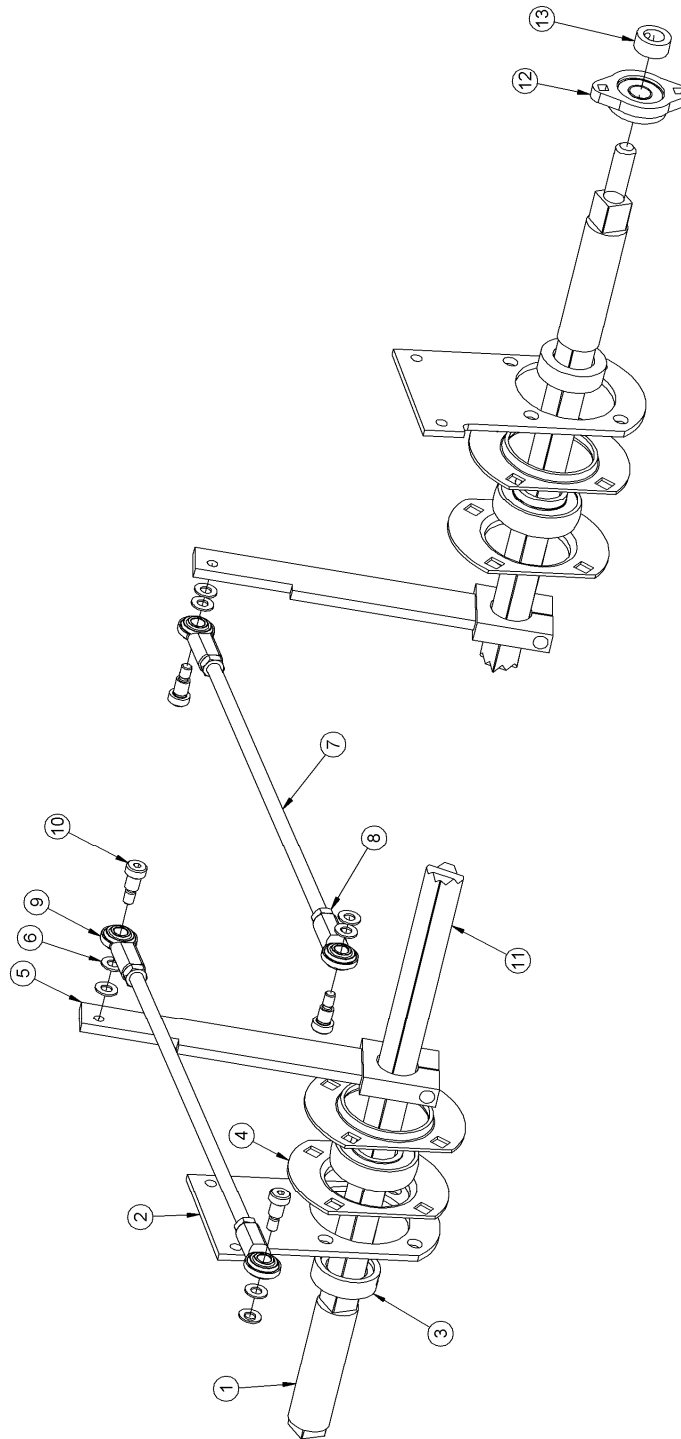
## MAIN ELECTRICAL ENCLOSURE

230/460v (Shown with Vacuum Option)

NOTES: 1: ITEM 16 FOR 230V ONLY  
ITEM 26 FOR 460V ONLY

2: ITEMS 19,21 AND 22 USED WITH 230V VACUUM OPTION ONLY  
ITEMS 20,21 AND 23 USED WITH 460V VACUUM OPTION ONLY

3: ITEM 28 COVER PLATE USED WITHOUT  
VACUUM OPTION ONLY



## FEED SYNC ASSEMBLY

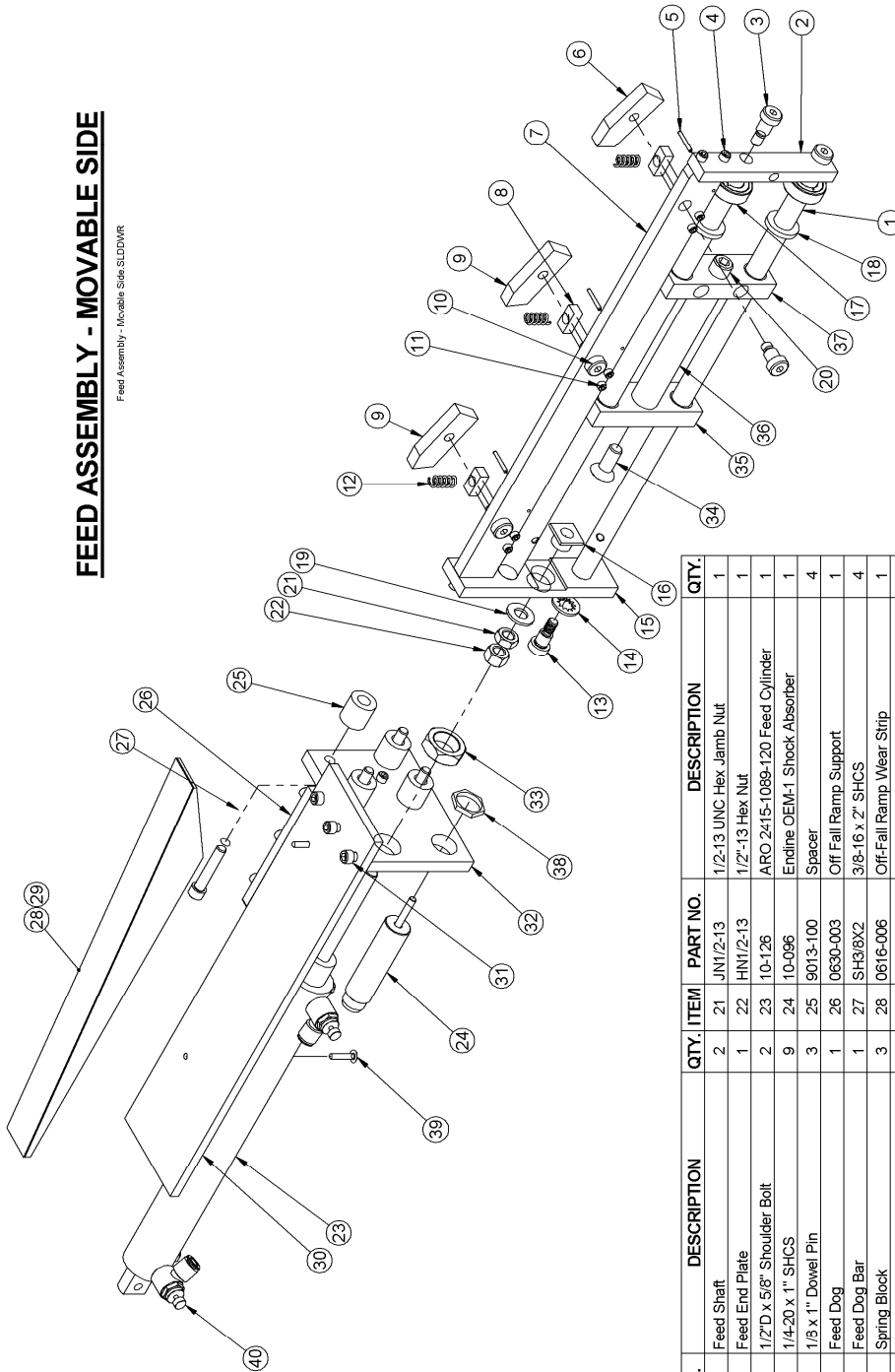
Complete Feed Sync Assembly, SLD008

ITEM	PART NO.	DESCRIPTION	QTY.
1	13-069	Jergens 1.4620 Square Hole Sleeve	2
2	0617-009	Bearing Bracket	2
3	12-013	Fafnir Bearing	2
4	0622-008	Bearing Flange	4
5	0615-100	Feed Drive Arm	2
6	FW36	3/8" Flat Washer	8
7	0617-006	Connecting Rod	2
8	JN1/2-20	1/2-20 Hex Jamb Nut	4
9	12-084	Rod End	4
10	SB17/2X5/8	1/2"Dx 5/8" Shoulder Bolt	4
11	0617-004	Square Feed Synchro Shaft	1
12	12-258	Fafnir VFTD-3/4 Pillow Block Bearing	1
13	SHAFT3/4	3/4" Solid Shaft Collar	1



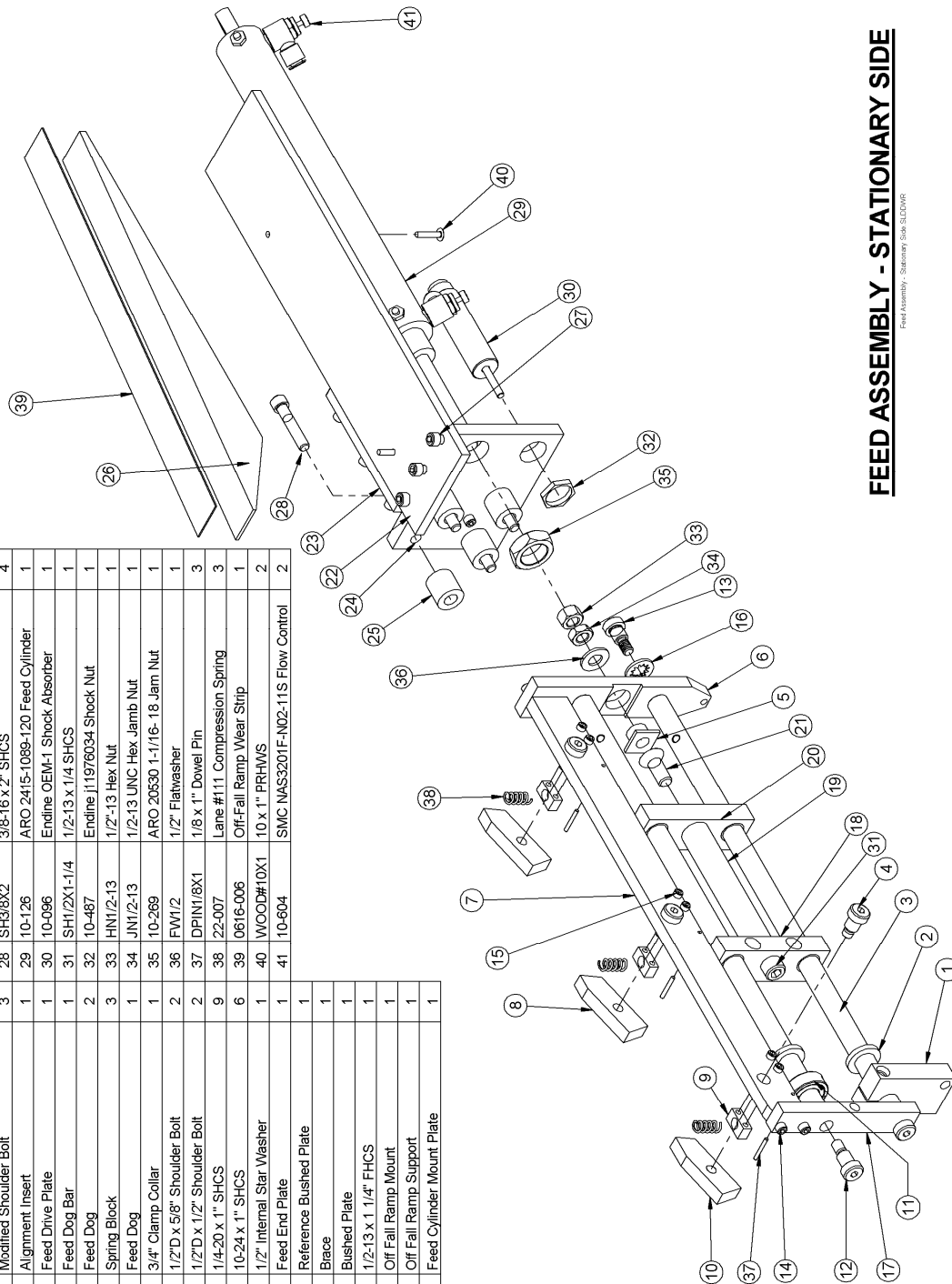
**FEED ASSEMBLY - MOVABLE SIDE**

Feed Assembly - Movable Side SLDWR



ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	0605-001	Feed Shaft	2	21	JN1/2-13	1/2-13 UNC Hex Jamb Nut	1
2	0617-001	Feed End Plate	1	22	HN1/2-13	1/2-13 Hex Nut	1
3	SB1/2X5/8	1/2"D x 5/8" Shoulder Bolt	2	23	10-126	ARO 2415-1089-120 Feed Cylinder	1
4	SH1/4X1	1/4-20 x 1" SHCS	9	24	10-096	Endline OEM-1 Shock Absorber	1
5	DPIN1/8X1	1/8 x 1" Dowel Pin	3	25	9013-100	Spacer	4
6	0620-002	Feed Dog	1	26	0630-003	Off Fall Ramp Support	1
7	0601-004	Feed Dog Bar	1	27	SH3/8X2	3/8-16 x 2" SHCS	4
8	0627-008	Spring Block	3	28	0616-006	Off-Fall Ramp Wear Strip	1
9	0620-003	Feed Dog	2	29	0616-005	Fall Off Ramp	1
10	0619-008	Modified Shoulder Bolt	3	30	0630-004	Off Fall Ramp Mount	1
11	SH10-24X1	10-24 x 1" SHCS	6	31	SH5/16X3/4	5/16-18 x 3/4" SHCS	3
12	22-007	Lane #111 Compression Spring	3	32	0630-001	Feed Cylinder Mount Plate	1
13	SB1/2X1/2	1/2"D x 1/2" Shoulder Bolt	2	33	10-269	ARO 20530 1-1/16- 18 Jam Nut	1
14	ILW1/2	1/2" Internal Star Washer	1	34	FH1/2X1-1/4	1/2-13 x 1 1/4" FHCS	1
15	0617-002	Feed Drive Plate	1	35	0627-102	Bushed Plate	1
16	4345-032	Alignment Insert	1	36	0627-001	Brace	1
17	CC3/4	3/4" Clamp Collar	2	37	0627-101	Reference Bushed Plate	1
18	12-354	Rubber Washer	2	38	10-487	Endline J11976034 Shock Nut	1
19	FW1/2	1/2" Flatwasher	1	39	WOOD#10X1	10 x 1" PRHWS	2
20	SH1/2X1-1/4	1/2-13 x 1/4 SHCS	1	40	10-604	SMC NAS3201F-N02-11S Flow Control	2

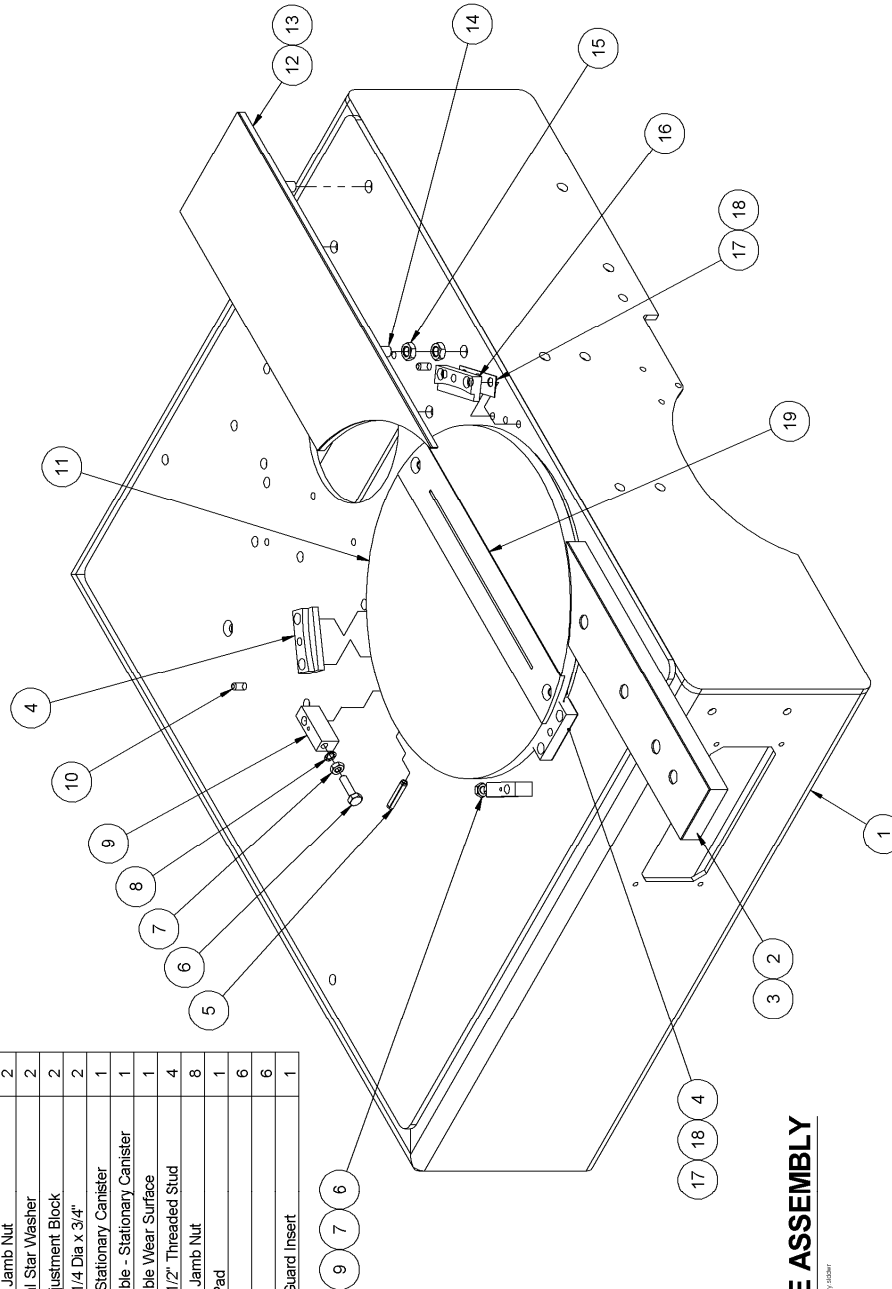
ITEM	PART NO.	DESCRIPTION	QTY.	ITEM	PART NO.	DESCRIPTION	QTY.
1	0621-007	Stop Clamp Block	1	25	9013-100	Spacer	4
2	12-354	Rubber Washer	2	26	0616-005	Fall Off Ramp	1
3	0605-001	Feed Shaft	2	27	SH5/16X3/4	5/16-18 x 3/4" SHCS	3
4	0619-008	Modified Shoulder Bolt	3	28	SH3/8X2	3/8-16 x 2" SHCS	4
5	4345-032	Alignment Insert	1	29	10-126	ARO 2415-1088-120 Feed Cylinder	1
6	0623-008	Feed Drive Plate	1	30	10-096	Endline OEM-1 Shock Absorber	1
7	0601-004	Feed Dog Bar	1	31	SH1/2X1-1/4	1/2-13 x 1/4 SHCS	1
8	0620-003	Feed Dog	2	32	10-487	Endline J11976034 Shock Nut	1
9	0627-008	Spring Block	3	33	HN1/2-13	1/2"-13 Hex Nut	1
10	0620-002	Feed Dog	1	34	JN1/2-13	1/2-13 UNC Hex Jamb Nut	1
11	CC3/4	3/4" Clamp Collar	1	35	10-269	ARO 20530 1-1/16-18 Jam Nut	1
12	SB1/2X5/8	1/2"D x 5/8" Shoulder Bolt	2	36	FW1/2	1/2" Flatwasher	1
13	SB1/2X1/2	1/2"D x 1/2" Shoulder Bolt	2	37	DPIN1/8X1	1/8 x 1" Dowel Pin	3
14	SH1/4X1	1/4-20 x 1" SHCS	9	38	22-007	Lane #111 Compression Spring	3
15	SH10-24X1	10-24 x 1" SHCS	6	39	0616-006	Off-Fall Ramp Wear Strip	1
16	ILW1/2	1/2" Internal Star Washer	1	40	WOOD#10X1	10 x 1" PRHWS	2
17	0617-001	Feed End Plate	1	41	10-604	SMC NAS3201F-N02-11S Flow Control	2
18	0627-101	Reference Bushed Plate	1				
19	0627-001	Brace	1				
20	0627-102	Bushed Plate	1				
21	FH1/2X1-1/4	1/2-13 x 1 1/4" FHCS	1				
22	0630-004	Off Fall Ramp Mount	1				
23	0630-003	Off Fall Ramp Support	1				
24	0630-001	Feed Cylinder Mount Plate	1				



**FEED ASSEMBLY - STATIONARY SIDE**

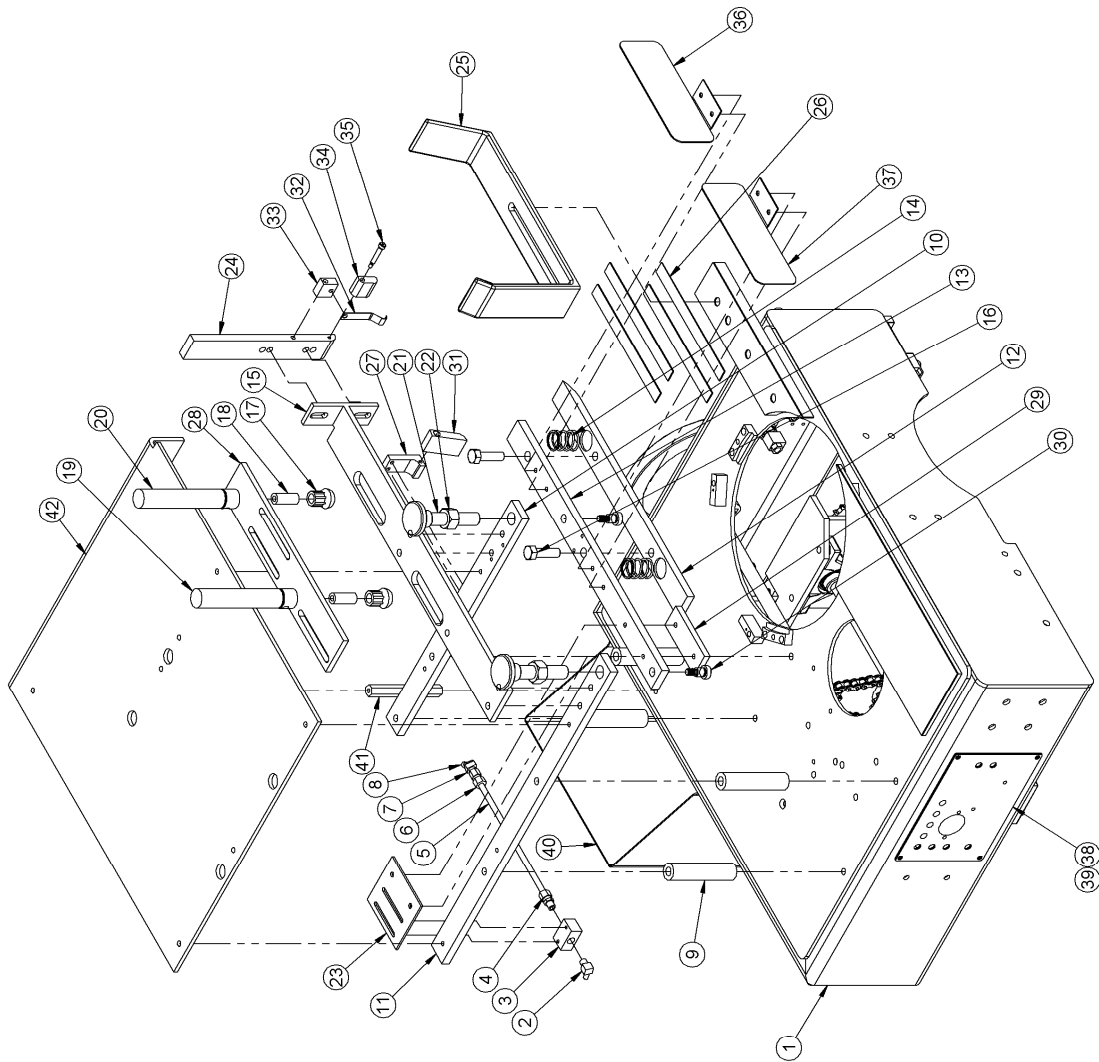
Feed Assembly - Stationary Side SLCOVER

ITEM	PART NO.	DESCRIPTION	QTY.
1	0604-100	Stationary Canister	1
2	0609-003	Infeed Table	1
3	0629-004	Wear Strip	1
4	0622-004	Turntable Pad	2
5	ROLLPIN4X20	1/4" Dia X 1-1/4" Roll Pin	1
6	HB1/4-20X1	1/4-20 x 1" HHCS	2
7	JN1/4-20	1/4-20 Hex Jamb Nut	2
8	ISW1/4	1/4" Internal Star Washer	2
9	0602-001	Angular Adjustment Block	2
10	DPIN1/4X3/4	Dowel Pin 1/4 Dia x 3/4"	2
11	4353-001	Turntable - Stationary Canister	1
12	0609-001	Outfeed Table - Stationary Canister	1
13	0629-003	Outfeed Table Wear Surface	1
14	9511-150	3/8-16 x 1-1/2" Threaded Stud	4
15	JN3/8-16	3/8-16 Hex Jamb Nut	8
16	0622-007	Turntable Pad	1
17	0629-011	Shim .010"	6
18	0629-010	Shim .005"	6
19	4300-003	Turntable Guard Insert	1



## TURNTABLE ASSEMBLY

TURNABLE ONLY OPTION

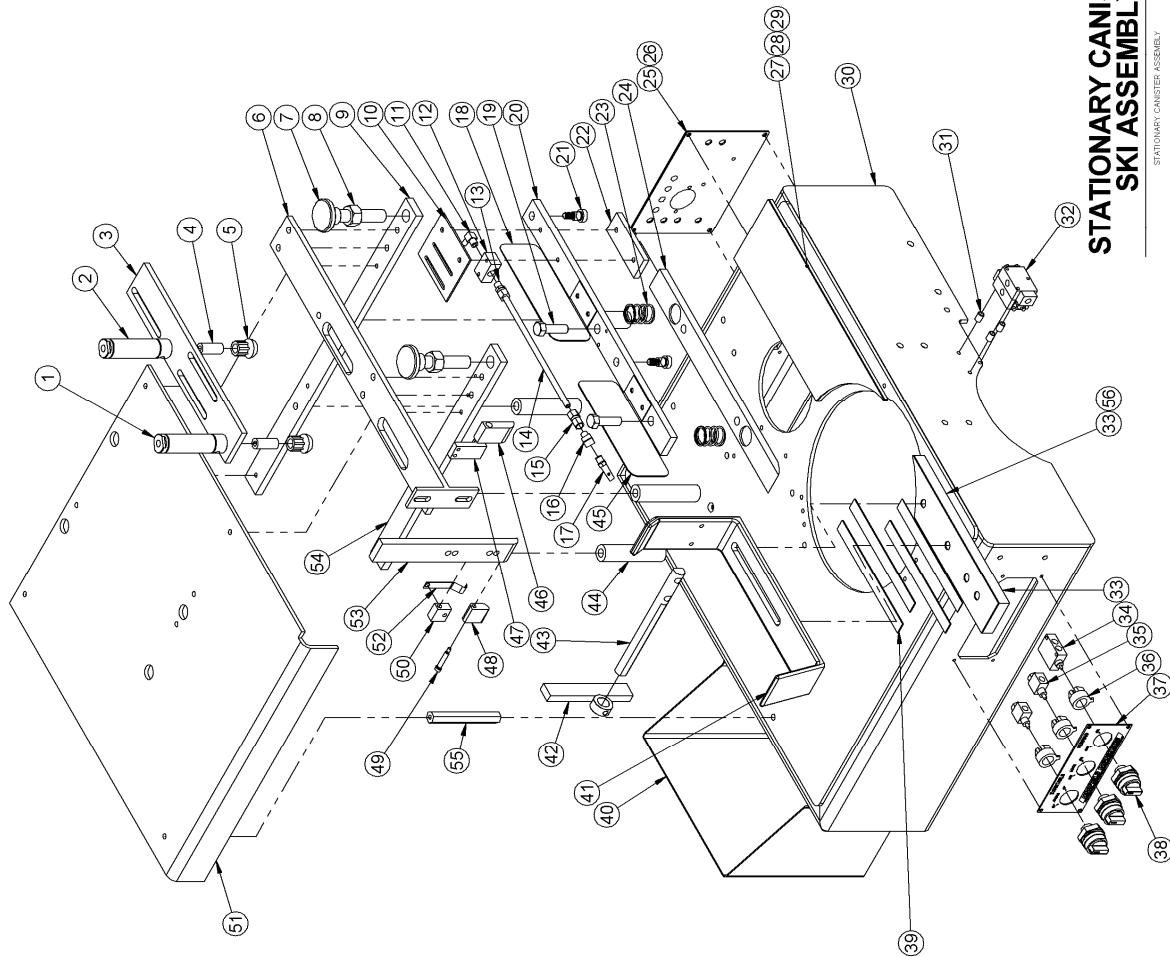


ITEM	PART NO.	DESCRIPTION	QTY.
1	*****	Movable Canister Assembly	1
2	21-056	Parker 229-6-2 Brass Fitting	1
3	4357-001	Manifold	1
4	21-109	Parker X68C-5-2 Brass Fitting	1
5	4357-003	Blow Tip Tubing	1
6	21-110	Parker X66C-5-2 Brass Fitting	1
7	21-077	Parker 2214P-2-2 Brass Fitting	1
8	10-317	Foster EX2ST Blow Tip	1
9	9013-438	Spacer	4
10	0607-002	T-Bar Support	1
11	4345-016	T-Bar Support	1
12	4357-007	Hold Down Ski	1
13	4345-017	Ski Adjustment Bar	1
14	22-013	#533 Compression Spring	2
15	0606-100	Clamp Bracket	1
16	HB1/2X1-3/4	1/2-13 x 1-3/4" HHCS	2
17	13-229	Crutch Tip	2
18	0602-003	Clamp Button	2
19	10-134	Bimba 092-D Cylinder	1
20	10-134	Bimba 092-D Clamp Cyl W/Kerfing	1
21	0625-100	Ski Adjustment Knob	2
22	HN3/4-10	3/4-10 Hex Nut	2
23	4357-002	Manifold Mount Plate	1
24	0619-004	Material Gate - Movable Side	1
25	0610-102	Movable Canister Magazine	1
26	0610-009	Hopper Shim	4
27	4357-006	Drop Block Mount Angle	1
28	0615-009	Adjustable Clamp Bar	1
29	0626-002	Wood Pad	1
30	0619-001	Modified Shoulder Bolt	2
31	4357-005	Drop Block	1
32	0621-006	Flipper Spring	1
33	0618-005	Spring Mount	1
34	0618-003	Hold Back Flipper	1
35	SB1/4X1-1/4	1/4 x 1-1/4" Shoulder Bolt	1
36	4345-019	Side Guard	1
37	4345-018	Side Guard	1
38	0614-007	Sub-Panel W Kerfing as shown	1
39	0614-008	Sub-Panel W/O Kerfing	1
40	0620-001	Fall-Off Deflector	1
41	9001-100	Hex Spacer	1
42	4345-015	Blade Guard (W/O Kerfing)	1

## MOVABLE CANISTER SKI ASSEMBLY

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ITEM	PART NO.	DESCRIPTION	QTY.
1	10-134	Bimba 092-D Clamp Cyl.	1
2	10-134	Bimba 092-D Clamp Cyl W/Kerfing	1
3	0615-008	Adjustable Mount Plate	1
4	0602-003	Clamp Button	2
5	13-229	Crutch Tip	2
6	0606-100	Camp Bracket	1
7	0625-100	Ski Adjustment Knob	2
8	HN3/4-10	3/4-10 Hex Nut	2
9	4345-016	T-Bar Support	1
10	4357-002	Manifold Mount Plate	1
11	21-056	Parker 229-6-2 Brass Fitting	1
12	4357-001	Manifold	1
13	21-109	Parker X68C-5-2 Brass Fitting	1
14	4357-003	Blow Tip Tubing	1
15	21-110	Parker X66C-5-2 Brass Fitting	1
16	21-077	Parker 2214P-2-2 Brass Fitting	1
17	10-317	Foster EX2ST Blow Tip	1
18	4345-019	Side Guard	1
19	HB1/2X1-3/4	1/2-13 x 1-3/4" HHCS	2
20	4345-017	Ski Adjustment Bar	1
21	SB1/2X1/2	1/2"D x 1/2" Shoulder Bolt	2
22	0626-002	Wood Pad	1
23	22-013	#533 Compression Spring	2
24	4357-007	Hold Down Ski	1
25	0614-007	Sub-Panel W Kerfing as shown	1
26	0614-008	Sub-Panel W/O Kerfing	1
27	0629-003	Outfeed Table Wear Surface	1
28	0609-001	Outfeed Table	1
29	9511-150	3/8-16 x 1-1/2" Threaded Stud	4
30	0604-100	Stationary Canister	1
31	0031-003	Spacer	3
32	10-075	Aro Air Valve	2
33	0609-003	Infeed Table	1
34	10-048	Clippard MJV-4 Air Valve	1
35	10-047	Clippard MJV-3 Air Valve	2
36	10-414	Clippard PB-85 Adapter	3
37	8035-001	Electrical Cover Plate	1
38	10-413	Clippard PL13TB Switch	3
39	0610-009	Hopper Shim	4
40	0620-001	Fail-Off Deflector	1
41	0610-101	Feed Magazine	1
42	0619-100	Material Stop Assembly	1
43	0619-003	Stop Adjustment Bar	1
44	9013-438	Spacer	4
45	4345-018	Side Guard	1
46	4357-004	Drop Block (Opp Side)	1
47	4357-006	Drop Block Mount Angle	1
48	0618-003	Hold Back Flipper	1
49	SB1/4X1-1/4	1/4 x 1-1/4" Shoulder Bolt	1
50	0618-005	Spring Mount	1
51	4345-014	Blade Guard (W/O Kerfing)	1
52	0621-006	Flipper Spring	1
53	0619-005	Material Gate	1
54	0607-002	T-Bar Support	1
55	9001-100	Hex Spacer	1
56	0629-004	Wear Strip	1

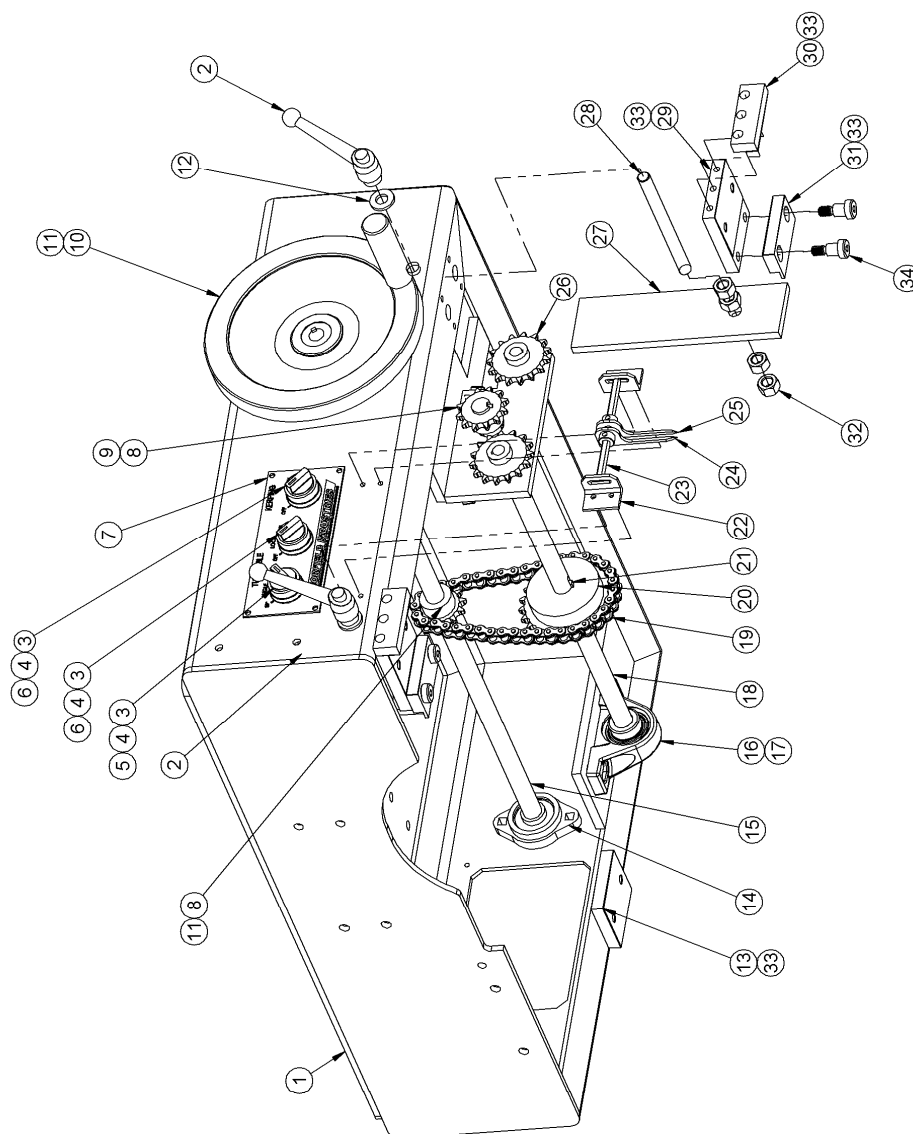


**STATIONARY CANISTER  
SKI ASSEMBLY**

STATIONARY CANISTER ASSEMBLY

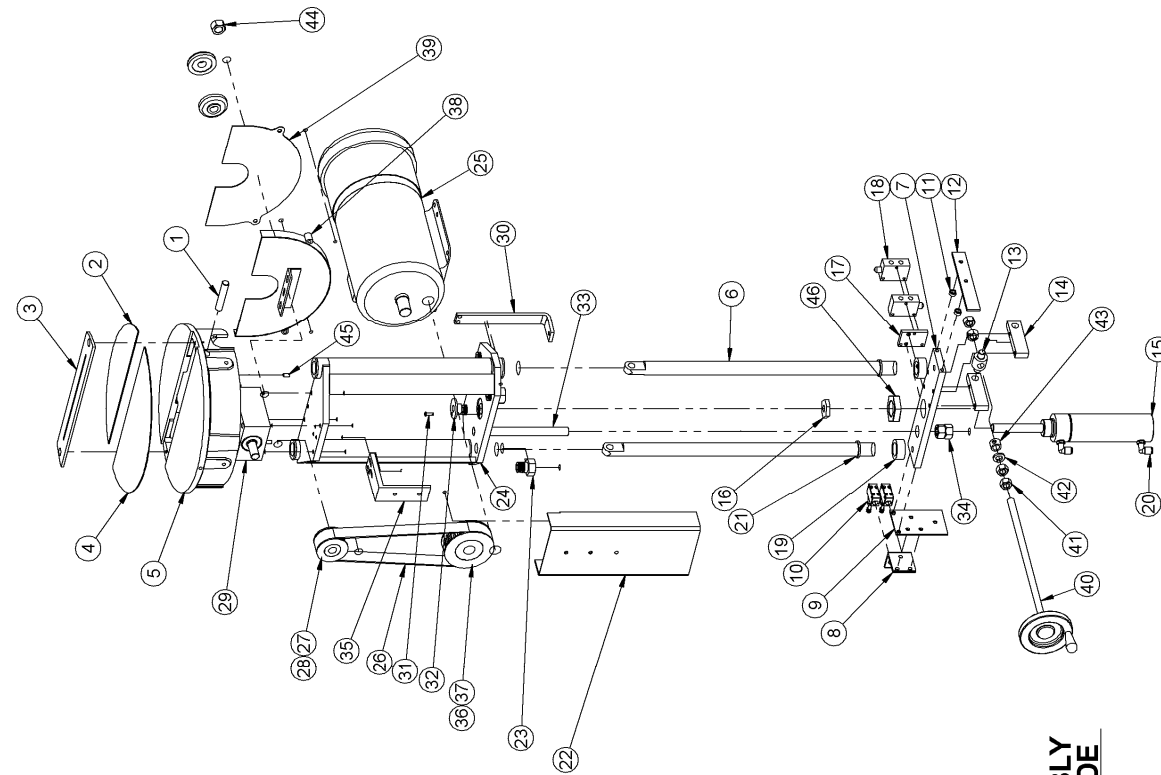
ITEM	PART NO.	DESCRIPTION	QTY.
1	0603-100	Movable Canister Assembly	1
2	13-856	Reid KHB-36 Knob	2
3	10-413	Clippard PLT3TB Switch	3
4	10-414	Clippard PB-85 Adapter	3
5	10-048	Clippard MJV-4 Air Valve	1
6	10-047	Clippard MJV-3 Air Valve	2
7	8035-001	Electrical Cover Plate	1
8	12-063	Martin 40BS12-3/4 Drive Sprocket	2
9	9072-100	3/16 SQUARE KEY x 1"	1
10	0627-005	Length Crank	1
11	9072-125	3/16 Square Key x 1-1/4"	2
12	12-107	Burling EN081602 Bushing	2
13	0609-007	Rear Slide Pad	1
14	12-258	Fafnir VFTD-3/4 Pillow Block Bearing	2
15	0627-007	Crank Shaft	1
16	12-096	Fafnir VAK-3/4 Pillow Block Bearing	2
17	FW3/8	3/8" Flat Washer	8
18	0627-006	Driven Shaft	1
19	#40 CHAIN	#40 Chain x 19-1/2"	1
20	12-086	Martin 40BS24-3/4 Drive Sprocket	1
21	9072-150	3/16 SQUARE KEY x 1-1/2"	1
22	0692-006	Pointer Mount Bkt.	2
23	0692-005	Pointer Mount Rod	1
24	0692-101	Red Scale Pointer	1
25	0692-102	Yellow Scale Pointer	1
26	12-052	Dodge CT-415 Idler Sprocket	2
27	0628-004	Clamp Plate	2
28	9513-600	1/2-13 x 6" Redl-Thread Stud	2
29	0609-008	Slide Pad	2
30	0609-005	Clamp Block	2
31	0609-006	Clamp Pad	2
32	HN1/2-13	1/2"-13 Hex Nut	8
33	*****	Pad Wear Surface	7
34	0619-001	Modified Shoulder Bolt	4

Note:  
For replacement Wear Surface Pad (Item 33), order  
Norfield Part # TEF.03X7 and cut to required sizes.



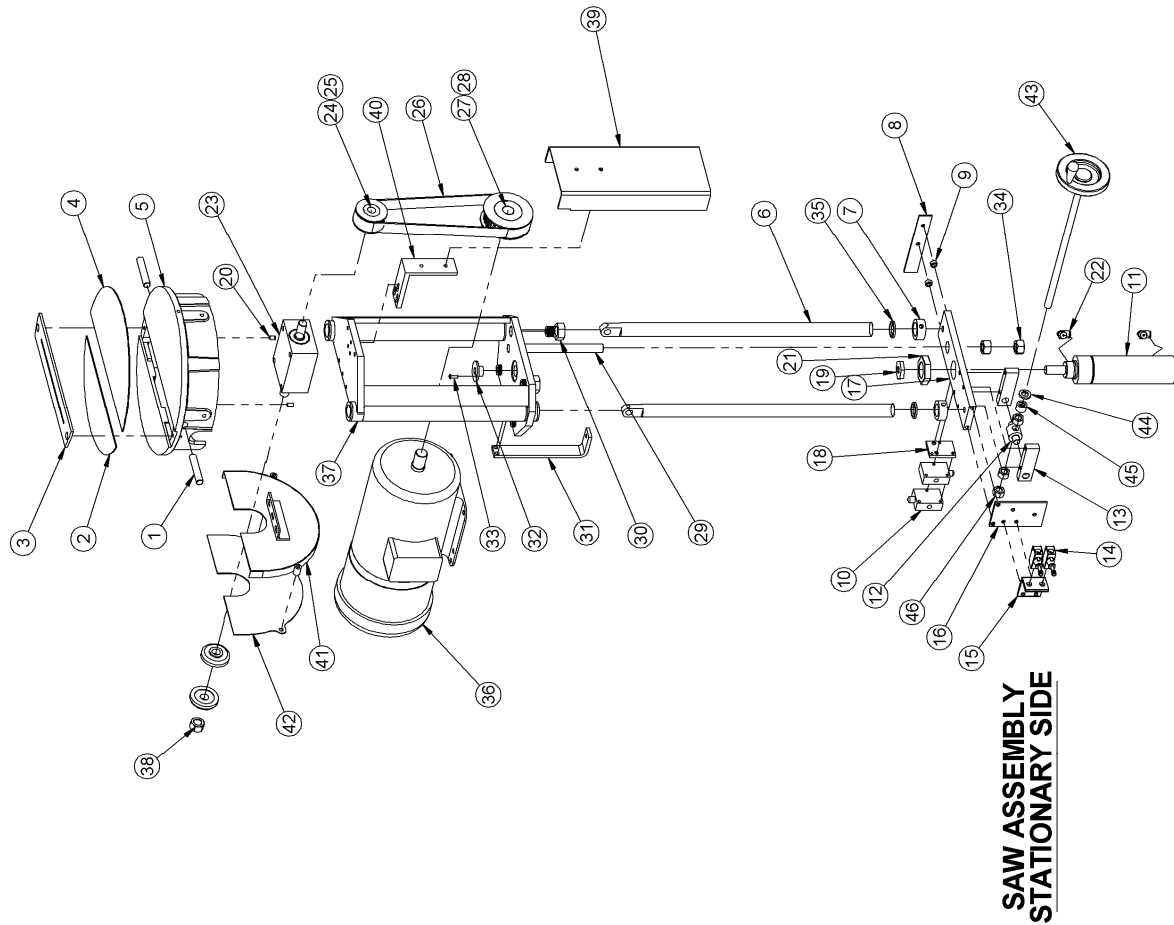
## MOVABLE CANISTER POSITIONING ASSEMBLY

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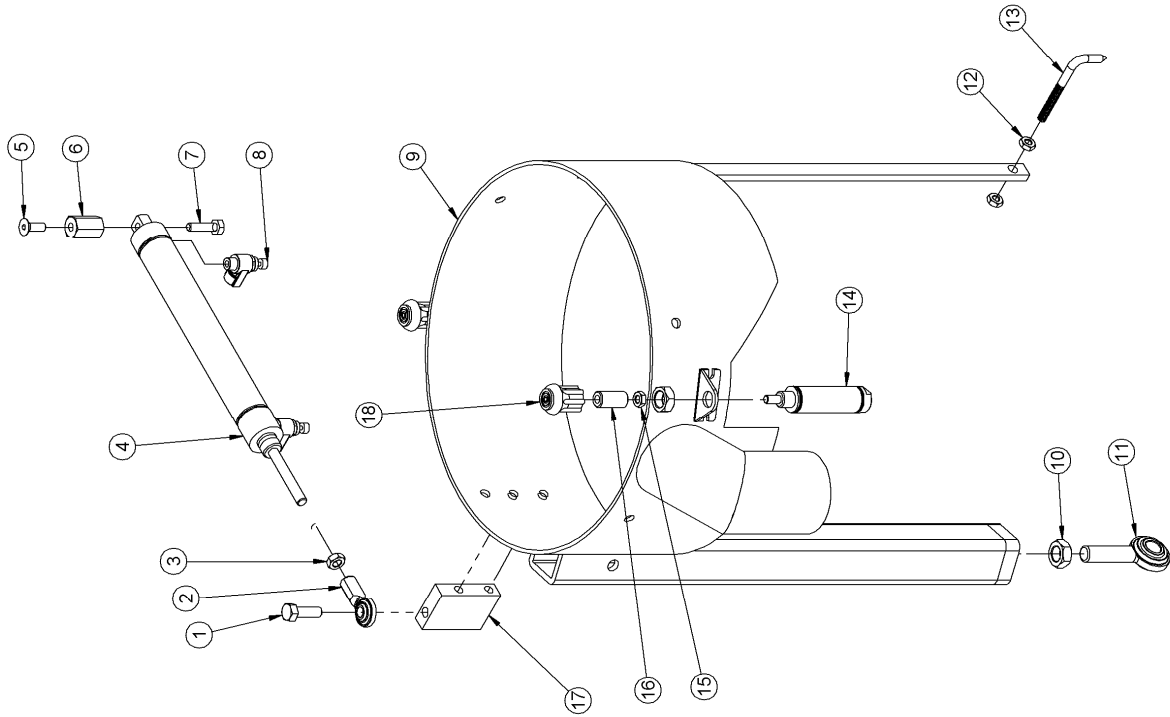
**SAW ASSEMBLY  
MOVABLE SIDE**

ITEM	PART NO.	DESCRIPTION	QTY.
1	0605-004	Pivot Pin	2
2	0629-002	Turntable Wear Surface	1
3	4300-003	Turntable Guard Insert	1
4	0629-001	Turntable Wear Surface	1
5	4353-002	Turntable - Movable Side	1
6	0605-002	Slide Rod	2
7	0612-002	Slide Rod Base	1
8	0613-006	Flow Control Bracket	1
9	4350-001	Valve Mount	1
10	10-071	SMC NAS2000-N01 Flow Control	2
11	9536-025	Bevel Gauge Spacer	2
12	0615-001	Bevel Gauges	1
13	0612-003	Trunnion	1
14	0602-007	Trunnion Block	2
15	10-153	Bimba 314-D Cylinder	1
16	0611-007	Aligning Insert	1
17	0601-009	Return Valve Mount Block	1
18	10-071	Aro 5030-06 Saw Sensor & Return Valve	2
19	SHAFT1	1" Shaft Collar Solid	2
20	21-123	SMC KQ2L07-35S FITTING	2
21	12-093	National 214 O-Ring	2
22	4350-101	Belt Guard	1
23	0629-005	SAW MOTOR JACKING SCREW	4
24	4355-101	Motor Mount Weldment	1
25	0693-016	Baldor Motor M3550T w/ Brake	1
26	12-008	Gates 300L100 Timing Belt	1
27	12-027	Dodge TL18L100 Timing Belt Pulley	1
28	12-035	Dodge 1008-5/8 Taper Lock Hub	1
29	0601-730	Movable Mandrel - 2" Right Hand	1
30	0601-001	Saw Return Trip Bracket	1
31	RVT10-1/2	#10 x 1/2" U-Drive Rivet	1
32	0611-006	Aligning Insert	1
33	9514-725	5/8-11 UNC Red-Thread x 7 1/4"	1
34	HN5/8-11	5/8-11 Hex Nut	2
35	4350-100	Belt Guard Brkt.	1
36	12-034	Dodge 1610-7/8 Taper Lock	1
37	12-029	Dodge TL28L100 Timing Belt	1
38	4351-101	Blade Guard Housing	1
39	4351-003	Blade Guard Cover	1
40	0602-101	Bevel Crank Assembly	1
41	HN1/2-13	1/2"-13 Hex Nut	4
42	LW1/2	1/2" Lockwasher W/ Barbs Ground Flat	1
43	SHAFT1/2	1/2" Shaft Collar	1
44	HN5/8-18	5/8-18 Hex Nut	1
45	SS1/4-20X1/2	1/4-20 x 1/4" Set Screw	2
46	10-357	Bimba Nut	1



ITEM	PART NO.	DESCRIPTION	QTY.
1	0605-004	Pivot Pin	2
2	0629-002	Turntable Wear Surface	1
3	4300-003	Turntable Guard Insert	1
4	0629-001	Turntable Wear Surface	1
5	4353-001	Turntable- Stationary Canister	1
6	0605-002	Slide Rod	2
7	SHAFT1	1" Shaft Collar Solid	2
8	0615-001	Bevel Gauges	1
9	9536-025	Bevel Gauge Spacer	2
10	10-071	Aro 5030-06 Saw Sensor & Return Valve	2
11	10-153	Bimba 314-D Cylinder	1
12	0612-003	Trunnion	1
13	0602-007	Trunnion Block	2
14	10-071	SMC NAS2000-N01 Flow Control	2
15	0613-006	Flow Control Bracket	1
16	4350-001	Valve Mount	1
17	0612-001	Slide Rod Base - Stationary Canister	1
18	0601-009	Return Valve Mount Block	1
19	0611-007	Aligning Insert	1
20	SS1/4-20X1/2	1/4-20 x 1/4" Set Screw	2
21	10-357	Bimba Nut	1
22	21-123	SMC KQ2L07-3SS FITTING	2
23	0601-731	Stationary Mandrel - 2" Left Hand	1
24	12-035	Dodge 1008-5/8 Taper Lock Hub	1
25	12-027	Dodge TL18L100 Timing Belt Pulley	1
26	12-008	Gates 300L100 Timing Belt	1
27	12-034	Dodge 1610-7/8 Taper Lock	1
28	12-029	Dodge TL28L100 Timing Belt	1
29	9514-725	5/8-11 UNC Red-Thread x 7 1/4"	1
30	0629-005	SAW MOTOR JACKING SCREW	4
31	0601-001	Saw Return Trip Bracket	1
32	0611-006	Aligning Insert	1
33	RV10-1/2	#10 x 1/2" U-Drive Rivet	1
34	HN5/8-11	5/8-11 Hex Nut	2
35	12-093	National 214 O-Ring	2
36	0693-016	Baldor Motor M3550T w/ Brake	1
37	4355-101	Motor Mount Weldment	1
38	HN5/8-18	5/8-18 Hex Nut LH	1
39	4350-101	Belt Guard	1
40	4350-100	Belt Guard Birt.	1
41	4351-101	Blade Guard Housing	1
42	4351-003	Blade Guard Cover	1
43	0602-101	Bevel Crank Assembly	1
44	LW1/2	1/2" Lockwasher W/ Barbs Ground Flat	1
45	SHAFT1/2	1/2" Shaft Collar	1
46	HN1/2-13	1/2"-13 Hex Nut	4



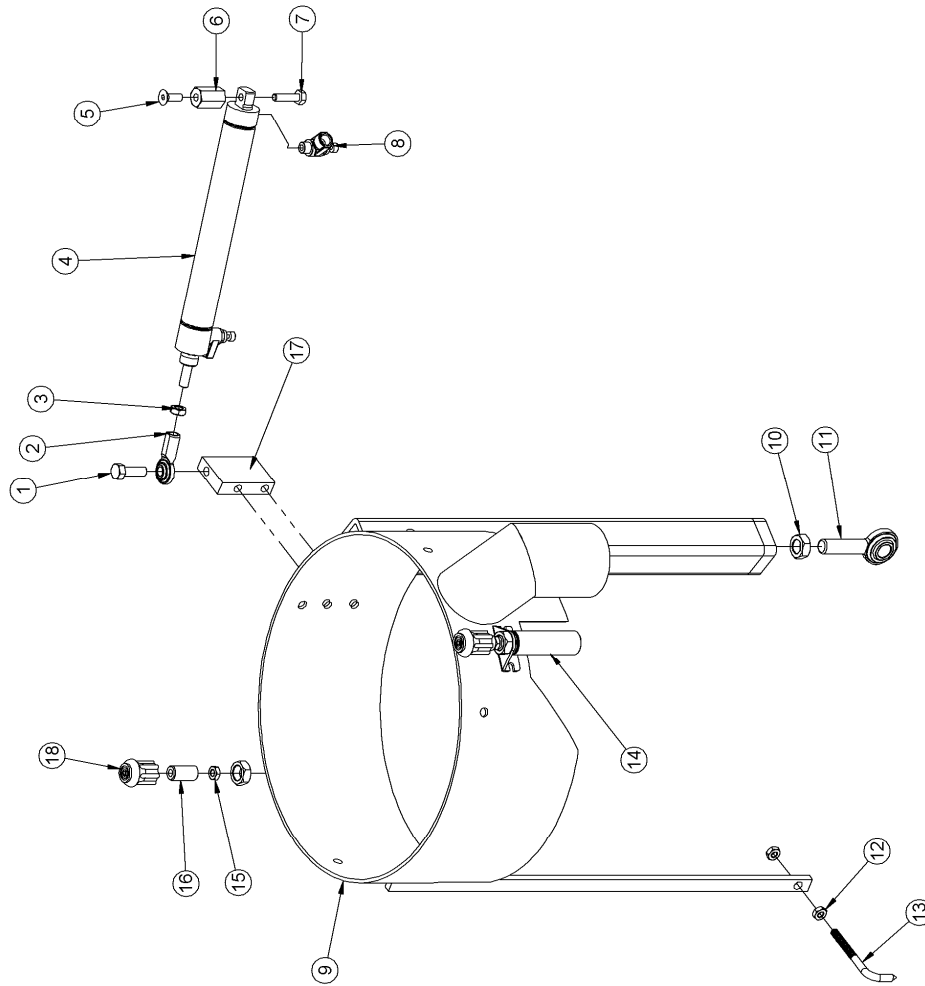


ITEM	PART NO.	DESCRIPTION	QTY.
1	*****	5/16-18 X 1" HHCS	1
2	12-082	Aurora CW-5 5/16" Female Rod-end	1
3	*****	5/16-24 Hex Jamb Nut	1
4	10-143	Bimba 096-DP Cylinder	1
5	FH1/4-20X3/4	1/4-20 x 3/4" FHCS	1
6	9001-100	Spacer	1
7	*****	1/4-20 x 1" HHCS	1
8	10-889	SMC NAS2201-FN010 Flow Control	2
9	4345-101	Movable Cannister Saw Housing	1
10	JN1/2-20	1/2-20 Hex Jamb Nut	1
11	12-436	Aurora CM-3 1/2-20 Male Rod End	1
12	JN1/4-20	1/4 - 20 UNC Hex Jamb Nut	2
13	0602-002	Bevel Pointer	1
14	10-128	Bimba 041 Cylinder	2
15	*****	1/4-28 Hex Jamb Nut	2
16	9026-001	Cylinder Button	2
17	0616-001	Spacer	1
18	13-228	1/2" Crutch Tip	2

## ROTATION ASSEMBLY MOVABLE SIDE

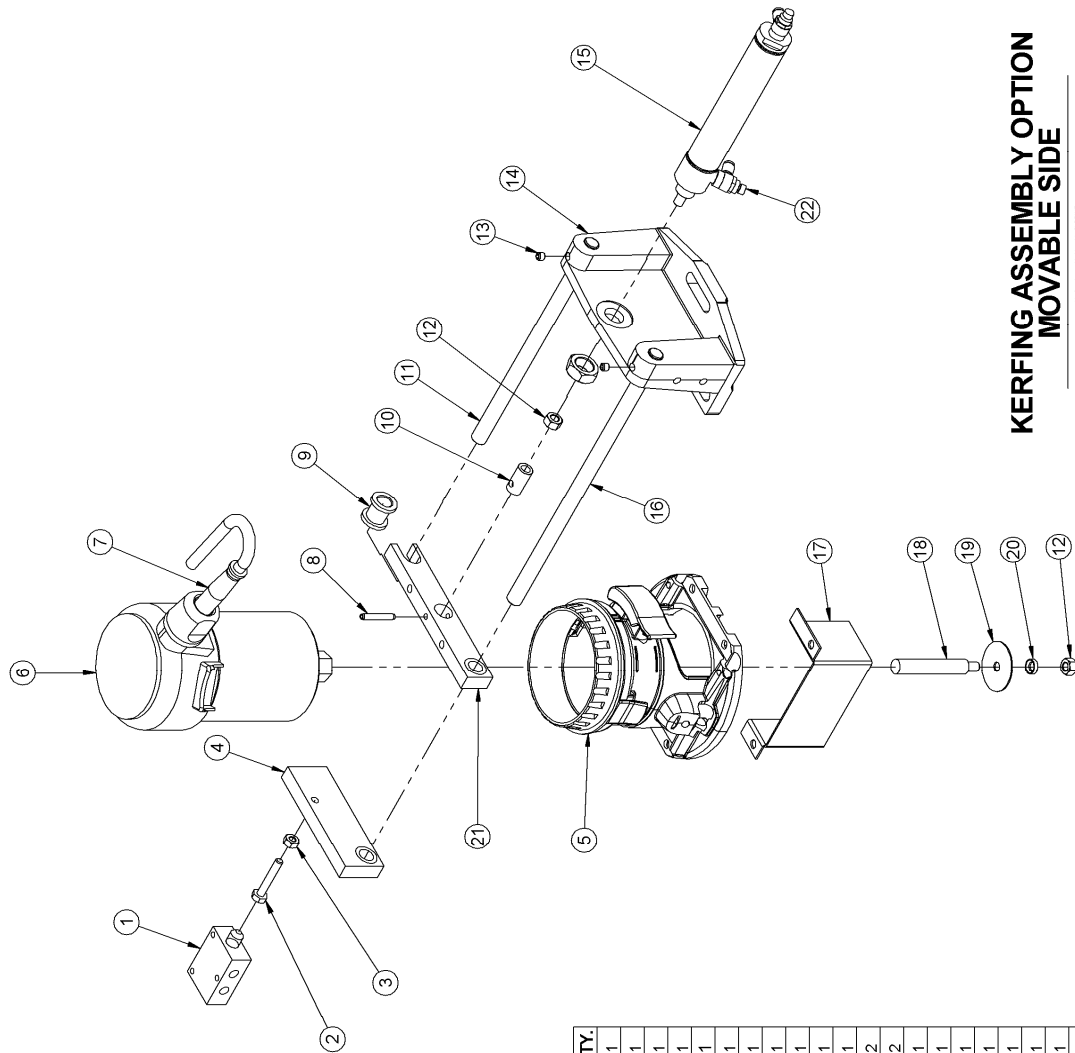
Rotation Assembly Movable Side, ILLCO®

ITEM	PART NO.	DESCRIPTION	QTY.
1	*****	5/16-18 X 1" HHCS	1
2	12-082	Aurora CW-5 5/16" Female Rod-End	1
3	*****	5/16-24 Hex Jamb Nut	1
4	10-143	Bimba 096-DP Cylinder	1
5	FH1/4-20X3/4	1/4-20 x 3/4" FHCS	1
6	9001-100	Spacer	1
7	*****	1/4-20 x 1" HHCS	1
8	10-669	SMC NAS2201-FN010 Flow Control	2
9	4345-100	Stationary Canister Saw Housing	1
10	JN1/2-20	1/2-20 Hex Jamb Nut	1
11	12-436	Aurora CM-8 1/2-20 Male Rod End	1
12	JN1/4-20	1/4 - 20 UNC Hex Jamb Nut	2
13	0602-002	Bevel Pointer	1
14	10-128	Bimba 041 Cylinder	2
15	*****	1/4-28 Hex Jamb Nut	2
16	9026-001	Cylinder Button	2
17	0616-001	Spacer	1
18	13-228	1/2" Crutch Tip	2



## ROTATION ASSEMBLY STATIONARY SIDE

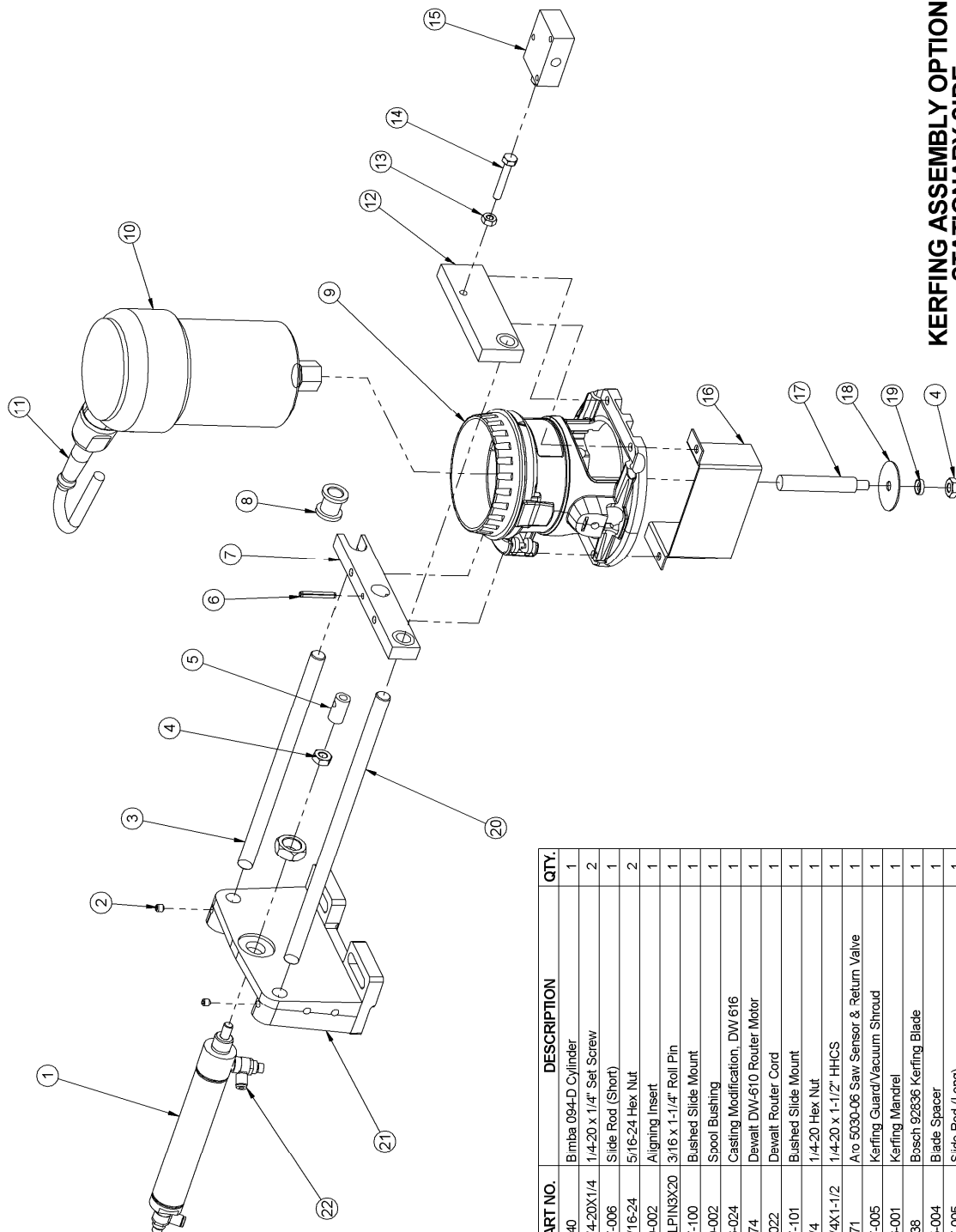
Rotation Assembly Stationary



# **KERFING ASSEMBLY OPTION MOVABLE SIDE**

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ITEM	PART NO.	DESCRIPTION	QTY.
1	10-071	Air 5030-06 Saw Sensor & Return Valve	1
2	HH1/4X1-1/2	1/4-20 x 1-1/2" HHCS	1
3	HN1/4	1/4-20 Hex Nut	1
4	4347-101	Bushed Slide Mount	1
5	4376-024	Casting Modification, DW 616	1
6	15-174	DeWalt DW-610 Router Motor	1
7	13-1022	DeWalt Router Cord	1
8	ROLLPIN3X20	3/16 x 1-1/4" Roll Pin	1
9	4350-002	Spool Bushing	1
10	0619-002	Aligning Insert	1
11	0607-006	Slide Rod (Short)	1
12	HN5/16-24	5/16-24 Hex Nut	2
13	SS1/4-20X1/4	1/4-20 x 1/4" Set Screw	2
14	0628-001	Kerfing Casting	1
15	10-140	Bimba 094-D Cylinder	1
16	0607-005	Slide Rod (Long)	1
17	4347-006	Kerfing Guard/Vacuum Shroud	1
18	4376-001	Kerfing Mandrel	1
19	13-038	Bosch 92836 Kerfing Blade	1
20	0615-004	Blade Spacer	1
21	4347-100	Bushed Slide Mount	1
22	10-689	SMC NAS2201F-N01-03S Flow Control	2

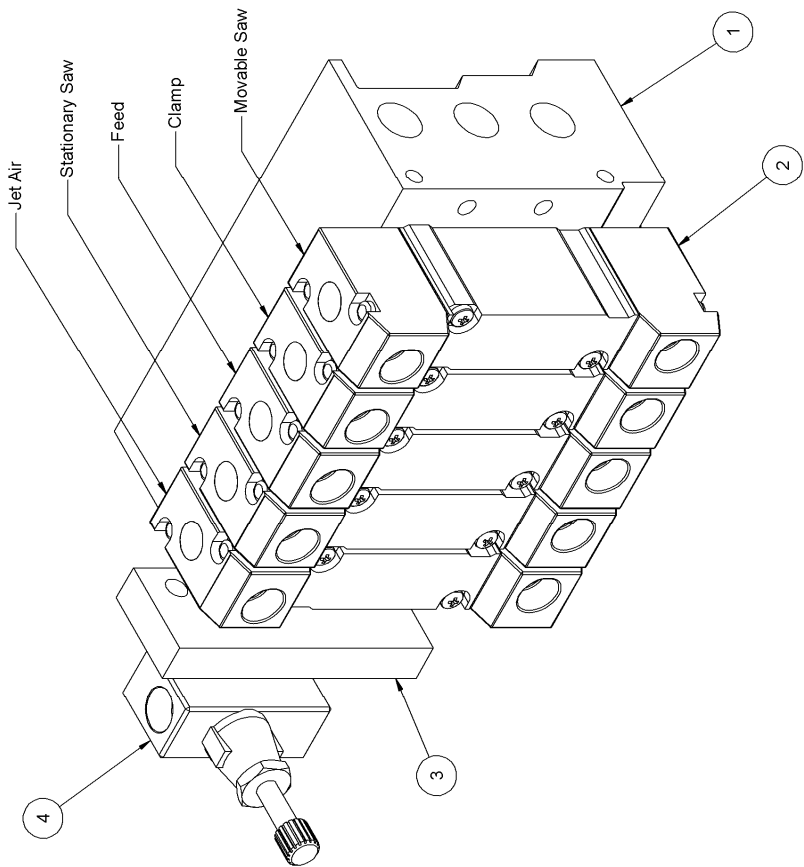


# **KERFING ASSEMBLY OPTION STATIONARY SIDE**

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ITEM	PART NO.	DESCRIPTION	QTY.
1	10-140	Bmba 094-D Cylinder	1
2	SS1/4-20X1/4	1/4-20 x 1/4" Set Screw	2
3	0607-006	Slide Rod (Short)	1
4	HN5/16-24	5/16-24 Hex Nut	2
5	0619-002	Aligning Insert	1
6	ROLLPIN3X20	3/16 x 1-1/4" Roll Pin	1
7	4347-100	Bushed Slide Mount	1
8	4350-002	Spool Bushing	1
9	4376-024	Casting Modification, DW 616	1
10	15-174	Dewalt DW-610 Router Motor	1
11	13-1022	Dewalt Router Cord	1
12	4347-101	Bushed Slide Mount	1
13	HN1/4	1/4-20 Hex Nut	1
14	HH1/4X1-1/2	1/4-20 x 1-1/2" HHCS	1
15	10-071	Aro 5030-06 Saw Sensor & Return Valve	1
16	4347-005	Kerfing Guard/Vacuum Shroud	1
17	4376-001	Kerfing Mandrel	1
18	13-038	Bosch 92836 Kerfing Blade	1
19	0615-004	Blade Spacer	1
20	0607-005	Slide Rod (Long)	1
21	0628-001	Kerfing Casting	1
22	10-669	SMC NAS2201F-N01-03S Flow Control	2

ITEM	PART NO.	DESCRIPTION	QTY.
1	10-1061	SMC SSY7-42-05-N11T Manifold	1
2	10-1060	SMC SYA7240-00T-X90 Valve	5
3	0622-009	Flow Control Mount Plate	1
4	10-017	SMC Flow Control	1

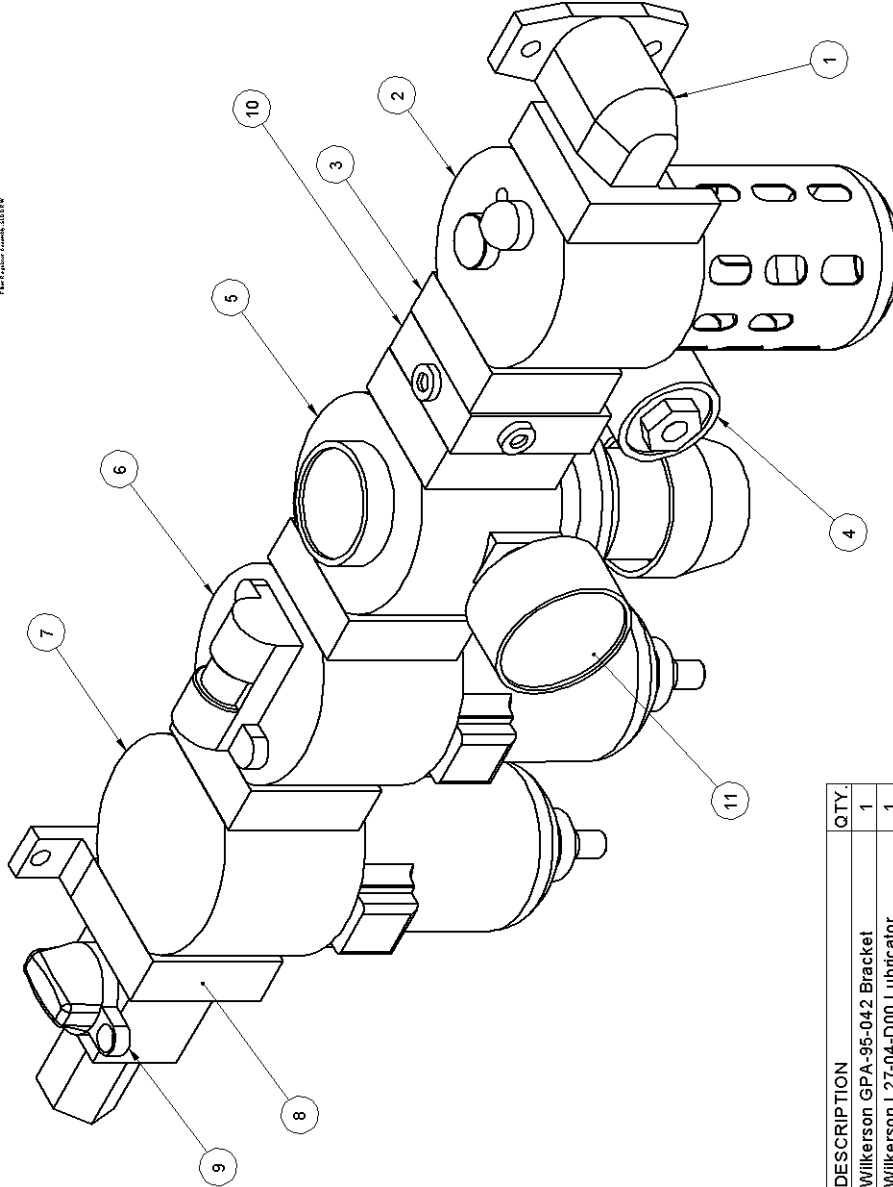


**Valve Assembly**

1000-1-000000

## Filter Regulator Assembly

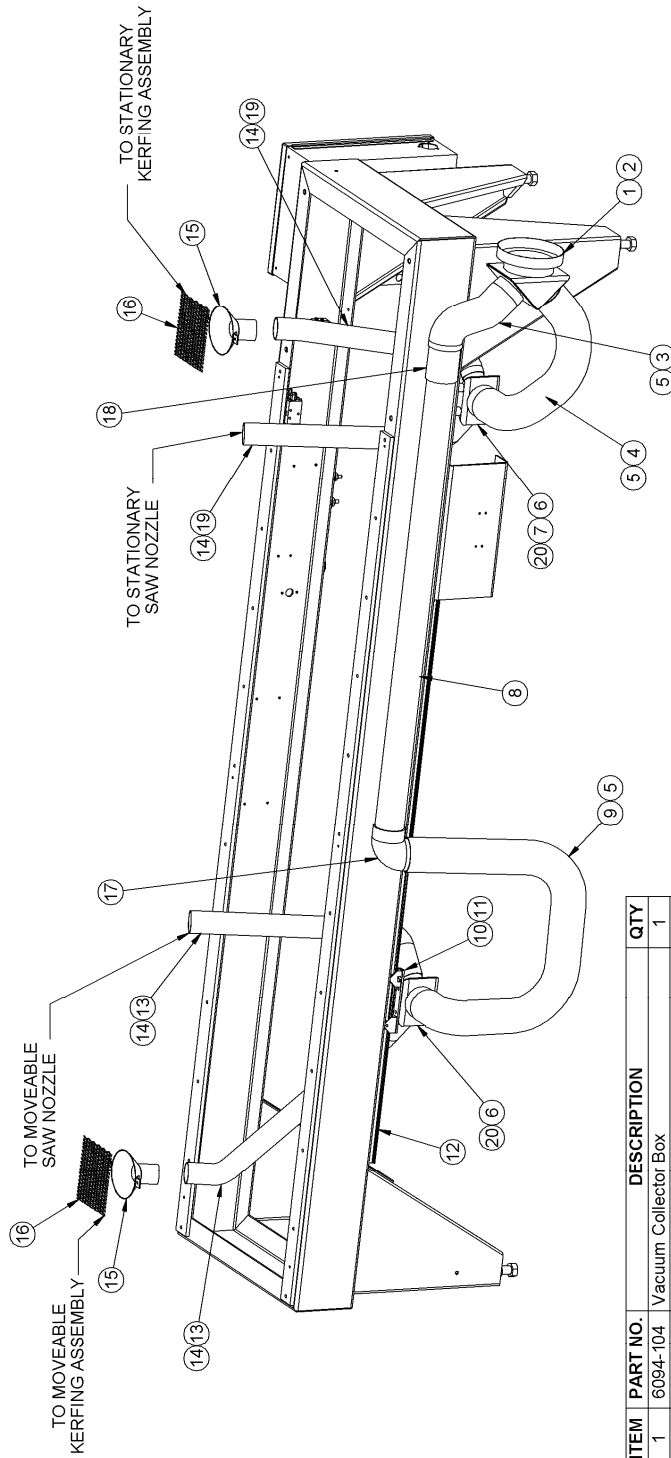
Part Number: 10-1182



The Following Replacement Parts Are Available For This Assembly	
PART NO.	DESCRIPTION
10-1182	Wilkerson FRP-95-115 Replacement Particulate Filter Element
10-540	Wilkerson MSP-95-989 Replacement Coalescing Filter Element
XX-XXX	Wilkerson GRP-95-112 Sleeve Assembly O-Ring

ITEM	PART NO.	DESCRIPTION	QTY.
1	10-548	Wilkerson GPA-95-042 Bracket	1
2	10-711	Wilkerson L27-04-D00 Lubricator	1
3	10-517	Wilkerson GPA-95-292 Sleeve	5
4	10-038	Humphry Valve	1
5	10-528	Wilkerson R26-04-G00 Regulator	1
6	10-539	M26-04-FM0 Coalescing Filter	1
7	10-523	Wilderson F26-04-FMO Particulate Filter	1
8	10-547	Wilkerson GPA-95-969 Sleeve w/ Mount	1
9	10-551	Wilkerson GPA-95-098 Lock-Out Valve	1
10	10-547	Wilkerson GPA-95-919 Manifold	1
11	10-464	Wilkerson GRP-95-227 Gauge	1





## DUST COLLECTION COMPONENTS

(SHOWN WITH KERFING OPTION)

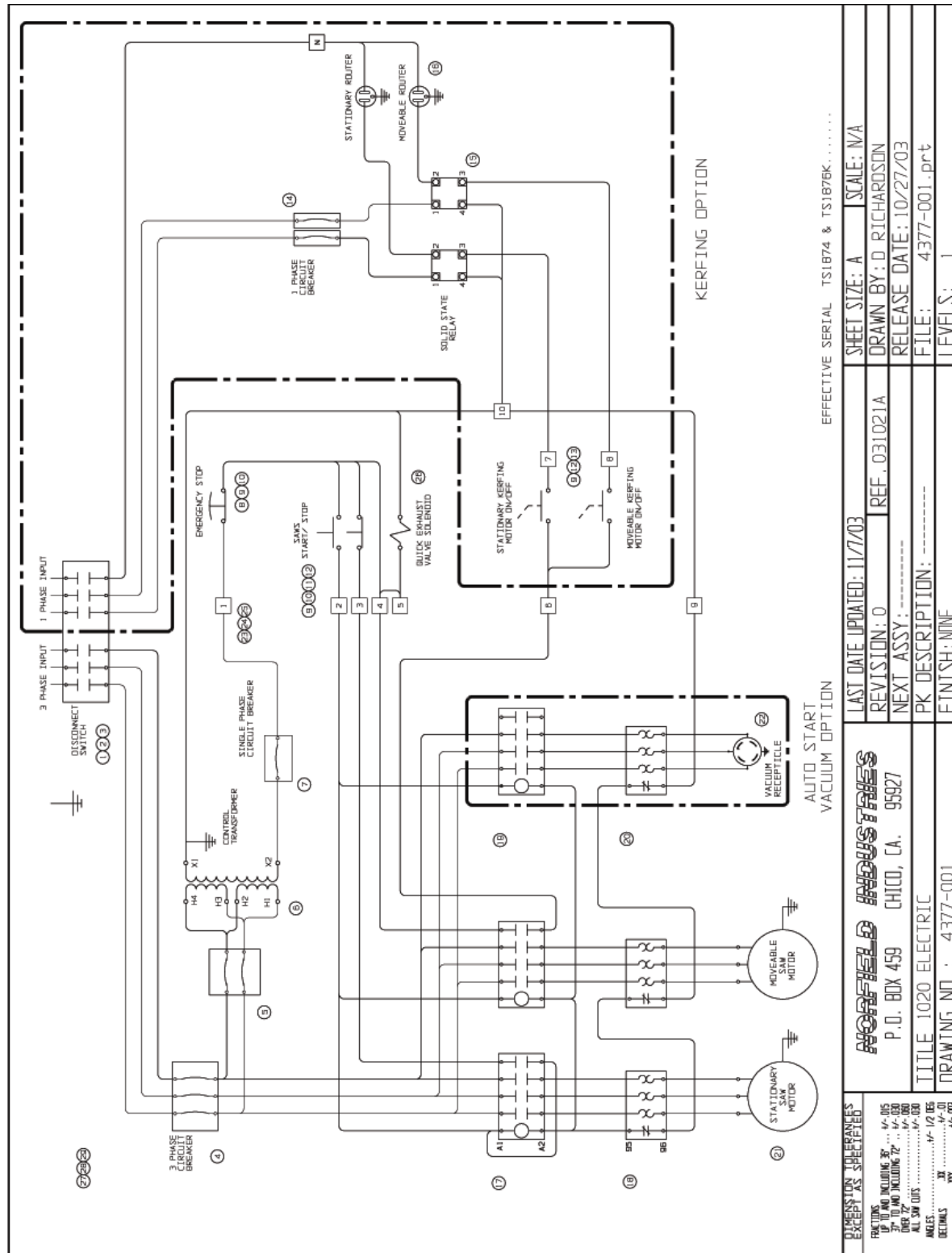
- NOTES: 1. ITEMS 15, 16 USED WITH KERFING OPTION  
2. ITEM 14 HOSE CLAMP QTY 4 WITH OUT KERFING OPTION  
3. ITEMS 13 & 14 QTY 1 WITHOUT KERFING OPTION

ITEM	PART NO.	DESCRIPTION	QTY
1	6094-104	Vacuum Collector Box	1
2	9013-100	Spacer	2
3	11-253	CVD400 4" Clear Exhaust Hose x 24"	1
4	11-253	CVD400 4" Clear Exhaust Hose x 14"	1
5	11-254	Hose Clamp 4-1/2" Size #64	6
6	4656-100	Dust Collection Switching Box	2
7	9013-150	Spacer	2
8	4356-003	Vacuum Tube	1
9	11-253	CVD400 4" Clear Exhaust Hose x 54"	1
10	13-079	Hanger Assembly	2
11	4354-004	V-Box Roller Mount	1
12	4354-005	V-Box Roller Track	1
13	11-252	CVD250 2-1/2" Clear Exhaust Hose x 24"	2
14	11-255	Hose Clamp 2-3/4" Size #36	8
15	4354-100	Kerfing Dust Collector Cone	2
16	4300-004	Kerfing Block Buster	2
17	8270-001	Vacuum Loom Elbow	1
18	8271-001	Vacuum Loom Coupler	1
19	11-252	CVD250 2-1/2" Clear Exhaust Hose x 26"	2



## SCHEMATICS

## ELECTRICAL



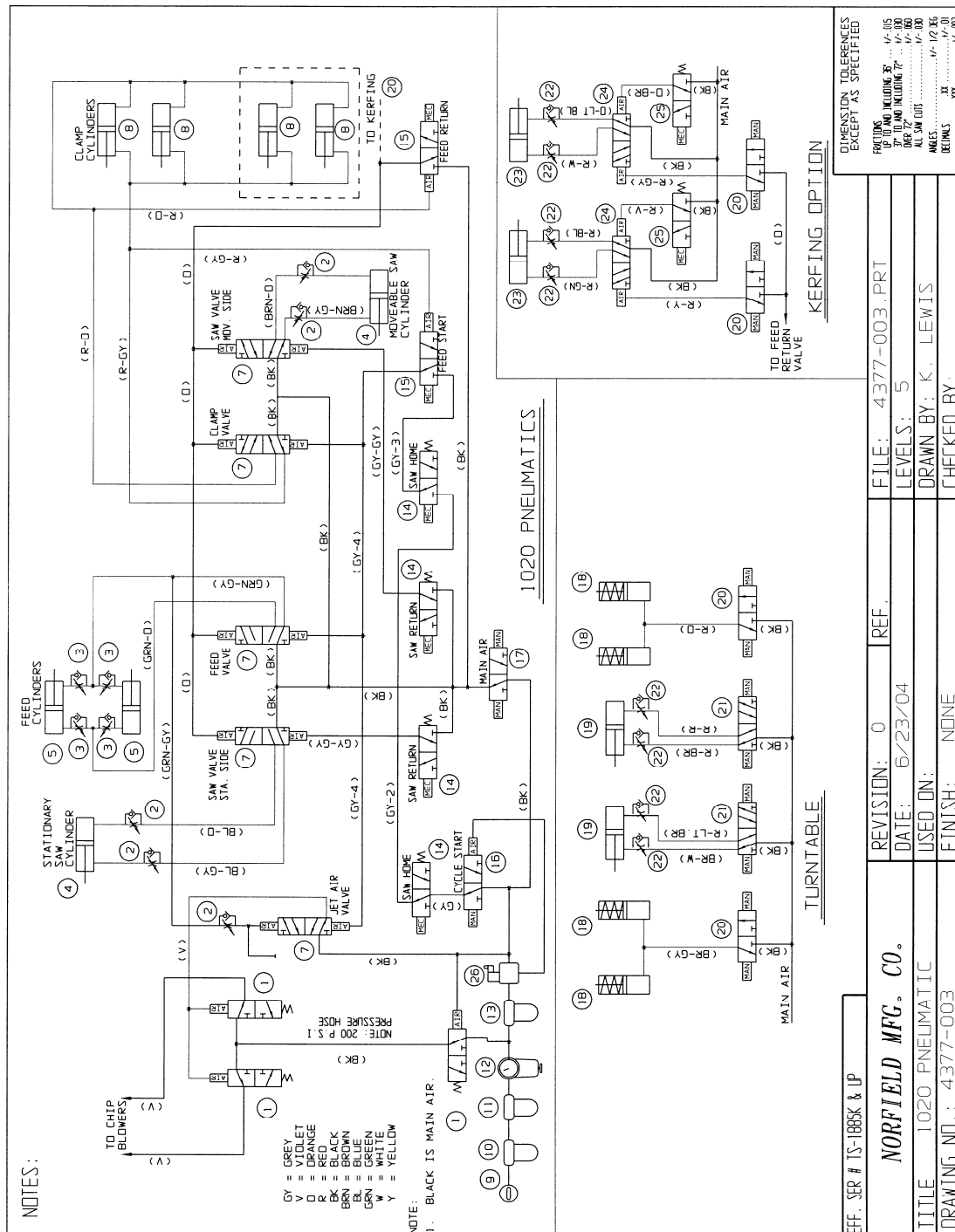
## 1020 ELECTRICAL

### POWER DISTRIBUTION & CONTROLS

ITEM	PART #	PART DESCRIPTION	QTY/ASSY
1	11-938	ALLEN BRADLEY 194E-A63-1753 DISCONNECT SWITCH 3 POLE	1
	11-935	ALLEN BRADLEY 194E-A63-1756 DISC SWTCH 6 POLE (KERFING OPTION)	1
2	11-865	ALLEN BRADLEY 194L-G2853 DCON SWITCH SHAFT EXTENSION	1
3	11-864	ALLEN BRADLEY 194L-HE6E-175 DCON SWITCH ACTUATOR	1
4	11-797	ALLEN BRADLEY 1492-CB3G-320 3P 32A CIRCUIT BREAKER (208/230)	1
	11-803	ALLEN BRADLEY 1492-CB3G-200 3P 20A CIRCUIT BREAKER (460/480)	1
5	11-881	ALLEN BRADLEY 1492-CB2H-010 2P 1A CIRCUIT BREAKER	1
6	11-619	ACME TA-2-81212 CONTROL TRANSFORMER	1
7	11-1037	ALLEN BRADLEY 1492-CB1G-020 1P 2A CIRCUIT BREAKER	1
8	11-1125	ALLEN BRADLEY 800EP-MT4 E-STOP OPERATOR SWITCH	1
9	11-1130	ALLEN BRADLEY 800E-A3L MOUNT LATCH	2
		W/ OPTIONAL KERFING	4
10	11-1126	ALLEN BRADLEY 800E-3X01 N.C. CONTACT BLOCK	1
11	11-711	ALLEN BRADLEY 800EP-U2B23 MOTOR START/STOP SWITCH	1
12	11-1128	ALLEN BRADLEY 800E-3X10 N.O. CONTACT BLOCK	1
		W/ OPTIONAL KERFING	3
13	11-1429	ALLEN BRADLEY 800EP-SM22 2 POS OPERATOR SWITCH	
		W/ OPTIONAL KERFING	2
14	11-1461	ALLEN BRADLEY 1492-CB1G-150 1P 15A CIRCUIT BREAKER	
		W/ OPTIONAL KERFING	2
15	11-300	CRYDOM TA-2425 SOLID STATE RELAY	
		W/ OPTIONAL KERFING	2
16	11-111	BRYANT 5279 RECEPTACLE	
		W/ OPTIONAL KERFING	2
17	11-992	ALLEN BRADLEY 100-C09D10 CONTACTOR	2
18	11-1124	ALLEN BRADLEY 193-EA1EB OVERLOAD	2
19	11-989	ALLEN BRADLEY 100-C16D10 CONTACTOR	
		W/ OPTIONAL VACUUM	1
20	11-1155	ALLEN BRADLEY 193-EA1GB OVERLOAD (208/230V)	
		W/ OPTIONAL VACUUM	1
	11-1156	ALLEN BRADLEY 193-EA1FB OVERLOAD (460/480V)	
		W/ OPTIONAL VACUUM	1
21	0693-016	BALDOR MODIFIED M355OT 1 ½ HP MOTOR W/BRAKE	2
22	11-783	BRYANT 71520-ER RECEPTACLE (208/230V)	
		W/ OPTIONAL VACUUM	1
	11-771	BRYANT 71620-ER RECEPTACLE (460/480V)	
		W/ OPTIONAL VACUUM	1
23	11-887	ALLEN BRADLEY 1492-W4 TERMINAL BLOCK	10
24	11-969	ALLEN BRADLEY 1492-EB3 END PLATE	1
25	11-960	ALLEN BRADLEY 1492-EA35 END ANCHOR	10
26	10-976	SMC NCGBA63-2400 QUIK EXHAUST VALVE	1
27	4376-020	MODIFIED ENCLOSURE	1
28	4376-021	MODIFIED BACK PLATE	1
29	6810-012	RECEPTACLE COVER	1
		W/ OPTIONAL VACUUM	0

REF. PRINT 4377-001  
REV 0

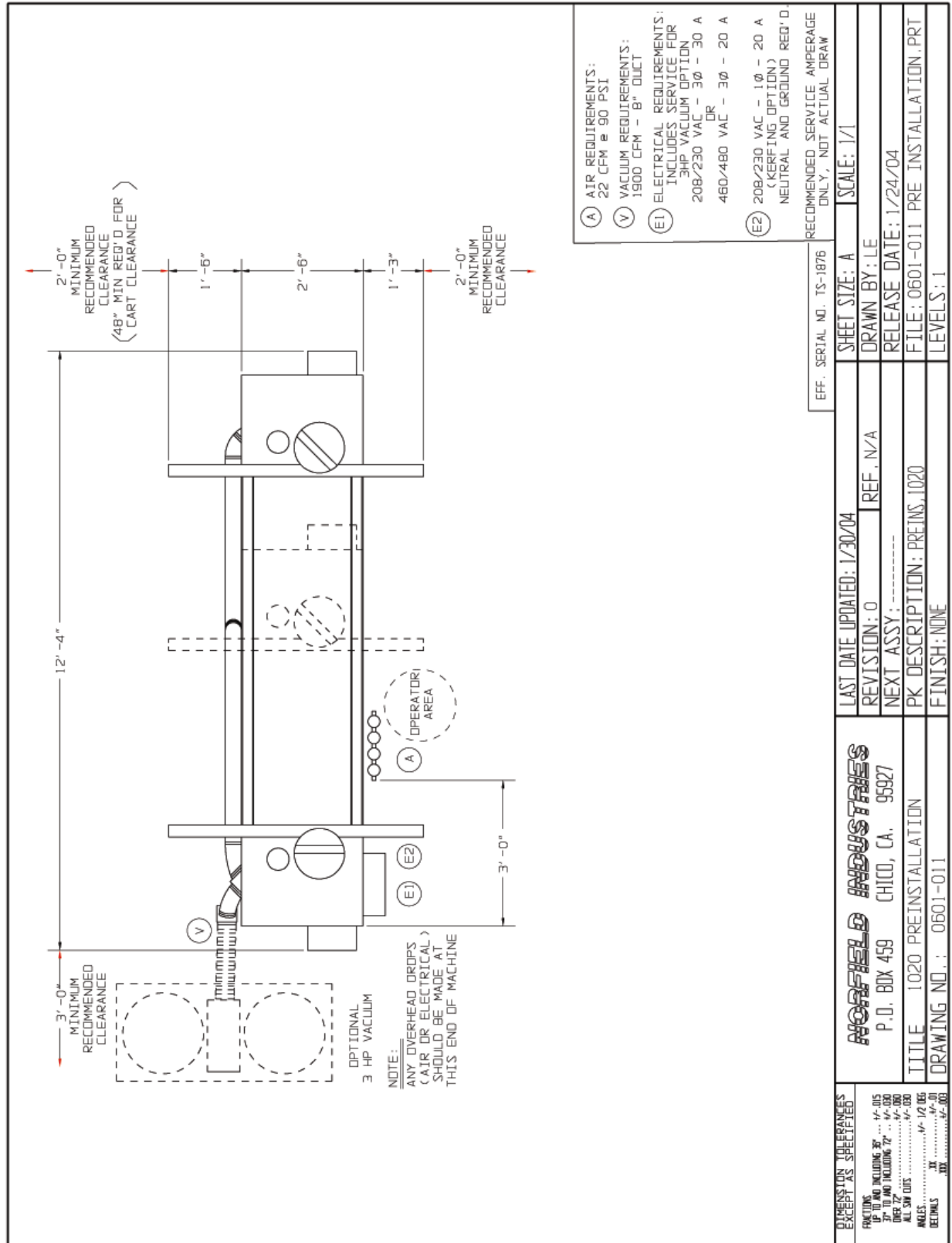
## PNEUMATIC



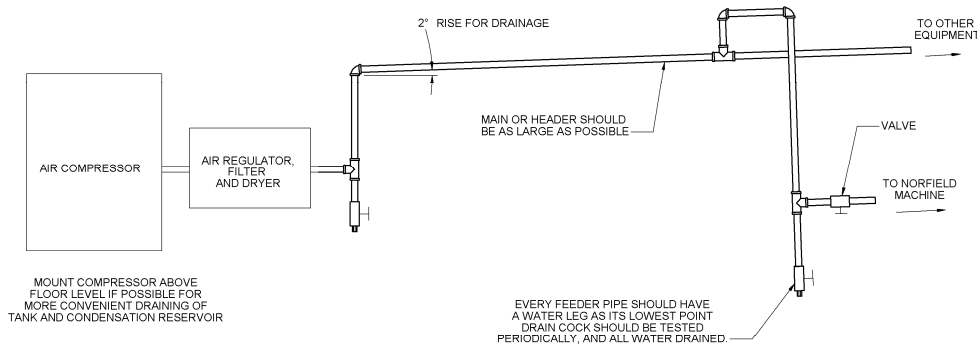
## Pneumatic Schematic Part List

Item	Norfield P/N	Description	Qty
1	10-038	HUMPHREY 250A-3-10-20 VALVE	3
2	10-017	SMC AS-2000 FLOW CONTROL	5
3	10-604	SMC NAS 3200F-NO2-11S FLOW CONTROL	4
4	10-153	BIMBA 314-D CYLINDER	2
5	10-126	ARO 0415-1009-120 CYLINDER	2
6	10-291	FOSTER 3W125 SLEEVE VALVE	2
7	10-1060	SMC VAVLE	5
	10-1061	SMC VALVE MANIFOLD	1
8	10-134	BIMBA 092-D CYLINDER	2/4 OPT
9	10-551	WILKERSON GPA-95-098 LOCKOUT VALVE	1
10	10-523	WILKERSON F26-04-FMO FILTER	1
11	10-539	WILKERSON M26-04-FMO FILTER	1
12	10-528	WILKERSON R26-04-GOO REGULATOR	1
13	10-524	WILKERSON L26-04-DOO LUBRICATOR	1
14	10-071	ARO 5030-06 VALVE	4
15	10-075	ARO 5030-24 VALVE	2
16	10-074	ARO 5030-20 VALVE	1
17	10-507	ARO E252LM VALVE	1
18	10-128	BIMBA 041 CYLINDER	4
19	10-143	BIMBA 096-DP CYLINDER	2
20	10-413	CLIPPARD PL-T3T-B SWITCH	2/4 OPT
	10-414	CLIPPARD PB-85 ADAPTOR	2/4 OPT
	10-047	CLIPPARD MJV-3 VALVE	2/4 OPT
21	10-413	CLIPPARD PL-T3T-B SWITCH	2
	10-414	CLIPPARD PB-85 VALVE	2
	10-048	CLIPPARD MJV-4 VALVE	2
22	10-669	SMC NAS 2201F-NO1-03S FLOW CONTROL	4/8 OPT
23	10-140	BIMBA 094-D CYLINDER	2 OPT
24	10-080	ARO 5040-35 VALVE	2 OPT
25	10-071	ARO 5030-06	2 OPT
26	10-976	SMC #NAV4000-NOZ-3DZ VALVE	1

## 1020 FLOOR LAYOUT



## BASIC PRINCIPLES OF PNEUMATIC PLUMBING



BASIC PRINCIPLES OF PNEUMATIC PLUMBING

Warm air has more capacity to hold moisture (water) than cool or cold air. As air is compressed, the temperature of the air increases. As a compressor compresses and stores air for a shop's pneumatic system, it also increases the chance of introducing moisture into air tools and equipment used in the shop. Ultimately, this will shorten the life of any air tool. As protection against such, the engineers at Norfield Industries have developed a pneumatic system and guidelines, which when followed, will significantly help lengthen the service life of all your air components.

### A. INSTALLATION

A mainline shut-off valve, filter and regulator should be installed on the holding tank of the compressor. A general rule relating to size of header, as well as size of components mentioned above is never use any pipe or connections smaller than the pipe size of the compressor holding tank outlet. Some shops are plumbed with up to a 2" header thinking in terms of future increase in air requirements. From the regulator, it is advisable to install a tee (refer to fig. 1-1) so that condensation reservoir may be installed. From the remaining (top) leg of the tee, the main line (referred to as the "header") should go up towards the ceiling, stopping short of the ceiling enough so that a 2 - 3 degree slope can be attained on the entire header line. Another equally good approach is to extend the header to the ceiling, sloping 2 - 3 Degrees toward the far end with an elbow down to a condensation reservoir.

Airlines supplying air to individual tools or banks of tools are referred to as "feeders". The size of each feeder line will be determined by the air volume requirement of all the tools

## **BASIC PRINCIPLES OF PNEUMATIC PLUMBING (CONT.)**

that are to be connected to it.

The tee in the header of each feeder should be installed so that the feeder comes off the top of the

header line (refer to fig. 1-1). The compressor should be placed away from cutting areas where there is an overabundance of sawdust to contaminate the air cleaner. Follow closely the compressor manufacturer's recommended maintenance schedule (i.e. Draining of moisture from holding tank, cleaning air cleaner, inspecting oil level, changing oil, etc.)

In very warm humid and or dusty shops, it may be advisable to vent the compressor's air intake outside through a wall to reduce the amount of moisture, dirt and dust taken in.



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## **Parts Replacement Policy**

The following will explain Norfield Industries policy for handling warranty claims. Our "Limited Warranty" is stated below for your reference.

Our warranty covers the replacement of defective parts; however, the labor to replace the parts on the machine is not included.

Upon notification of a warranty claim, Norfield will either refer the customer to a regional repair facility or replacement parts will be shipped from the factory. Parts shipped from the factory will be invoiced to the customer's account until the warranty claim is verified. To obtain verification, the defective parts must be returned to Norfield within thirty (30) days from the date of the claim for inspection. **Before returning the defective parts, please contact Norfield to obtain a "Return Goods Number".**

All parts manufactured by Norfield and found to be defective will be given appropriate credit. All parts not manufactured by Norfield are covered by their respective manufacturer's warranty and will be sent to the original manufacturer for credit. When, and if, credit is issued to Norfield, we will in turn issue credit to your account.

## **Limited Warranty**

Norfield warrants any and all such parts manufactured by them against defects in material or workmanship for a period of one-year from date of purchase. Norfield's liability under this warranty shall be limited to replacing free of charge, F.O.B. Chico, California, any parts proved to be defective within the period of the warranty. Norfield will not be responsible for transportation charges or consequential damages.

Norfield will not in any case or under any circumstances be liable or responsible for any injuries to persons or property suffered as a result of the use or operation of the machine, or losses or costs resulting from any period of non-operation for any reason.

Parts which are claimed to be defective, but show tangible evidence of abuse or negligence will not be replaced on a no-charge basis.

Norfield reserves the right, at its own discretion without notice and without making similar changes in machinery previously manufactured, to make changes in material, design, finish and/or specifications.

Any changes, alteration or installation of additional equipment to this machine without first obtaining written consent from Norfield may void this warranty. Determination of the effect of any alteration on this warranty is left to the discretion of Norfield.

Norfield makes no written or implied warranty with respect to electrical equipment, including motors or other purchased components used in the manufacture of the machine. All such parts are covered by their respective manufacturer's warranty. We do endeavor, at all times, to purchase only those components manufactured by responsible manufacturers which we have found to be reputable in their handling or warranties.

Norfield expressly disclaims any warranty, expressed or implied, other than those which are expressly made in this limited warranty.