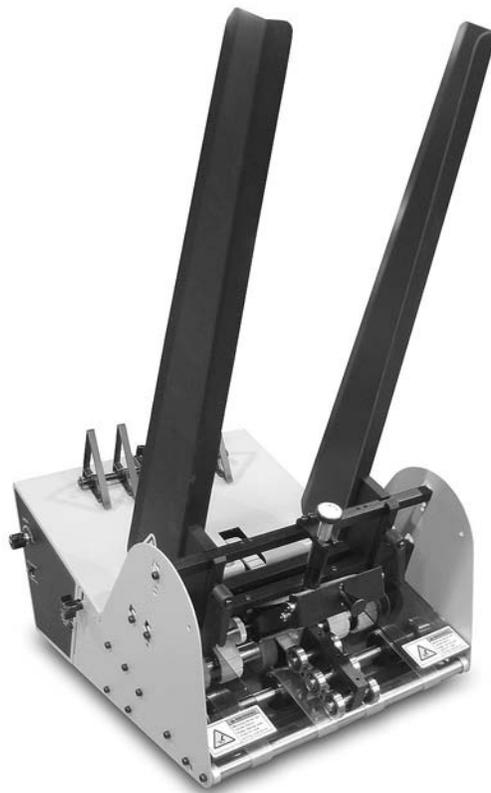


Value Series V-710IJ

Manual



Thiele
Technologies
A Barry-Wehmler Company

Streamfeeder
®

Part Number: 00900367

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BEFORE YOU BEGIN

Message Conventions



DANGER signifies an action or specific equipment area that can result in serious injury or death if proper precautions are not taken.



WARNING signifies an action or specific equipment area that can result in personal injury if proper precautions are not taken.



CAUTION signifies an action or specific equipment area that can result in equipment damage if proper precautions are not taken.



ELECTRICAL DANGER signifies an action or specific equipment area that can result in personal injury or death from an electrical hazard if proper precautions are not taken.



TIP signifies information that is provided to help minimize problems in the installation or operation of the feeder.



NOTE provides useful additional information that the installer or operator should be aware of to perform a certain task.



CHECK signifies an action that should be reviewed by the operator before proceeding.



IMPORTANT alerts the installer or operator to actions that can potentially lead to problems or equipment damage if instructions are not followed properly.



WARNING LABELS affixed to this product signify an action or specific equipment area that can result in serious injury or death if proper precautions are not taken.

BEFORE YOU BEGIN

Message Conventions



Avoid injury. Do not reach around guards.



Hazardous voltage. Contact will cause electric shock or burn. Turn off and lock out power before servicing.



Moving parts can crush and cut. Keep guards in place. Lock out power before servicing.



Pinch point. Keep hands and fingers clear.



Moving parts can crush and cut. Keep guards in place. Lock out power before servicing.

SPECIFICATIONS

Maximum Product Size: 12 W x 12 L in (305 x 305 mm)*

Minimum Product Size: 3.75 W x 3.75 L in (95 x 95 mm)

Optional: 2.5 W x 2.5 L in (63 x 63 mm)

Min/Max Product Thickness:003-.75 in (.076-19.1 mm)

Belt Speed: 5700 in/min (144780 mm/min)

Electrical Requirements: 115/230vac, 50/60Hz, 3A

Weight: 41 lbs. (18.6kg)

*Optional product size available

1 About the Machine

Features

The V-710IJ Universal Friction Feeder is designed for reliability, flexibility, and ease of use with a variety of vacuum and non-vacuum bases.

All parts required for setup, loading, feeding, and easy operator control are combined into one compact unit.

Review the *main assemblies* in Figure 1-1 to become familiar with names and locations of feeder parts and adjustments. This will help to prepare you for initial setup. Descriptions are found in Table 1-1.

Review the *control panel components* in Figure 1-2 to become familiar with names and locations of specific connectors, switches, and controls. This will help to prepare you for installation and operation. Descriptions are found in Table 1-2.

Main Assemblies

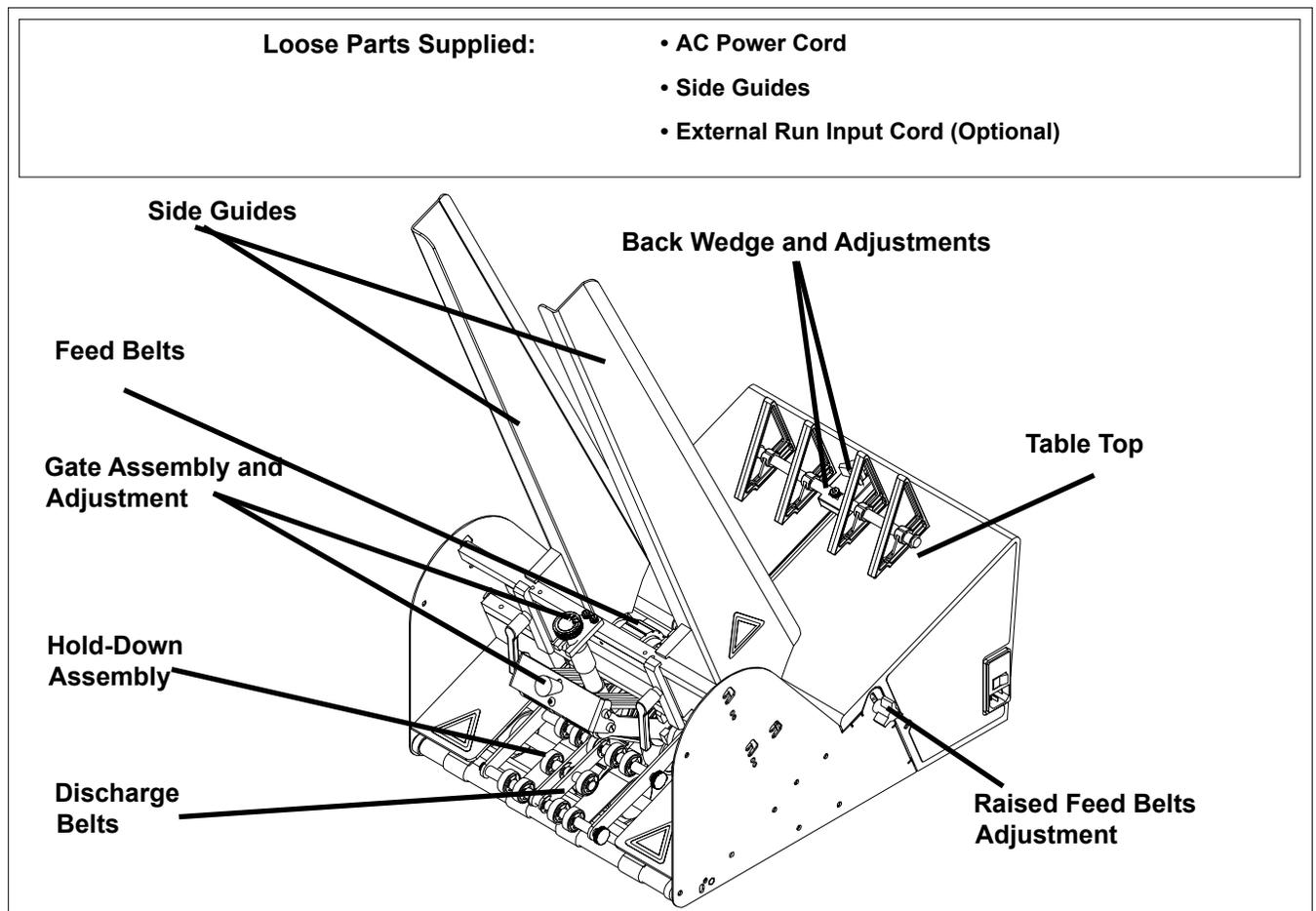


Figure 1-1. Main Assemblies of the V-710IJ Universal Friction Feeder

Table 1-1. Main Assemblies Feature Descriptions

Feature	Description
Gate assembly and adjustment	Mounted on a gate bracket assembly above the feed belts, this device provides a curvature to help preshingle stacked material. When properly adjusted, a clearance is created to help singulate and feed material.
Table top	Used to support the back wedge.
Raised feed belts adjustment	Located on each side of the feeder, these adjustment knobs allow you to raise the rear feed belts above the table top to achieve optimum contact with material.
Side guide adjustments	Dual-knob design allows you to move side guides together or apart for different size material. Can be positioned equally or offset. <i>(Note: Single-knob design also available.)</i>
Discharge safety shield	Provides residual risk protection to operator when feeder is running.
Back wedge and adjustments	Lifts the material to keep it off the table top, reduces excessive contact with the feed belts, and helps push the material against the curvature of the gate assembly. To achieve proper lift, adjustment wing-nuts and locking levers allow you to slide the wedge to various positions and angles.
Feed belts	Provides the friction and motion necessary to pull individual material from the bottom of the stack and through the gate assembly area.
Discharge belts	Combined with the top roller hold-down assembly, provides the friction and motion necessary to transport material away from the gate assembly area.
Hold-down assembly	A series of small rollers mounted on movable brackets help to gently hold material down on the discharge belts as material exits the gate assembly area. These brackets and rollers are part of the gate assembly and are removed when the gate assembly is removed.
Control panel components	For descriptions, see Figure 1-2A and 1-2B, and Table 1-2.
AC power cord, 8 ft. (2.44 m)	IEC320 removal three-prong. Shipped loose.
External run input (optional)	This two-wire cable allows the feeder to be turned On or Off with the host base.

Control Panel Components

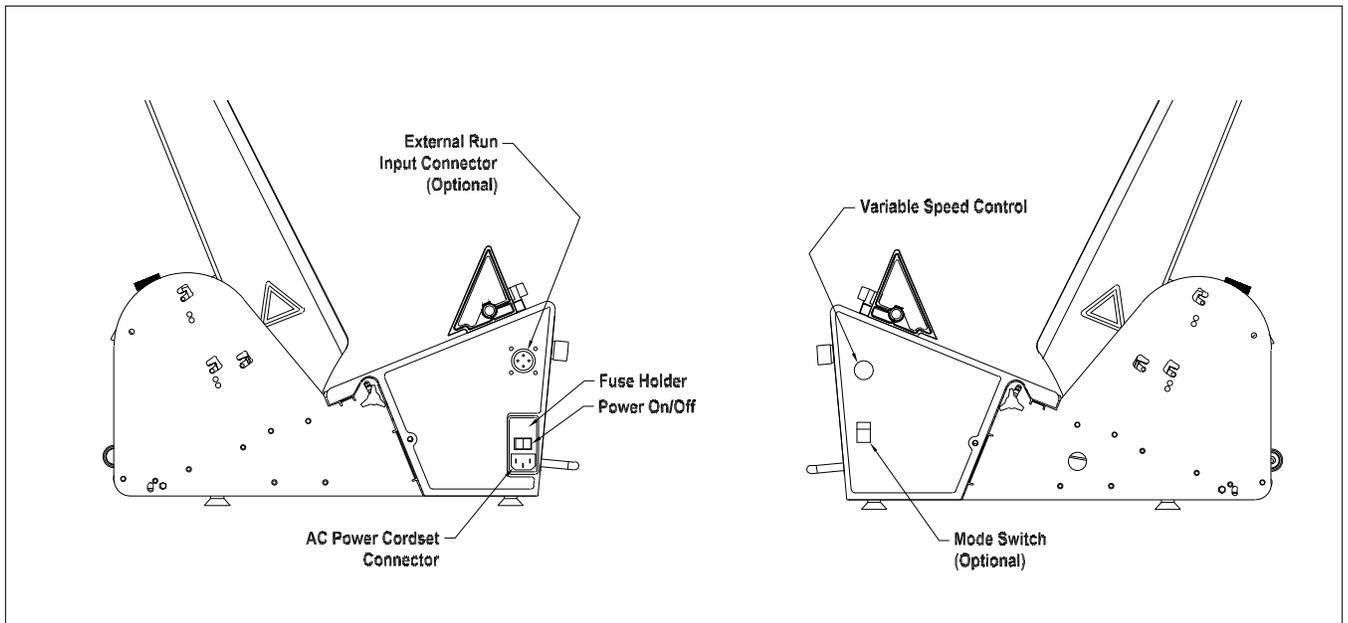


Figure 1-2A. Control Panel Components (Left and Right Side Views)

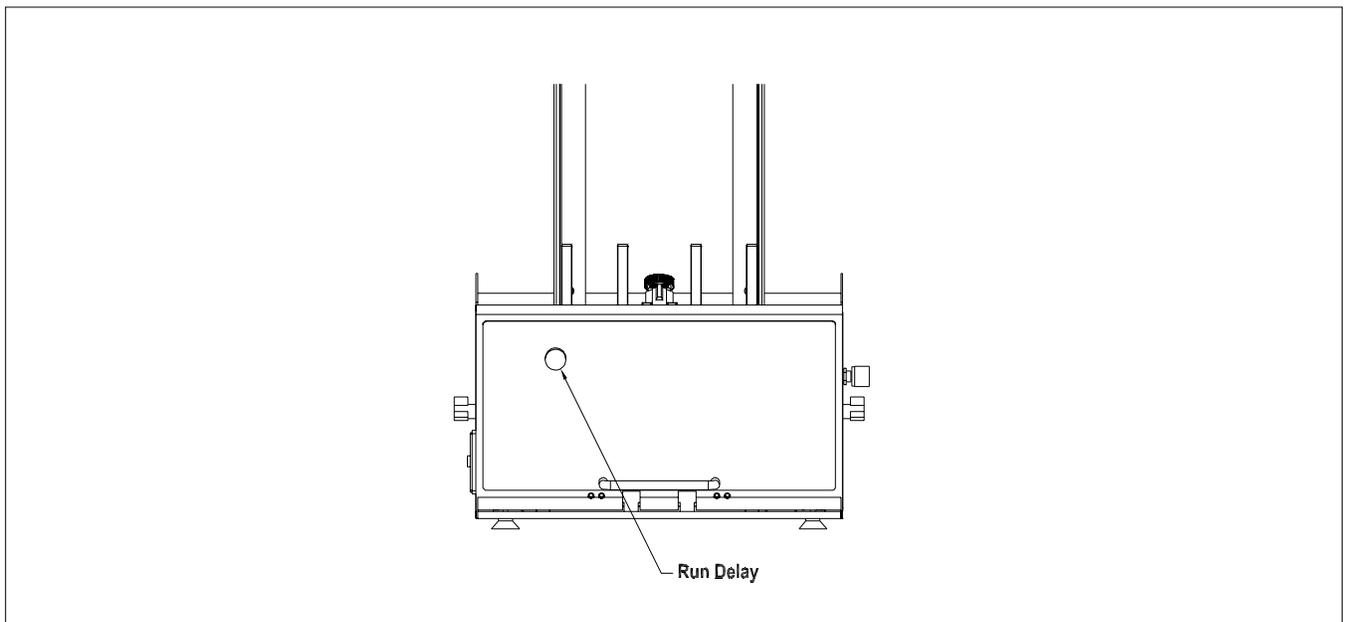


Figure 1-2B. Control Panel Components (End View)

Table 1-2. Control Panel Feature Descriptions

Feature	Description
External run input connector (optional)	This 4-pin connector (labeled External Run Input) is used to carry start/stop signals from a vacuum or non-vacuum base to the feeder.
Power On/Off	Toggles AC power On or Off.
Fuse holder	Contains two replaceable 5-Amp, 5x20 mm time delay fuses. <i>IMPORTANT: Always make sure power module is replaced exactly as removed so that "115" is always visible on 115V models and "230" is always visible on 230V models. Failure to follow this caution can result in damaged electrical parts.</i>
AC power cordset connector	Cordset plugs into this IEC320 connector to provide feeder with power from a grounded and fused outlet.
Mode switch (optional)	<i>Note: Included with optional external run input only.</i> This slide switch (labeled Continuous/External Run) allows you to use the feeder "stand-alone" or with the optional external run input interface.
Variable speed control	This dial switch (labeled Speed) allows the feeder speed to be synchronized with a vacuum or non-vacuum base. Turning counter-clockwise decreases speed; clockwise increases speed. <i>Note: Feeder motor stops if turned completely counter-clockwise.</i>
Run delay	Used to delay (or synchronize) feeder startup with base startup. Range is adjustable from 0 to 12 seconds.

2 Installing the Machine



When performing initial installation, always make sure you turn Off the main power switch and disconnect all equipment from the electrical power source. Failure to do so can expose you to a potential startup and moving parts which can cause serious injury.

Do not attempt feeder installation while the feeder and machine of application are running. Failure to do so can expose you to moving parts which can cause serious injury. Do not wear loose clothing when operating the feeder.

Avoid turning on the feeder or making initial adjustments until all parts are secured. Failure to do so can cause damage to equipment.

This section provides information on installing the V-710IJ Universal Friction Feeder onto a vacuum or non-vacuum transport base.

Information for a particular application typically includes procedures for basic parts removal, feeder mounting and alignment, and cable connections for power and control interface. *Information that relates to specific adjustments you must make to feeder prior to startup and operation is found in Section 3, “Preparing for Operation.”*

Vacuum Base Installation

Installation of the V-710IJ Universal Friction Feeder onto various types of vacuum and non-vacuum bases is a relatively simple procedure. Several minor modifications to the vacuum base are required prior to mounting, wiring, and aligning the feeder.

To install the feeder onto a vacuum base, perform the following steps:

- 1: Repositioning front side guides
- 2: Removing back jogging plate/back hopper guide
- 3: Raising hopping rollers
- 4: Disabling the shuttle
- 5: Initial positioning of feeder
- 6: Providing AC power to feeder
- 7: Connecting external run input
- 8: Checking material discharge from feeder

STEP 1: Repositioning Front Side Guides

1. Loosen locking knobs at both side guides (Figure 2-1).
2. Slide each side guide to the outermost position. Do not lock in place.

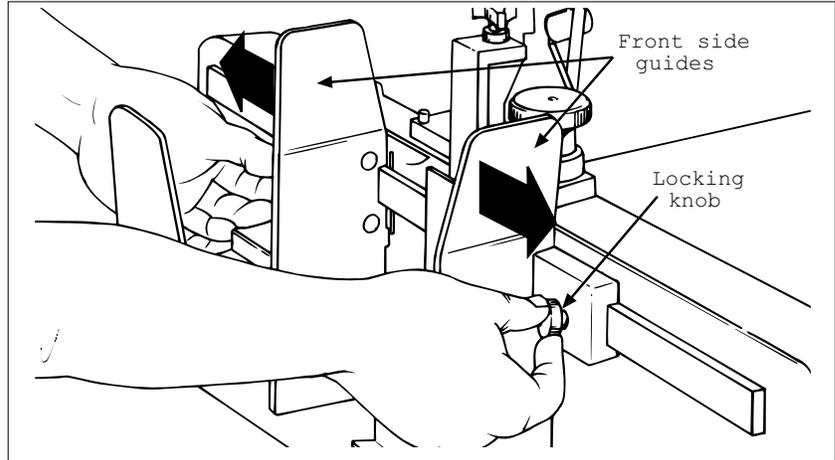


Figure 2-1. Front Side Guides Being Repositioned

STEP 2: Removing Back Jogging Plate/Back Hopper Guide

1. Loosen each of the setscrews at the two shaft housing assemblies A and B (Figure 2-2).
2. Slide shaft end closest to the vacuum base gate out of housing A (with jogging plate/hopper guides still attached). Slide shaft back far enough on housing B to allow removal of jogging plate/hopper guides.
3. Loosen locking knob and slide jogging plate/back hopper guide off of shaft and away from the surface of the vacuum base.
4. Return shaft end to housing B. Lock setscrews in both housing assemblies.

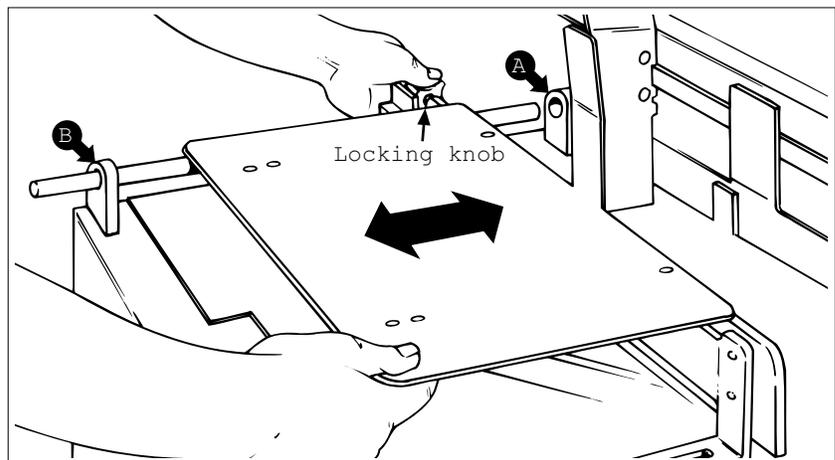


Figure 2-2. Back Jogging Plate/Back Hopper Guide Removal

STEP 3: Raising Hopping Rollers



If additional control of material is required during feeding, you may choose to keep the base's hopping roller assembly in the down (or normal) position.

1. Locate the gate adjustment knobs (Figure 2-3) and turn completely in a clockwise direction to raise hopping rollers.
2. Then, locate the vertical adjustment lever on the hopping rollers assembly and push down all the way. This will raise the feed rollers to highest vertical position possible, thus making for maximum clearance.

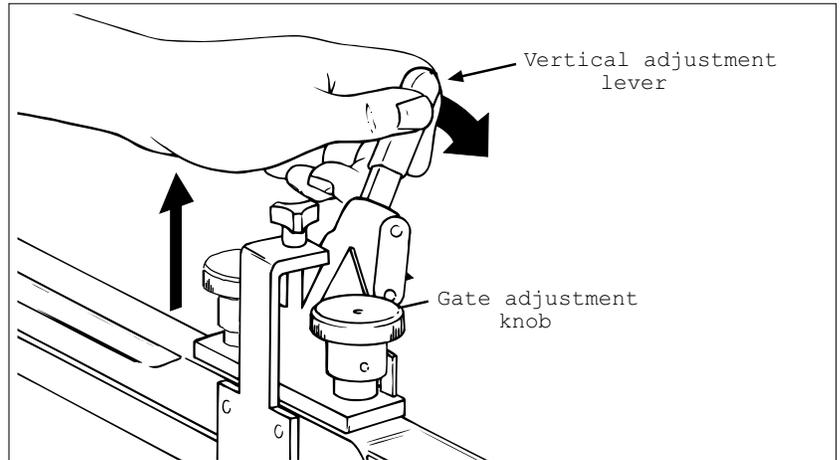


Figure 2-3. Using the Adjustments to Raise Hopping Rollers

STEP 4: Disabling the Shuttle



To prevent any accidental startup of shuttle motor and to eliminate the hazard of moving parts, you can prevent accidental startup by either disconnecting vacuum base from AC power at the outlet, or you can remove the internal AC power fuse (located behind the access door of the vacuum base).

1. Remove side access panel from vacuum base enclosure.
2. Locate the reciprocating arm and reciprocating block directly beneath the underside of shuttle (Figure 2-4).
3. Using a box wrench, remove the hex-head rod end bearing bolt holding the reciprocating arm to the reciprocating block.
4. Once the bearing bolt is removed, the reciprocating arm is effectively disconnected. As the shaft is connected to the shuttle base plate on the other end, simply allow the shaft to hang in-position, with no further disassembly.
5. Make sure the base plate of shuttle is all the way forward (toward the vacuum base gate).

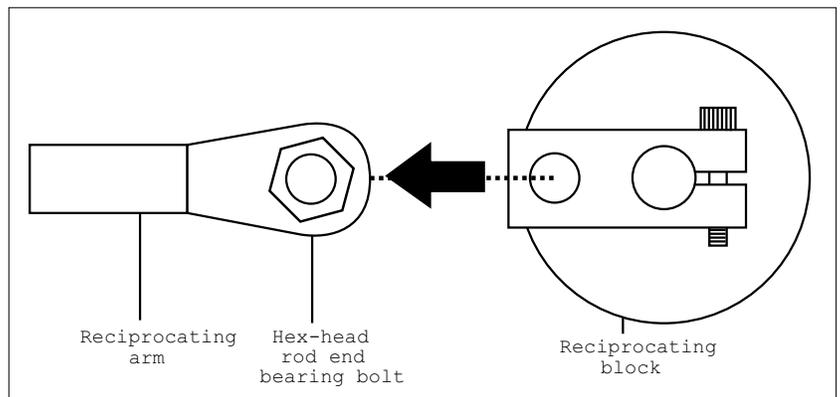


Figure 2-4. Disabling the Shuttle from Inside the Access Panel

STEP 5: Initial Positioning of Feeder

1. Lift the feeder onto the top plate of the vacuum base and slide forward toward the vacuum base gate.
2. Center the feeder between the two side guides as you position the feeder fully forward. To verify centering, sight down the center of the feeder gate, making sure it is in-line with the vacuum base gate (Figure 2-5).
3. Trap the feeder in-between the vacuum base side guides by sliding each in toward the side plates of the feeder until they gently touch. Tighten side guide knobs to secure in position.

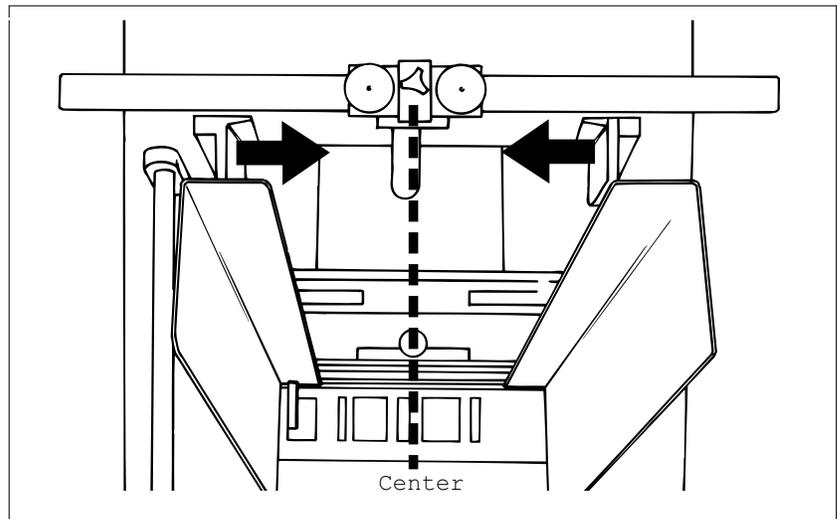
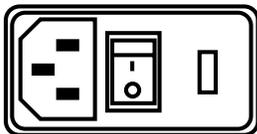


Figure 2-5. Positioning the Feeder on the Vacuum Base

STEP 6: Providing AC Power to Feeder



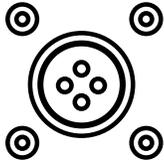
IMPOR TANT

Please verify that the voltage shown at the power inlet module matches the incoming voltage from the power source.

In order to comply with EN 6100-4-5, the AC power line must be protected with a surge suppressor.

1. Connect IEC320 end of power cord to the feeder (at the power inlet module).
2. Connect three-prong end to nearest AC voltage power source.

STEP 7: Connecting External Run Input



IMPORTANT

This procedure should be performed only by a qualified technician.

Using the two-wire interface cable supplied for vacuum base applications:

1. At the feeder, connect external run input cable to feeder using the two-pin threaded connector on the control panel.
2. At the vacuum base, open access door at end of the lower enclosure to locate start/stop control circuit (Figure 2-6).
3. Route external run input cable from the feeder to this area.
4. Determine the exact run input voltage required by checking the label on the run input cable.
5. Interface the two bare wire leads at the opposite end of the interface cable to the vacuum base start/stop circuit. This involves splicing the black wire and red (AC, DC or dry contact) wire to the start/stop circuit.

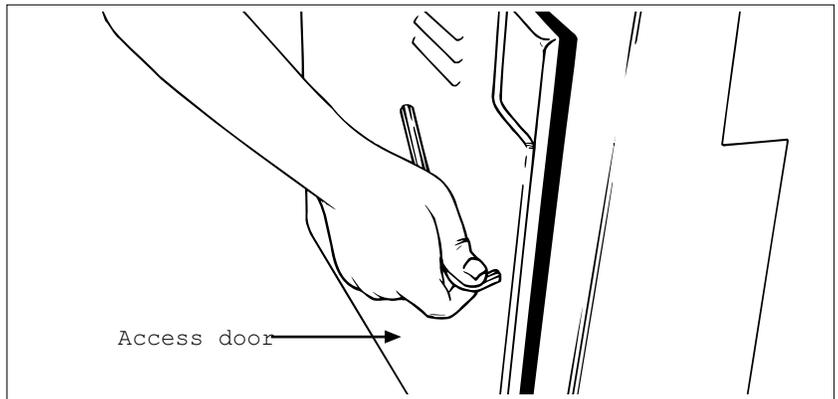


Figure 2-6. Gaining Access to Vacuum Base Start/Stop Circuit

STEP 8: Checking Material Discharge from Feeder

IMPORTANT

Make sure rollers on vacuum base are raised in the highest vertical position so that it does not interfere with the material.

As material leaves the feeder gate cylinder, the trailing edge must be under the hold-down as the leading edge is entering the vacuum base transfer section. *In other words, there must be a good transfer of material from the feeder hold-down to the vacuum base transfer section.*

To verify:

1. Slide feeder back far enough to clear the vacuum base side guides. *If necessary, loosen the knobs on both side guides and pull to the outside slightly to allow movement of the feeder.*
2. Insert a piece of material under the hold-down in such a way that approximately 2/3 of the leading edge is extending out beyond the feeder (Figure 2-7).
3. Slide feeder back into position, making sure it is again centered between the side guides. As you do so, also make sure that the leading edge of the material moves into the transfer section of the vacuum base unobstructed.

**STEP 8:
Checking Material
Discharge from Feeder
(continued)**

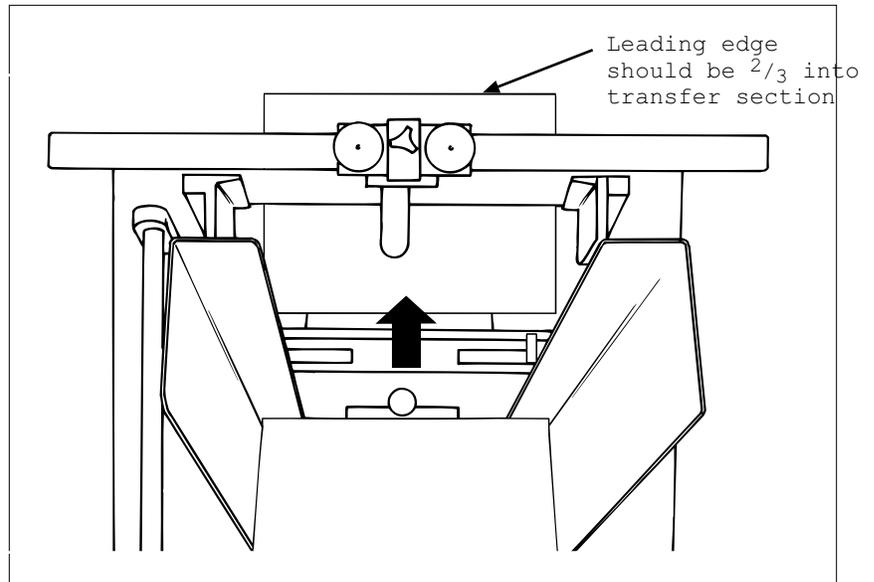


Figure 2-7. Checking for Proper Material Discharge from Feeder to Vacuum Base

4. Check to make sure the material is still under the hold-down roller bearings and also resting on the vacuum base transfer section.
5. Trap the feeder in-between the side guides until they gently touch. Tighten side guide knobs.

3 Preparing for Operation



When performing initial feeder adjustments prior to operation, always make sure you turn Off the main power switch and disconnect all equipment from the electrical power source. Failure to do so can expose you to a potential startup and moving parts which can cause serious injury.

Do not attempt to make any adjustments while the feeder and machine of application are running. Failure to do so can expose you to moving parts which can cause serious injury. Do not wear loose clothing when operating the feeder.

Avoid making adjustments with loose or unsecured parts. This can potentially damage parts.

Once the Streamfeeder V-710IJ Universal Friction Feeder is installed on your host system, you are then ready to prepare the machine for operation. To do so, you must perform several adjustments with the material you are going to be feeding. And, you must do a test run with this material to verify that it is set correctly before you begin cycling the feeder. *You will have to perform this procedure for material you plan to feed.*

The adjustments you must make (in order) are as follows:

- 1: Gate assembly adjustment
- 2: Side guides setting
- 3: Back wedge adjustment
- 4: Verifying proper installation

STEP 1: Gate Assembly Adjustment



Excessive lowering of the gate assembly can damage product or lead to premature wear of the O-rings or feed belts.



If material does not move freely, then the gate assembly is too tight. This can lead to premature wear of the O-rings or feed belts.

TIP

A wider gap between product and belt provides the highest tolerance for curled and bent edges.



Feeding problems will occur with either too much material in the hopper, or too large a gap between the gate assembly and the material.

Procedure

To adjust the gate assembly for proper gap:

1. Slide a single sheet of test product under the gate assembly. It may be necessary to pull up on the adjustment knob to allow the piece to be inserted.
2. Test the piece for clearance. Grasp the product with two hands and slide it front-to-back under the gate assembly. A proper adjustment allows a slight amount of drag on the top of the piece.
3. Adjust the knob on the gate assembly until the piece has the desired drag. Turn the knob clockwise to increase clearance or counterclockwise to decrease clearance.
4. Repeat the drag tests and adjust as needed to achieve acceptable clearance.

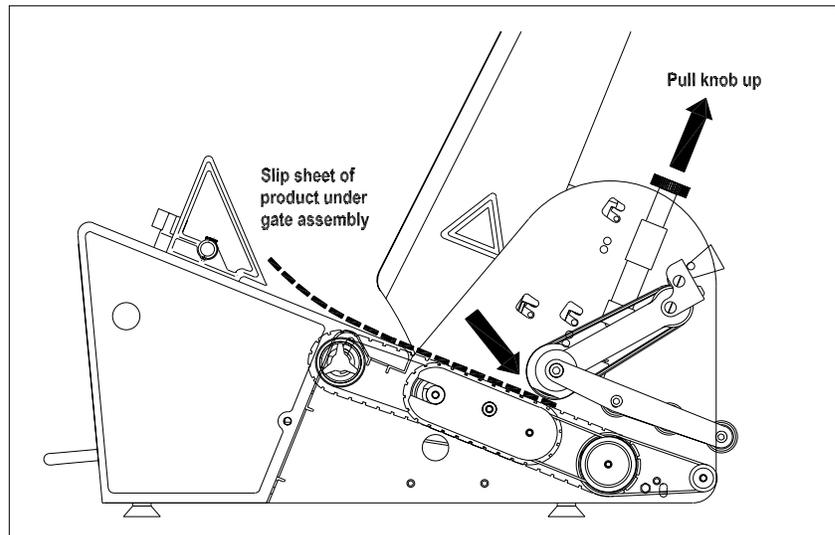


Figure 3-1. Lifting Gate Assembly Upward to Insert Product

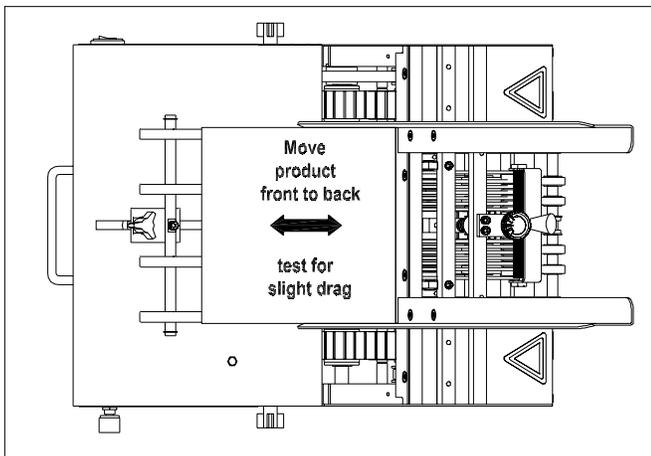


Figure 3-2. Using One-Piece Thickness of Product to Set Gap

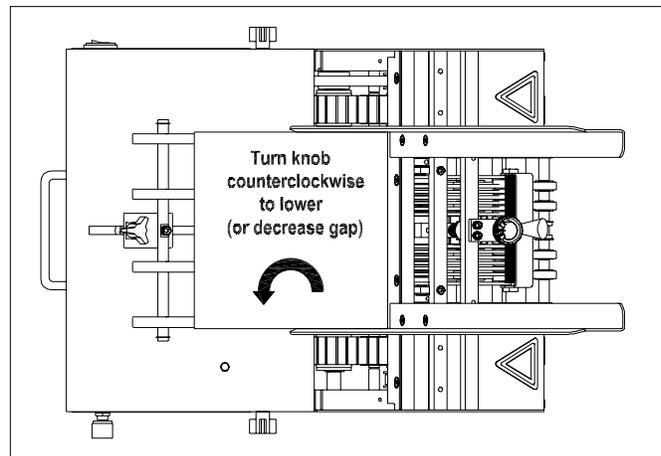


Figure 3-3. Adjusting Gate Assembly for Correct Gap

STEP 1: Gate Assembly Adjustment (continued)



*When feeding product with varying thickness throughout, it may be necessary to turn both adjustment rollers 1-2 **full turns** counterclockwise to compensate for the differential thickness. This procedure allows the gate horizon to “float.”*

IMPOR TANT

*The adjustment knob set screws are pre-set at the factory to lock the knob to the threaded rod. **DO NOT OVER-TIGHTEN!** Over-tightening the set screws may damage the components.*

To adjust the gate for effective material skew control, follow these steps:

1. Repeat drag test detailed on page 12.
2. Test the piece for uneven side-to-side drag. Grasp with two hands and slide it front-to-back under the gate assembly. A proper adjustment allows for equal drag on the left and right sides of the piece of material.
3. To compensate for greater drag on one side of the material, turn the *opposite* adjustment roller *counterclockwise* 1/8 turn. Next, turn the other adjustment roller *clockwise* 1/8 turn.
4. Repeat drag tests and adjust as needed until equal drag is achieved. You may need to repeat this procedure after observing the feeder cycling (refer to Section 4, “How to Operate”).

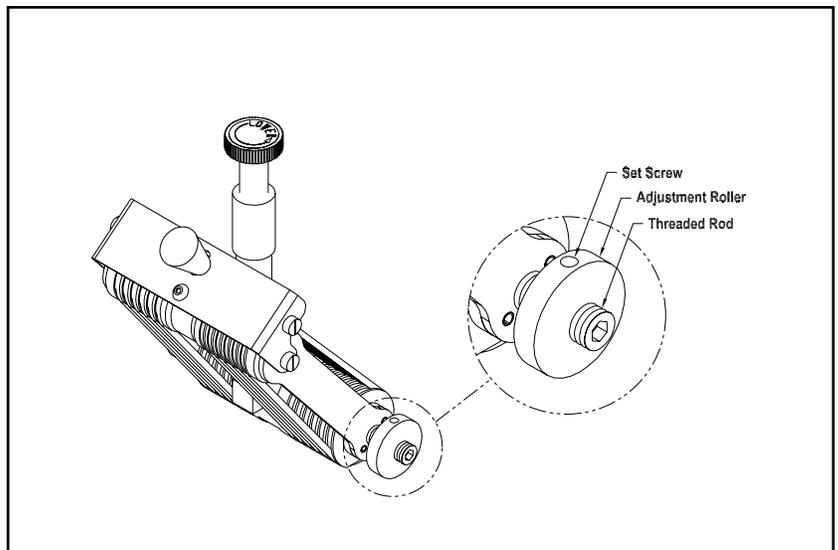


Figure 3-4. Horizon Adjustment Mechanism (shown on Advancing O-Ring Gate)

Changing From Factory Set High-Tension to Low-Tension



Excessive lowering of the gate assembly can damage material and/or lead to premature wear of the O-rings or feed belts.

IMPORTANT

When changing from a low-tension to high-tension setting, you may have to adjust the stack height downward to prevent feeding problems.



NOTE

Certain types of single-sheet material may require even more tension than the high-tension setting can provide. To increase tension even further, place a washer between the cylinder and spring.

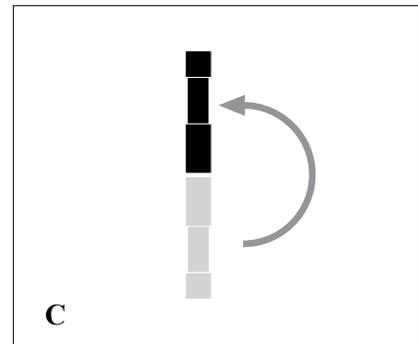
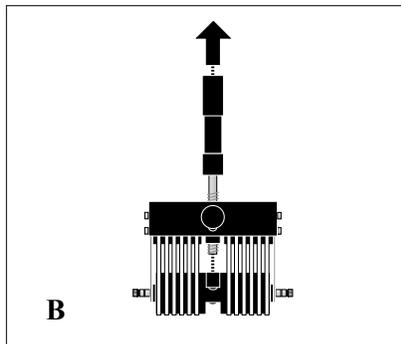
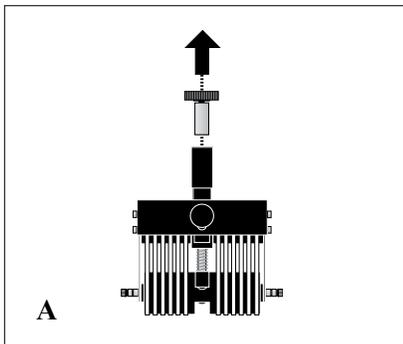
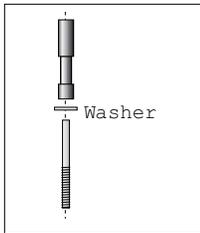


Figure 3-5. Adjusting Gate Assembly for Low-Tension

Procedure

Certain types of material may demand that you change the gate assembly from a *high-tension* setting to a *low-tension* setting (for example, irregular shaped material).

To change the spring from a *high* to a *low* tension, follow these steps:

1. Remove the gate assembly from gate bracket assembly. To do so, pull cylinder down with one hand, lift up on knob with other, and tip at slight angle to remove.
2. Remove the adjustment knob by turning counter-clockwise. Then lift the cylinder off of top of spring.
3. Turn the cylinder around so that the cylinder collar faces up. Then place the cylinder on top of the spring.
4. Replace the adjustment knob (make about 8 revolutions of the knob before reinstalling gate assembly on gate plate).

STEP 2: Side Guides Setting

Dual-Knob Side Guides. To adjust each side guide for proper *offset* horizontal spacing using the dual-knob adjustment, follow these steps:

1. Start by loosening each side guide wing adjuster (counter-clockwise) This will allow you to move each side guide as needed.
2. Grasp whichever side you wish to offset first and move into position.
3. Place a small stack of material in the hopper, with edge of paper against offset guide.
4. Move the second side guide so that it is located at the recommended distance from the material: .0625 in. (1.6 mm) from each edge, .125 in. (3.1 mm) overall.
5. Tighten each wing adjuster after you establish proper position for each guide.
6. Visually check both guides for proper spacing from material.

STEP 3: Back Wedge Adjustment



Moving the back wedge too far forward to the gate assembly can create a pinch point between the tip of the triangle wedges and the material. If moving the back wedge in is not effective, then an optional wedge may be required.



Keep in mind that the back wedge works with the gate assembly to provide the proper lift, curvature of the material, and proper belt/material contact to separate and feed one sheet at a time.



There are a number of feeding problems which can be solved by simply adjusting the back wedge to different positions. Some of these problems include double feeds, skewing, twisting, poor singulation, ink or varnish buildup on the belts, and jamming at the gate assembly area.

Procedure

To adjust the back wedge for initial proper positioning, follow these steps:

1. Grasp a handful of material, approximately 2 to 2.5 in. (5 to 6 cm) thick, and preshingle the edges with your thumb.
2. Place the preshingled material in the hopper so that the edges rest against the curvature of the gate assembly.
3. Turn the back wedge wing-nut adjustment counter-clockwise to loosen the wedge.
4. Move the back wedge forwards and backwards until the bottom sheet is not touching the table top. A good starting point is to measure about .625 in. (16 mm) from the bottom sheet to front edge of table top. Then as you test, you can “fine tune” from this point.
5. Make sure the edge of the back wedge assembly is parallel with the edge of the material stack. Adjust as required and then tighten wing-nut.
6. Check that individual wedges are evenly spaced to provide enough support to lift the material off the table top and feed belts, without any bowing or twisting.

STEP 4: Verifying Proper Installation

Now that you have made all the necessary adjustments for operation, it is recommended that you verify material singulation and separation at the feeder for your particular application. Before you power-up and run your machine with a full hopper, manually feed several sheets of material through the gate assembly area.



If the gate assembly is too tight, the feeder will have difficulty pulling the material through the gate assembly area. This will cause “missed” feeds.



Moving the back wedge too far forward to the gate assembly can create a pinch point between the tip of the triangle wedges and the material. If moving the back wedge in is not effective, then an optional wedge may be required.



For certain types of materials, you may have to position the material “off-center” to prevent any skewing affect.

Manual Test to Verify

Prepare your test by loading the hopper with approximately 2 to 2.5 in. (5 to 6 cm) of material. Make sure you preshingle the stack so that material rests against the curvature of the gate assembly.

1. With the power off, manually feed several sheets of material slowly through the gate assembly area. Move the drive belts by pressing your thumb against the discharge belt.
2. Observe how individual material enters and exits the gate assembly area. Remember, a properly set gap will allow each new sheet to enter at about the center line of the cylinder while the bottom sheet is exiting the gate assembly area. Ideally, this means a slight overlap of both the first sheet and the second sheet (.125 in., or 3 mm) at the gate assembly area. The overlap occurs as the bottom sheet is exiting, and the next sheet is entering.
3. If feeding doubles, then move the wedge in towards the gate assembly. Test again.
4. If sheets are overlapping excessively or, if the machine is feeding doubles, then reduce the gap slightly by moving the knob about 1/8 turn counter-clockwise. Test again.
5. As material moves through the hold-down area, check for any skewing or jamming. Also check for damage to the material.
6. If this or other feeding problems still persist (slipping, skewing, jamming), then review all the adjustment procedures in Section 3, “Preparing for Operation”.

4 How to Operate

This section provides a *sequence of operation* for the V-710IJ Universal Friction Feeder. It also provides information for *clearing a jam* and for *shutdown*.

Sequence of Operation

Successful power-up and operation is assured if you apply the following sequence of steps:

- 1: Loading material in the hopper
- 2: Determining stack height
- 3: Powering On feeder
- 4: Setting/adjusting speed
- 5: Running test cycles
- 6: Final check

STEP 1: Loading Material in the Hopper



Preshingling prevents multiple sheets from jamming under the gate assembly at startup.

1. Start by preshingling by hand a small stack of material so that it conforms to the curvature of the gate assembly. Push in gently to make sure lead edges touch the gate bracket assembly and front edges of the hopper guides.
2. At the back wedge, notice how it helps lift the trailing edges of the material off the table top and feed belts. Also notice how the lifting helps to push the preshingled edges against the curvature of the gate assembly.

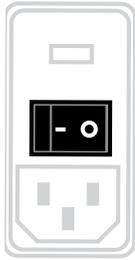
STEP 2: Determining Stack



Stack height affects the downward pressure on the feed belts. Greater downward pressure can increase the chances for double feeds.

1. Gradually add more material to the hopper after the initial stack is formed around the gate assembly. As stack height will have a preferred minimum and a maximum, you will have to experiment to determine effective range of height.
2. Make sure the material is loaded in the hopper as straight as possible. Before adding to hopper, “jog” each handful of material on a flat surface to make sure lead edges are as even as possible. As you add each handful, gently push in each stack so that lead edges rest firmly against front of side guides.

STEP 3: Powering On Feeder



Turn the feeder power On by pushing the horizontal line (—) at the **Power On/Off** rocker switch.

- For feeders equipped with an external run option, feeder motor will not run until the entire base power switch is turned On (feeder On/Off is controlled via external run input cable).

STEP 4: Setting/Adjusting Speed

1. Set the variable speed control to the lowest speed (counterclockwise). *Feeder motor stops if turned completely counterclockwise.*
2. Start by slowly turning the control clockwise to gradually increase feeder speed to coincide with the production line speed of your particular application.

STEP 5: Running Test Cycles



It might be helpful to know that a properly set gap will allow the leading edge of sheet to enter at about the center line of the cylinder, as the previous or bottom sheet is exiting the gate assembly area.

For vacuum base applications:

1. With the feeder already fully loaded and powered On, run the vacuum base through several cycles.
2. Notice transition of material from feeder gate assembly area to the transfer area of the vacuum base. Adjust feeder horizontally as needed (refer back to Section 2, “Installing the Machine”).
3. Adjust feeder speed as needed to coincide with transport belt speed.

STEP 6: Final Check

Make sure:

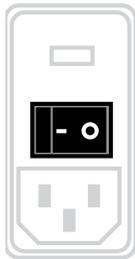
- Leading edge of bottom sheet stops at proper location.
- Proper separation is occurring at gate assembly area.
- Material is not skewing.
- Effective preshingling is occurring at curvature of gate assembly.
- Material is not being damaged during cycling.
- Feeder is secured and will not move during operation.

Clearing a Jam

If a jam occurs during operation, follow these steps:

1. Turn the feeder power Off by pushing the circle (O) at the rocker **Power** On/Off rocker switch.
2. Remove jammed product from feeder. While doing so, try to determine the cause of the jam (see Section 5, “Troubleshooting”).
3. Verify whether any adjustments are loose. If so, refer back to Section 3, “Preparing for Operation”, for proper adjustment procedures.
4. Turn the feeder power back On by pushing the horizontal line (—) at the **Power** On/Off rocker switch.

Shutdown



Should you not be using the feeder for long periods of time, follow these steps to ensure safe and secure storage:

1. Turn the feeder power Off by pushing the circle (O) at the rocker **Power** On/Off rocker switch.
2. Disconnect the feeder power cord from the AC power source. *If installed, disconnect external run input from feeder control panel.*
3. Cover the feeder with a cloth or plastic tarp to prevent dust and debris from accumulating.

5 Troubleshooting

Table 5-1 is intended to provide you with quick solutions to the more common day-to-day problems you may encounter.

Table 5-1. Quick-Look Troubleshooting

Problem	Cause	Solution
No AC power to feeder	1. On/Off switch in "Off" (or "O" position).	Move switch to "On" (or "—" position).
	2. Power cord loose or not plugged into outlet (or AC power source).	Check and secure power cord at AC outlet.
	3. Female end of power cable loose or not plugged into AC power inlet at rear of feeder.	Check and secure cord at AC power inlet at rear of machine.
	4. Faulty external run input connection or cable.	Check and secure cable connections. Replace if necessary.
Feeding doubles	1. Gate assembly improperly adjusted (possibly more than one sheet thickness).	Review gate adjustment procedure.
	2. Back wedge improperly adjusted.	Review back wedge adjustment procedure.
	3. Worn O-rings (or angled edge).	Rotate O-rings. If applicable, replace angled edge. If wear is excessive, consult with a qualified technician.
	4. Material interlocking.	Check material and source.
	5. Static buildup.	Check material and source.
Feed belts are operating, but material not feeding	1. Material stack height is too low when stack height is down, resulting in reduction of down pressure.	Review material loading procedure.
	2. Binding in side guides.	Adjust side guides further apart to allow freedom of movement between sheets.
	3. Slippery feed belts.	Consult with a qualified technician.
	4. Sheet adhesion or interlocking between the bottom and next sheet.	Review material loading procedure and back wedge adjustment procedure.

Table 5-1. Quick-Look Troubleshooting (continued)

Problem	Cause	Solution
Feed belts are operating, but material not feeding (continued)	5. Gate assembly may be down too tight.	Review gate assembly adjustment procedure.
	6. Too much weight in hopper.	Remove material from stack. Test again.
Feed belt(s) not tracking on rollers	1. Excessive weight in hopper.	Reduce weight. Test again.
	2. Excessive down pressure on gate assembly.	Rotate gate adjustment 1/8 turn to increase gap and manually test. Review gate assembly adjustment procedure.
	3. Off-centered product from center point of machine.	Review side guide setting procedure.
	4. Stack is bearing down on edge of belt.	Move stack away from belt, even if this causes stack to be off center from center line of feeder.
	5. Belt wear.	Review gate assembly adjustment procedure. Also review inspection and care procedures. If wear is excessive, consult with a qualified technician.
	6. Rollers out of adjustment.	Consult with a qualified technician.
Jamming occurs during operation	1. Improper adjustment in one or more of the following: <ul style="list-style-type: none"> • gate assembly • back wedge • top roller hold-down assembly 	A. Turn the Power switch to "Off" by pressing the circle (O). B. Remove jammed material from feeder. While doing so, try to determine the cause of the jam. C. Verify each adjustment by reviewing the "Preparing for Operation" section of the manual.
Material skewing	1. Back wedge not aligned properly.	Review back wedge adjustment procedure.
	2. Improperly adjusted gate horizon.	Review gate assembly adjustment procedure.
Excessive fuse failure	1. Material too thick.	Consult with a qualified technician.
	2. Excessive weight in hopper.	Consult with a qualified technician.

6 Inspection and Care



When performing initial feeder adjustments prior to operation, always make sure you turn Off the main power switch and disconnect all equipment from the electrical power source. Failure to do so can expose you to a potential startup, and therefore moving parts which can cause serious injury.

Do not attempt to make any adjustments while the feeder and machine of application are running. Failure to do so can expose you to moving parts which can cause serious injury. Do not wear loose clothing when operating the feeder.

Avoid making adjustments with loose or unsecured parts. This can potentially damage parts.

Please read this Section to learn how to:

- Visually inspect your machine to detect part problems which may require adjustment or replacement.
- Periodically care for your machine to prevent any operational problems.

Visual Inspection

Checking for Feed and Discharge Belt Wear

Check for visual signs of:

- Walking. Replace as required.
- Cracking. Replace as required.
- Thinning. Replace as required.

Checking for Timing and Drive Belt Wear

Check for visual signs of:

- Fraying. Replace as required.
- Missing teeth. Replace as required.
- Cracking. Replace as required.
- Paper residue buildup. Clean belts, especially in grooves.

Visual Inspection (continued)

Ensuring Proper Feed and Discharge Belt Tracking

Check for visual signs of:

- Stretching.
 - Improper roller adjustment.
-

Ensuring Proper Timing and Drive Belt Tracking

Check for visual signs of:

- Misaligned timing pulleys.
-

Checking for Gate Assembly Wear

Check for visual signs of wear:

- Advancing O-ring, or standard O-ring: Flat areas along the O-rings.
- Bar Gate: Angled wedge begins to flatten excessively.

Visual Inspection (continued)

Advancing O-Ring Gate: Adjusting Worn O-Rings

To adjust worn O-rings on advancing O-ring gate:

1. Turn Off feeder and remove power cord from outlet.
2. Rotate O-rings by grasping advance knob and pushing towards gate cylinder about .125 to .25 in. (3 to 6 mm). NOTE: O-rings only advance when pushing toward gate cylinder. Return knob to position away from gate cylinder.

Standard O-Ring Gate: Adjusting Worn O-Rings

To adjust worn O-rings on standard O-ring gate:

1. Turn Off feeder and remove power cord from outlet.
2. Remove gate assembly from gate plate.
3. Insert a screwdriver in slot on top of gate assembly and rotate screwdriver clockwise or counter-clockwise 360° so as to move worn area of O-ring about .125 to .25 in. (3 to 6 mm).
4. Remove screwdriver and repeat for each ring as necessary.
5. Reinstall gate assembly and restore power.

Replacing Worn Angled Wedge (Bar Gate II)

To replace a worn angled wedge:

1. Turn Off feeder and remove power cord from outlet.
2. Remove gate assembly from gate plate.
3. Remove plate on bottom of gate cylinder (two screws).
4. Remove angled wedge.
5. Install new angled wedge. Reinstall plate on bottom of gate cylinder (two screws).
6. Reinstall gate assembly and restore power.

Preventive Care



Use only isopropyl alcohol. Other solvents can cause belts to wear prematurely, and even cause total breakdown of material.

Cleaning schedule for various materials:

- *Typical: every month*
- *Dusty: after every shift*
- *High ink or varnish: 1 time per shift*

Cleaning Feed and Discharge Belts

To clean feed belts:

1. Turn Off feeder and remove power cord from outlet.
2. Remove gate assembly and safety shields from gate plate for easier access to belts.
3. Apply a small amount of isopropyl alcohol to a soft cloth.
4. Use your hand to move the feed belt, start with one feed belt at a time and carefully press the moistened area of the cloth to the belt. As you rotate the belt, use moderate pressure to wipe across the belt, making sure to wipe in direction of grooves. After several rotations of the belt, repeat for each belt.
5. Taking a dry portion of the cloth, go back to the first feed belt cleaned and use moderate pressure against the belt for several revolutions to ensure the belt is dried. Repeat for each belt.
6. Reinstall gate assembly and safety shields; restore power.

To clean discharge belts:

1. Turn Off feeder and remove power cord from outlet.
2. To access discharge belts, remove gate assembly and safety shields.
3. Repeat steps 4–6 above. Repeat for each belt.
4. Reinstall gate assembly and safety shields; restore power.

Preventive Care (continued)



Depending on the application, it may be necessary to move the feeder from original installation so as to access gate assembly.

Cleaning schedule for various materials:

- *Typical: every month*
- *Dusty: after every shift*
- *High ink or varnish: 1 time per shift*

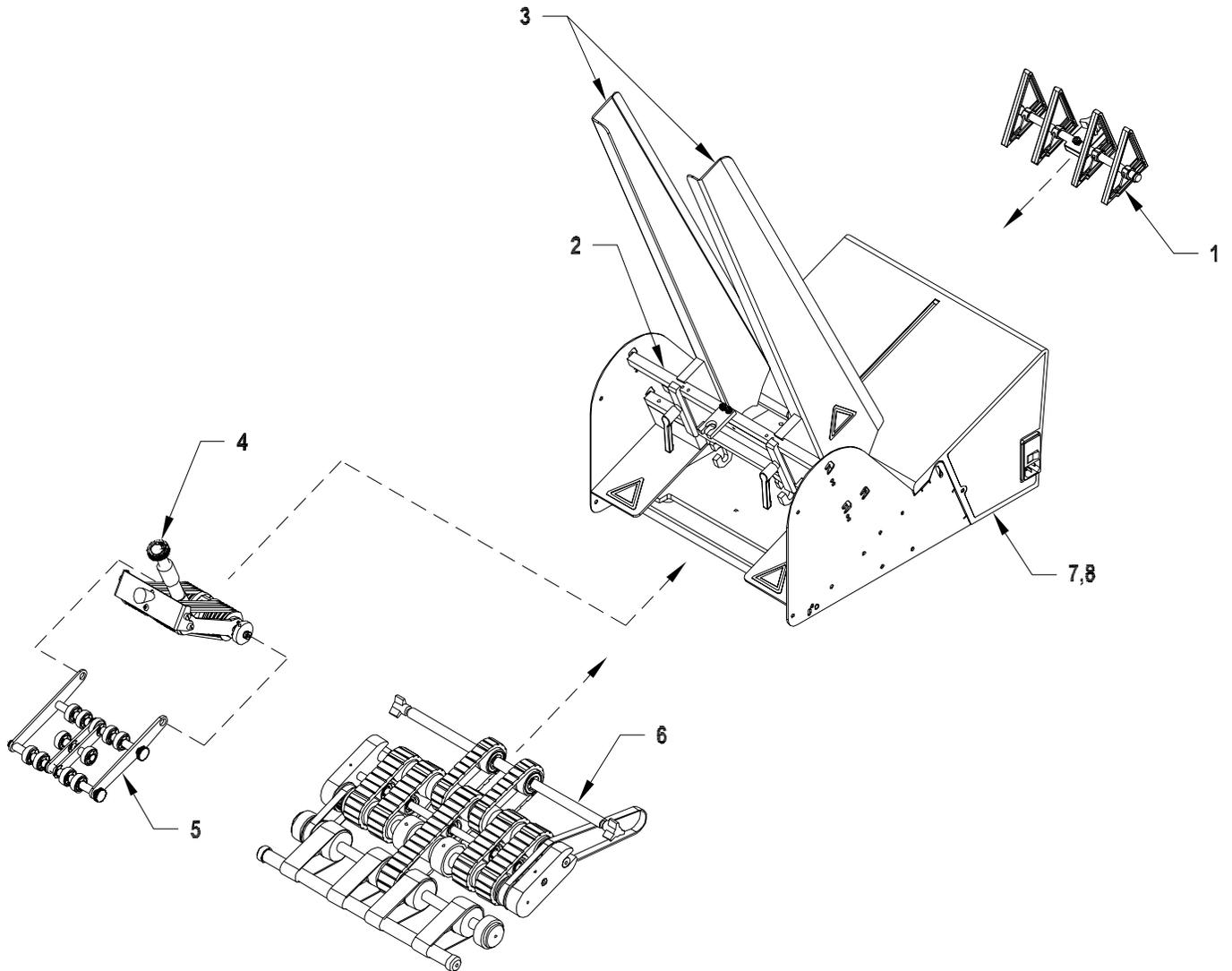
Cleaning Gate Assembly

Use only isopropyl alcohol (98% concentration). Do not use any other types of solvents. They can cause premature wear of the belts, or even total breakdown of the material.

To clean gate assemblies:

1. Turn Off feeder and remove power cord from outlet.
2. Remove gate assembly from gate bracket assembly.
3. Apply a small amount of isopropyl alcohol to a soft cloth.
4. Wipe across O-rings, or angled wedge if applicable. First wipe in one direction, then the other.
5. Taking a dry portion of the cloth, go back and wipe all surfaces to ensure they are dried.
6. Reinstall gate assembly and restore power. *It may be necessary to recheck alignment of feeder with host machine if feeder was moved from original installation position (for a review, refer back to Section 2, "Installing the Machine").*

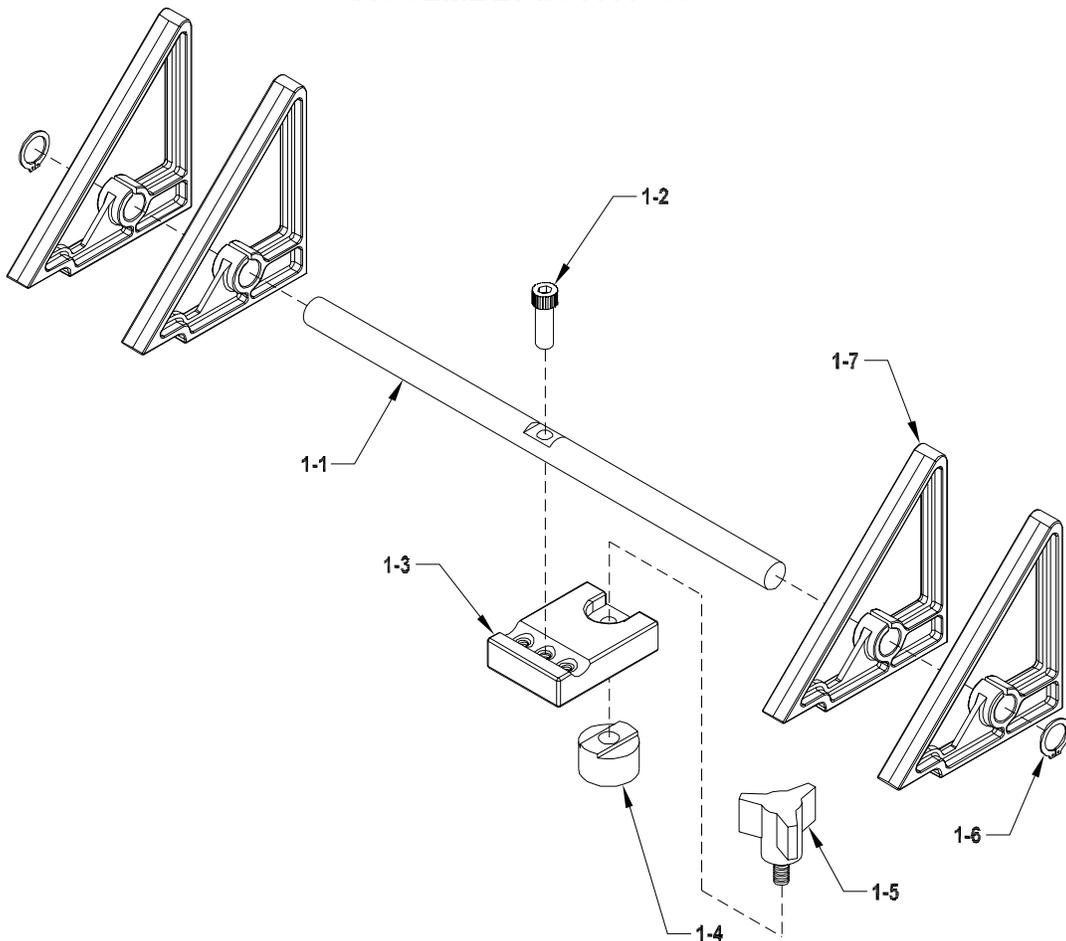
7 Mechanical Components



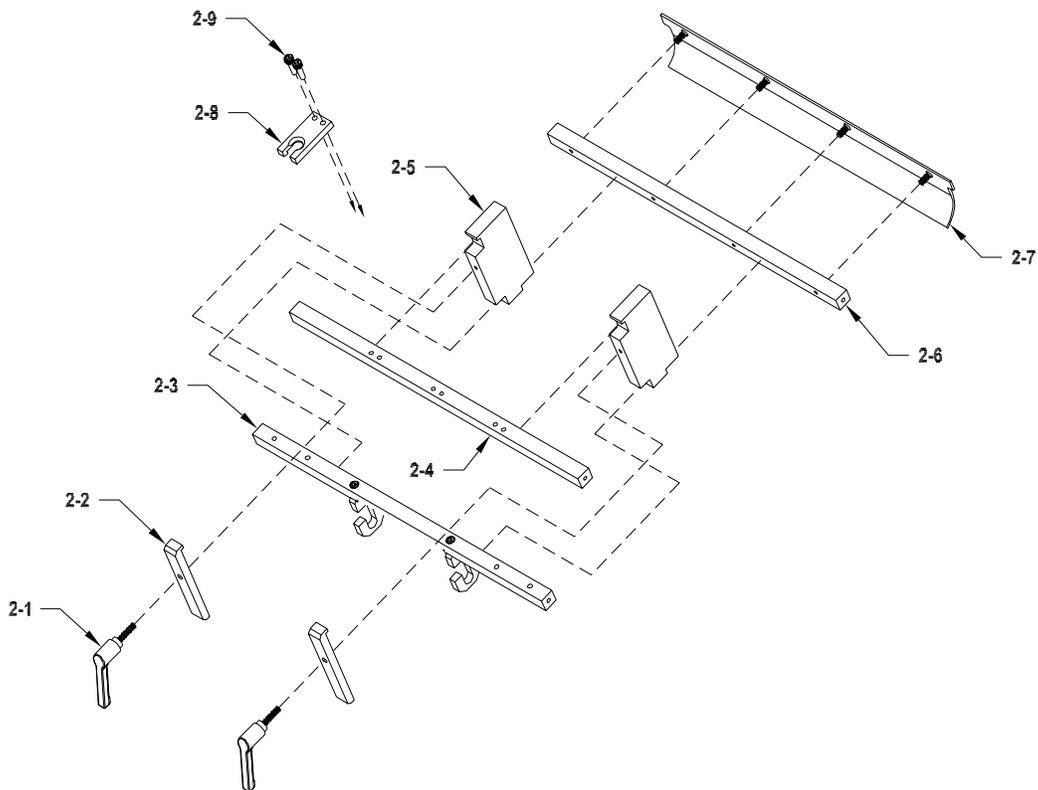
**1: TRIANGLE WEDGE
ASSEMBLY #63311018**

<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
1-1	1	Wedge Guide Shaft	44633018
1-2	1	SHCS 10-32 X 5/8" LG	00002320
1-3	1	Wedge Block	44633014
1-4	1	T-Nut Round	44633016
1-5	1	Knob 3 Lobe 10-32 X 5/8" LG	44633033
1-6	2	Ring Grip 3/8 Waldes	00001110
1-7	4	Wedge Material Support	43560212

**2: GATE PLATE
ASSEMBLY #84111006**



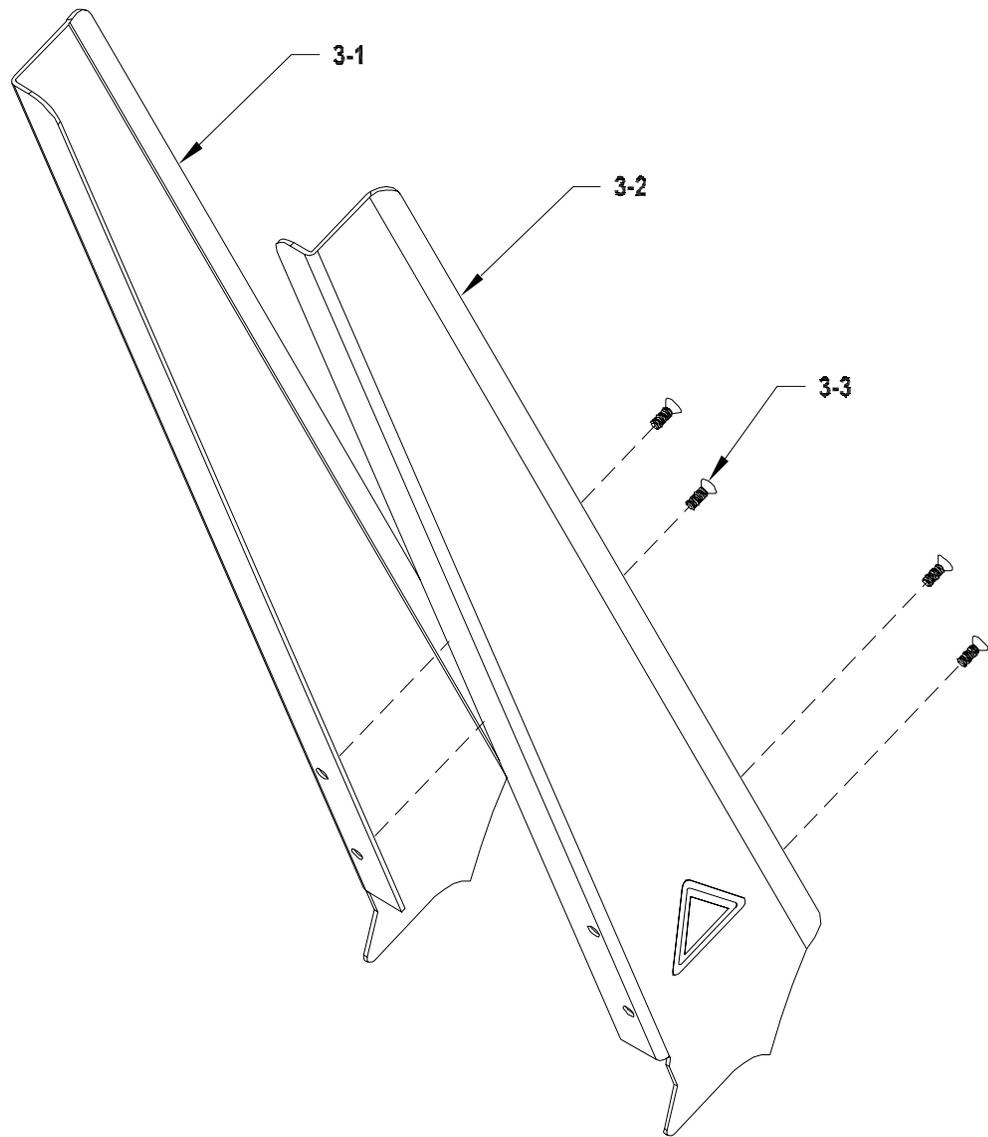
<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
2-1	2	Lever Adjustment 10-32 X .75	43555098
2-2	2	Side Guide Adjust Clamp Front	44675006
2-3	1	Lower Gate Support Bar	44841005
	2	Gate J Hook	44841011
	2	SHCS 8-32 X 5/8" LG	00002215
2-4	1	Upper Gate Support	44841006
2-5	2	Side Guide Adjust Clamp Rear	44841004
2-6	1	Pregate Bar	44841007
2-7	1	Pregate	44841016
	4	Screw FHS 10-32 X 1/2" LG	00002330
2-8	1	Adjustment Reference Block	44841019
2-9	2	SHCS 8-32 X 5/8" LG	00002215



**3: SIDE GUIDE KIT 1424 TEFLON
ASSEMBLY #10501108**

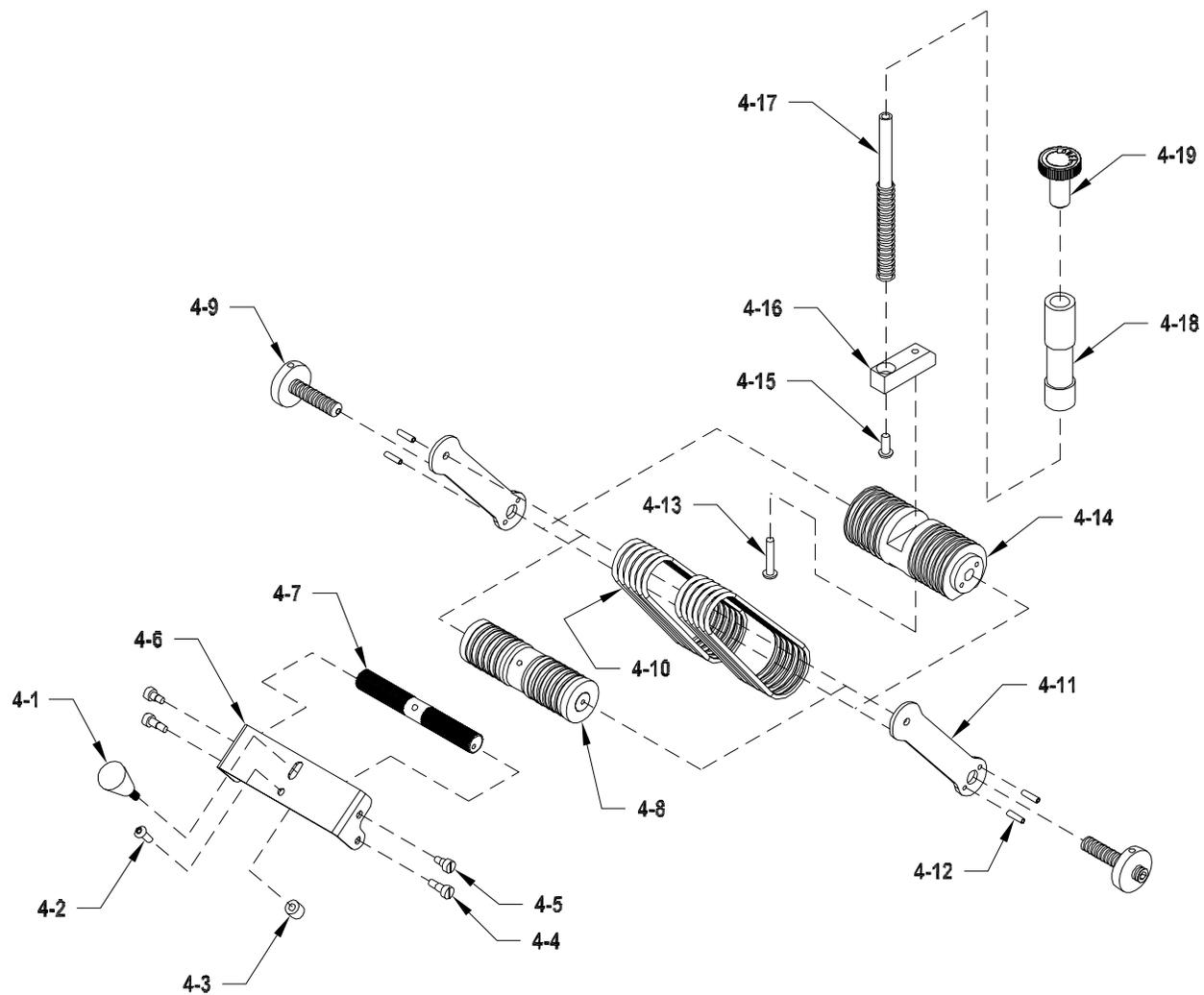
<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
3-1	1	Side Guide Right 1424 Teflon	51050040
	1	Label Warning	44600005
3-2	1	Side Guide Left 1424 Teflon	51050039
	1	Label Warning	44600005
3-3	4	Screw FHS 10-32 X 1/2" LG	00002330
NS	2	Guard Rear Accordion	44600001

4: ADVANCING O RING GATE w/HORIZON ADJUST



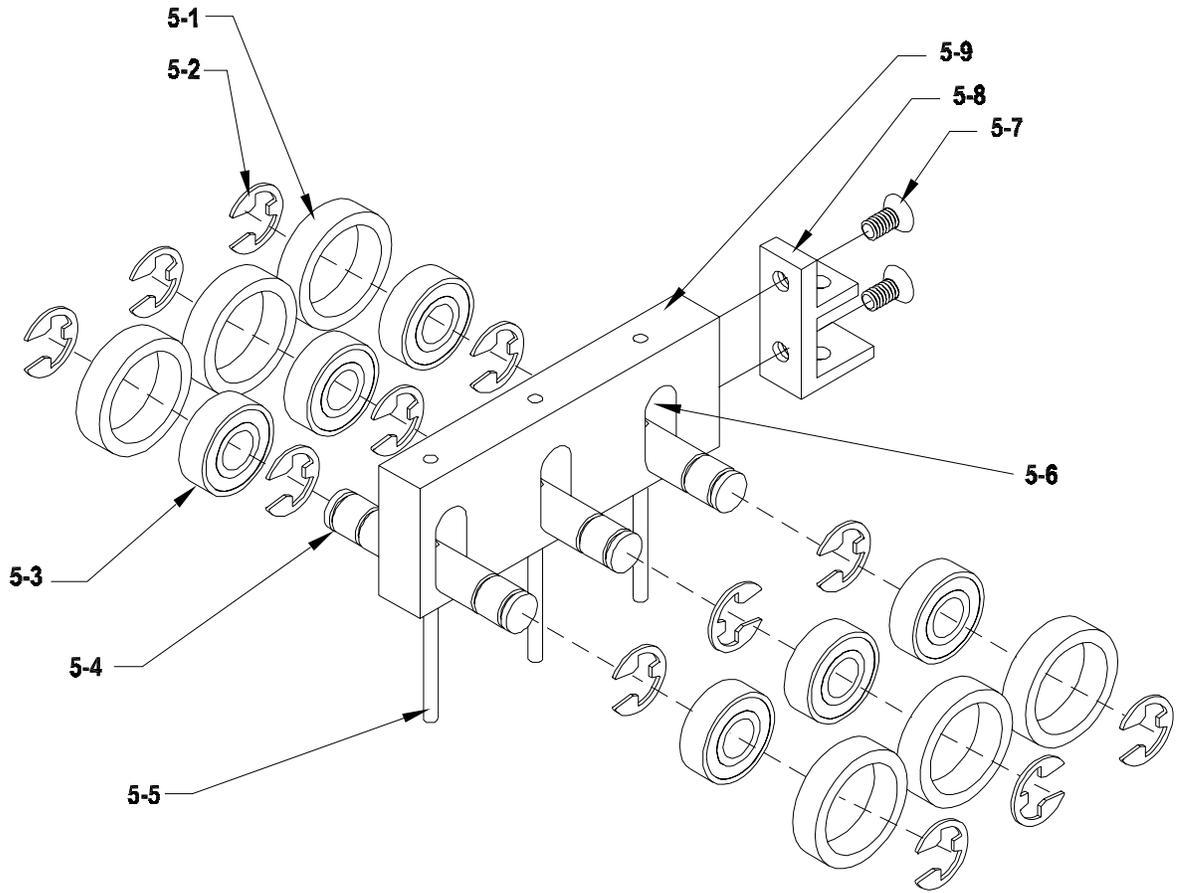
ASSEMBLY #87211001

<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
4-1	1	Handle Studded 10-32 X 1/2"	44657007
4-2	1	BHCS 8-32 X 1/2" LG	00002302
4-3	1	Spacer Belt Indexer .312 X .375	44657010
4-4	2	Screw Shoulder 8-32 Slotted	00003320
4-5	2	Screw Shoulder 8-32 X 1/8	00003321
4-6	1	Belt Indexer Bracket	44657005
4-7	1	Pinch Roll Cam	44657003
4-8	1	Belt Indexer Shaft	44657008
	2	O Ring Take Up Roller	44657002
	1	Belt Indexer Center Hub	44657009
	2	Clip E 1/2 Waldes	00001155
	2	Screw Socket Set 8-32 X 5/16 Cup Point	00002211
4-9	2	Roller	44872003
	2	Adjustment Screw	44872005
	2	Screw Socket Set 10-32 X 3/8" LG Nylon Tip	44872007
4-10	12	O Ring Advancing	44657006
4-11	2	Side Plate Adjust	44872002
4-12	4	Pin Roll 1/8 X 1/2	00001161
4-13	1	BHCS 10-32 X 1" LG	00002340
4-14	1	Gate Cylinder w/Horizon (Not Sold Individually)	44872004
4-15	1	BHCS 10-32 X 1/2" LG	00002334
4-16	1	Mount Gate Lift Shaft	15000001
4-17	1	Shaft Gate Lift	23560084
	1	Spring Gate Compression	23500083
4-18	1	Cylinder Gate Spring Tension	23500019
4-19	1	Adjustment Knob Assembly for Gate	23511037



**5: HOLD DOWN
ASSEMBLY #10501109**

<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
5-1	6	Discharge Roller Collar	51277087
5-2	12	E-Clip 3/8	00001150
5-3	6	R6 Bearing	23500095
5-4	3	Hold Down Shaft	51050238
5-5	3	Spring Pin 1/8"	51312003
5-6	3	Hold Down Spring	51328001
5-7	2	FHSC 10-32 X 3/8"	00002234
5-8	1	Hold Down Mount	51312001
5-9	1	Hold Down Block	51050239



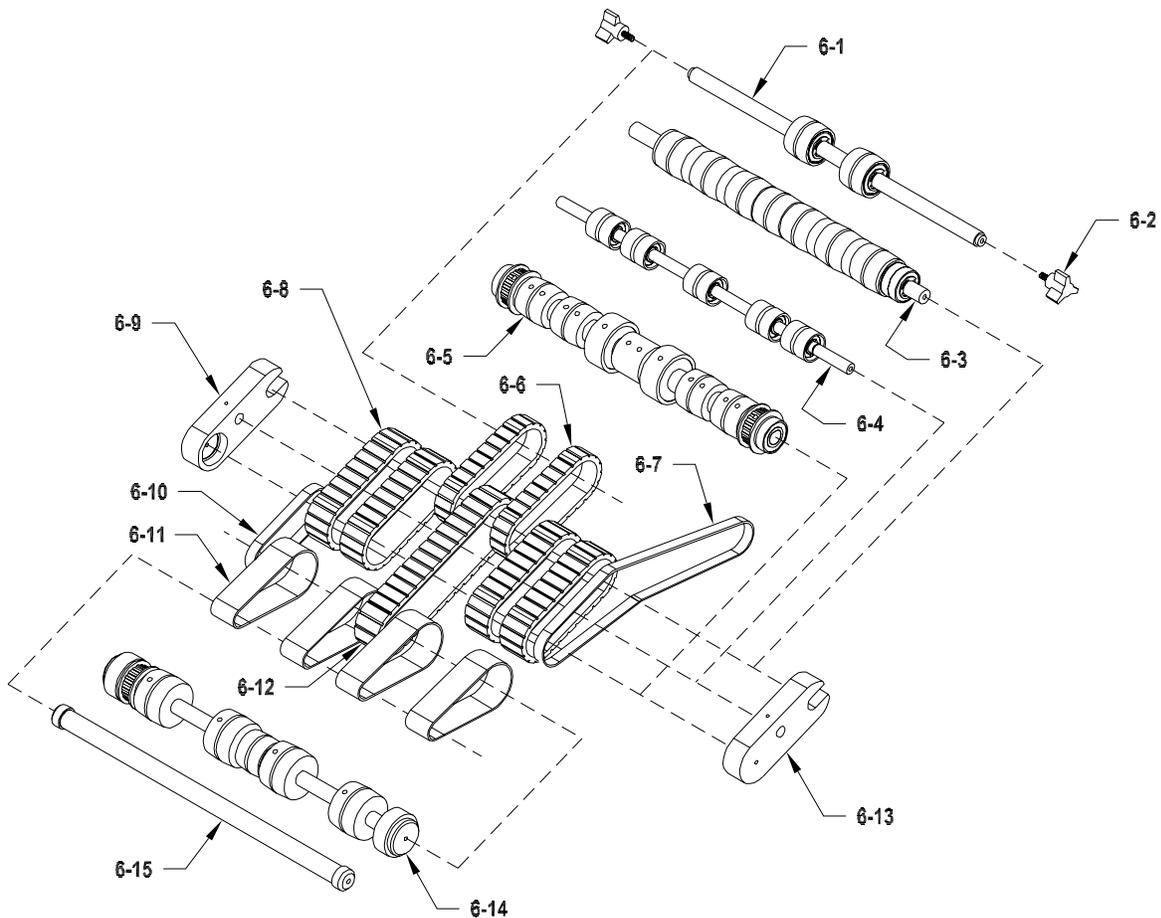
**6: GROOVED GUM CARRIAGE
ASSEMBLY #10501105**

<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
6-1	1	Adjustable Roller Shaft	44841020
	2	Roller Crown Driven Narrow	44841033
	4	Bearing Ball R8	23500094
	4	Clip E 1/2 Waldes	00001155
6-2	2	Knob 3 Arm 10-32 X 7/16	23500092
6-3	1	Idler Shaft	43555047
	1	Tube Driven	44630004
	4	Bearing Ball R8	23500094
	3	Clip E 1/2 Waldes	00001155
6-4	1	Shaft Discharge Feed Roller EX	43550036
	10	Roller Support Driven w/Bearing	23511030
	10	Ring Grip 3/8 Waldes	00001110
6-5	1	Shaft Drive 3/4	43555205
	2	Pulley 20T 1/2 Bore w/Flange Driven	23500097
	4	Crown Drive Roller	23560208
	2	Roller Feed .75 Inch Bore	23500126
	1	Roller Flat Drive	23560206
	2	Bearing Ball R8	23500094
	2	Ring Grip 1/2 Waldes	00001115
	12	Screw Socket Set 10-32 X 1/4" LG	00002216
	4	Screw Socket Set 10-32 X 5/16" LG	00002217
	2	(1 for each 20 tooth pulley, 1 for each blue feed roller) Key Woodruff 1/8 X 3/8	00003351
6-6	2	Feed Belt Tan Gum Grooved Composite 3/4W	15000076
6-7	1	Drive Belt 206XL037	44841034
6-8	4	Belt Feed Tan Gum Grooved Composite 1W	23500162
6-9	1	Holder Carriage Right Side	44485005
	1	Screw Socket Set 6-32 X 1/4" LG	00003316
6-10	1	Drive Belt 86XL037	51050010
6-11	4	Belt Discharge Clear 1W	51050062
6-12	1	Feed Belt Tan Gum Grooved Composite 1W	44759062
6-13	1	Holder Carriage Left Side	44485006
	1	Screw Socket Set 6-32 X 1/4" LG	00003316

(CONTINUED ON NEXT PAGE)

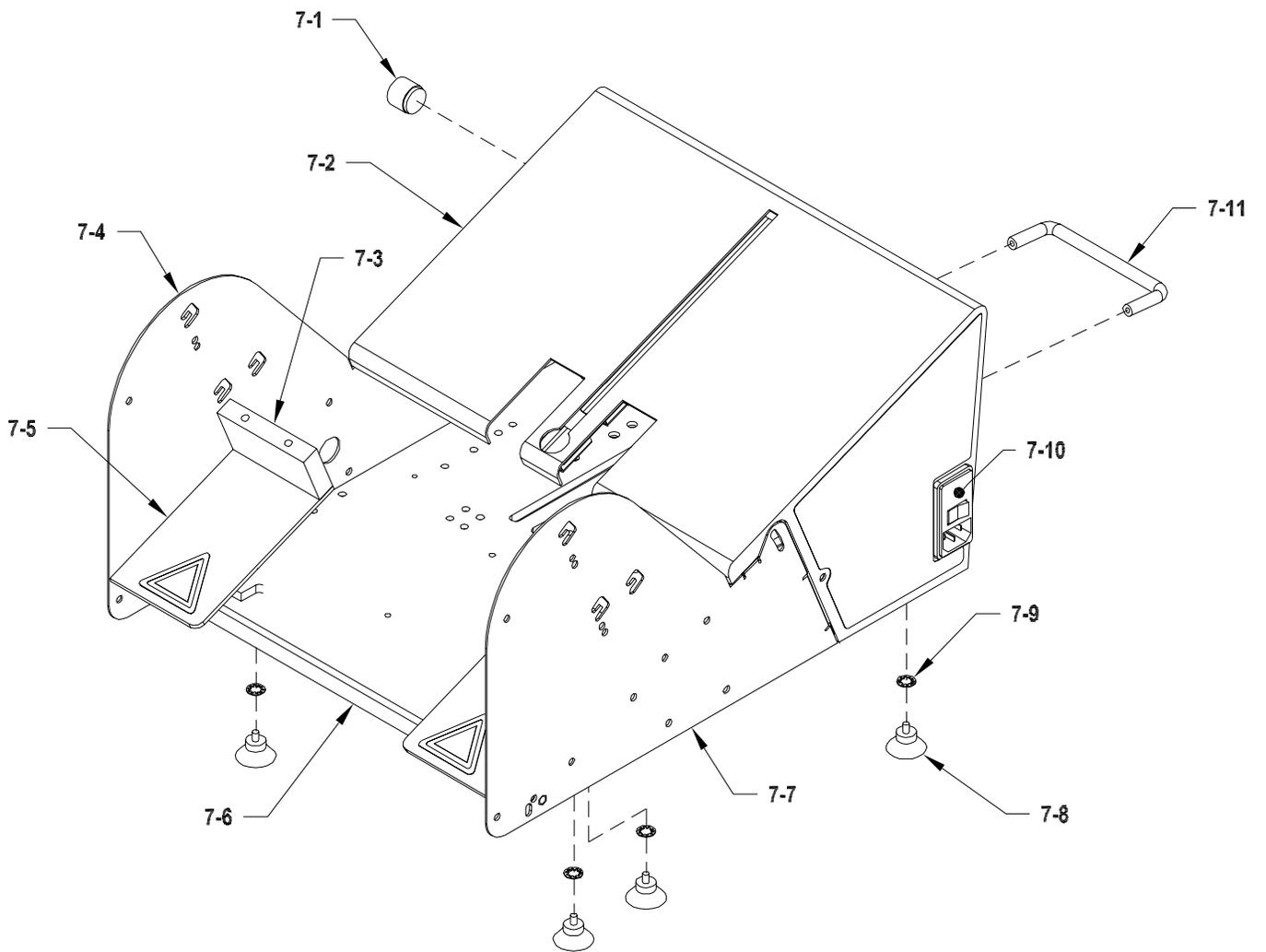
**6: GROOVED GUM CARRIAGE (CONTINUED)
ASSEMBLY #10501105**

<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>	
6-14	1	Upper Discharge Shaft	51050008	
	2	Holder Outboard Bearing Cup	23500032	
	4	Drive Crown Roller	51050006	
	1	Roller Crown Driven Narrow	44841033	
	1	Pulley 20T 1/2 Bore w/Flange Driven	23500097	
	4	Bearing Ball R8	23500094	
	4	Clip E 1/2 Waldes	00001155	
	1	Screw Socket Set 10-32 X 1/4" LG (for 20t pulley)	00002216	
	9	Screw Socket Set 10-32 X 5/16" LG	00002217	
	1	Key Woodruff 1/8 X 3/8	00003351	
	6-15	1	Lower Discharge Shaft	51050007
		2	Cup Bearing R4	44846050
2		Bearing Ball R4	44582021	



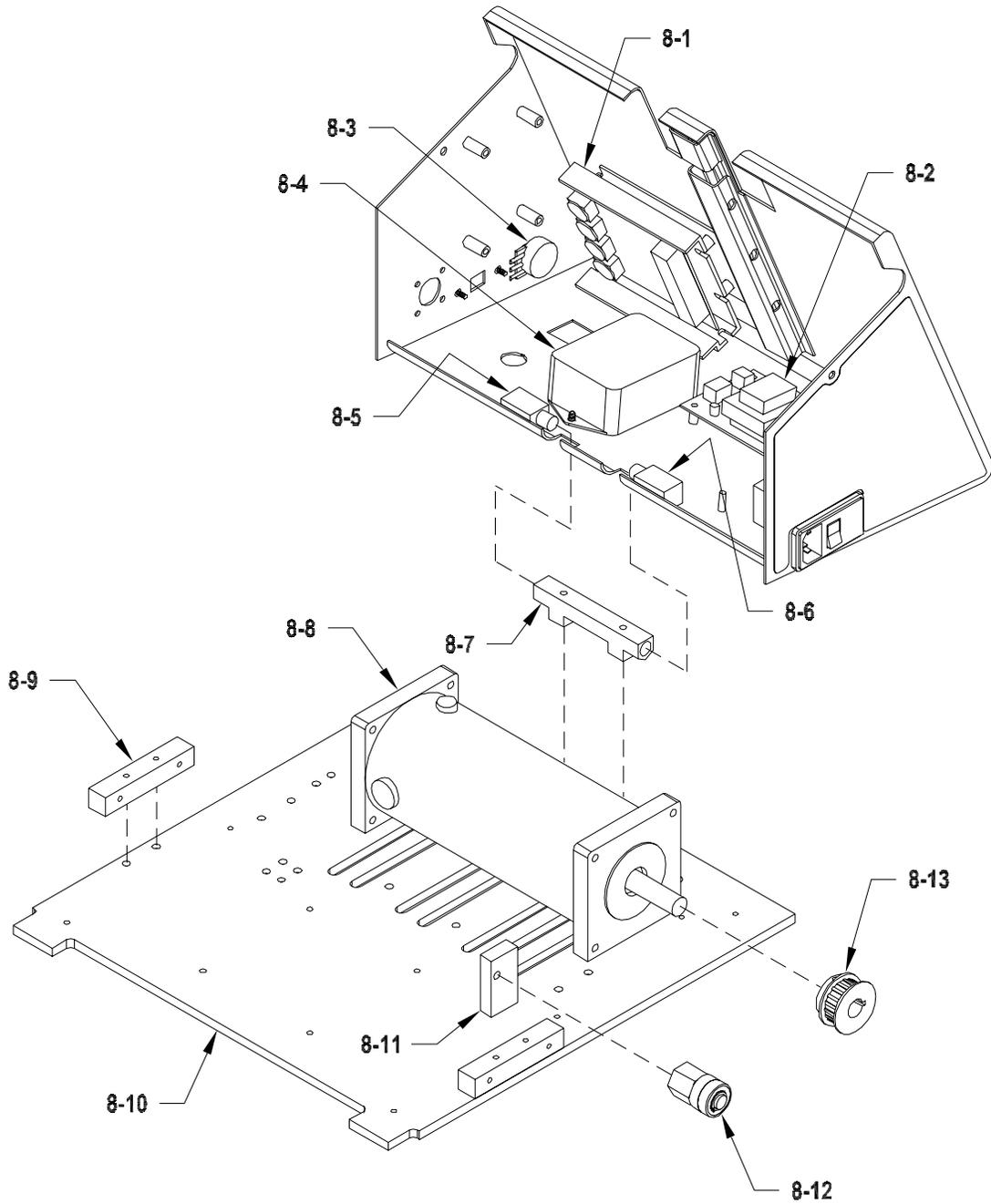
7: EXTERIOR FEATURES

<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
7-1	1	Knob Straight Knurl Black	44675030
7-2	1	Shell Split Back	44841060
7-3	2	Spacer Shield	51050073
7-4	1	Shell Split Front Ear Right	51050102
7-5	2	Shield Lexan Smoked	51050072
	2	Label Warning Roller Pinch Point	44600004
	4	BHCS 10-32 X 2" LG	00003396
7-6	1	Discharge Support Bar	44841035
7-7	1	Shell Split Front Ear Left	51050101
7-8	4	Foot Suction Cup	44846058
7-9	4	Washer Lock 1/4 Internal Star Tooth	00003341
7-10	1	Module AC Power Entry (w/o Fuses)	44649034
	2	Fuse 5A 250V Slo-Blo 5 x 20 mm	53500558
7-11	1	Pull Handle	44841002

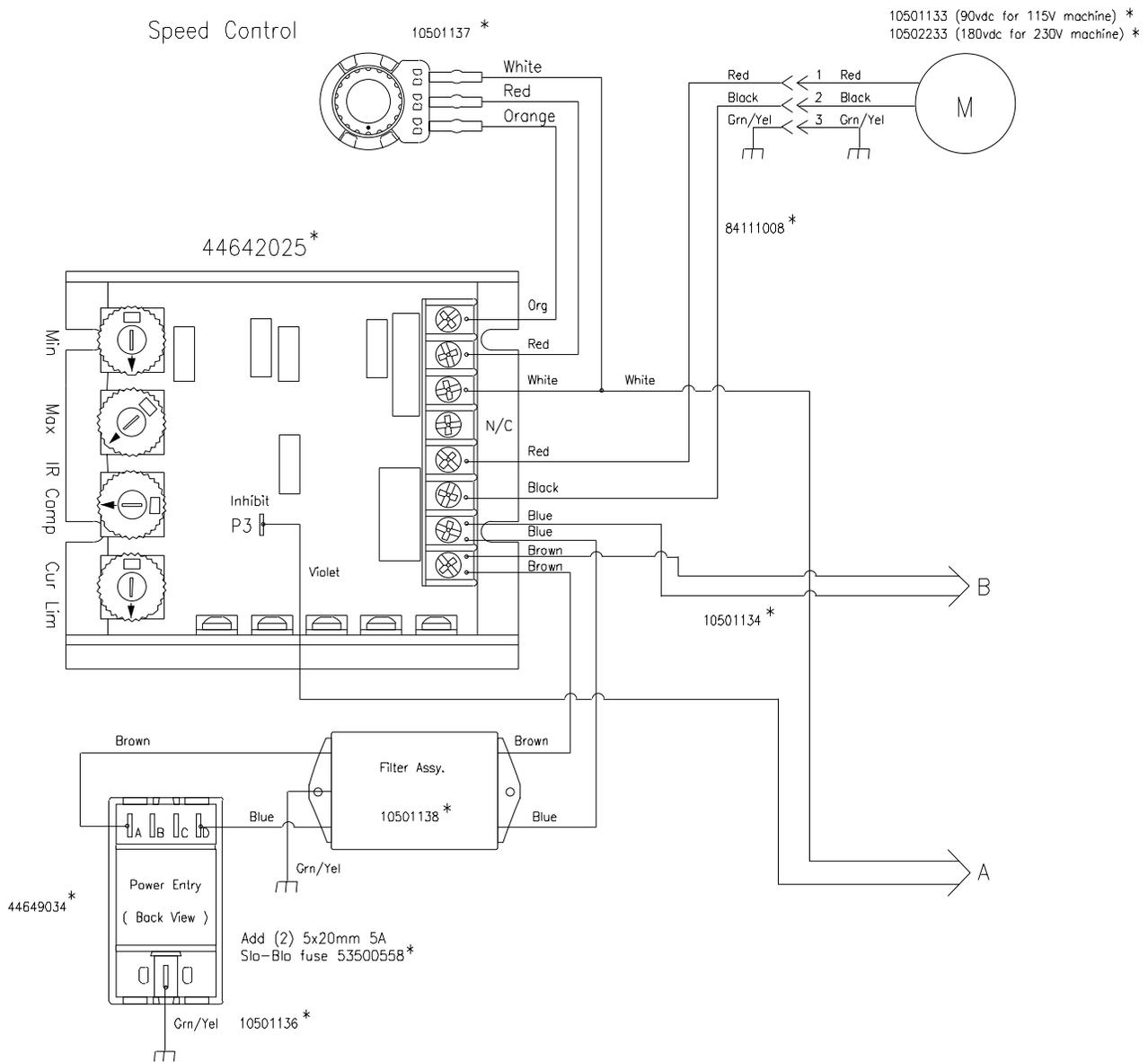


8: INTERIOR FEATURES

<u>DIAGRAM NUMBER</u>	<u>QTY</u>	<u>DESCRIPTION</u>	<u>PART NUMBER</u>
8-1	1	SCR Board w/36 Inch Pot Leads	44642025
8-2	1	Plate Mounting SCR	51050112
8-3	1	Board V710 IJ Control (115V Models Only)	44841015
	1	Board V710 IJ Control (230V Models Only)	51050171
8-4	1	Speed Pot Assembly	10501137
8-5	1	Line Filter Assembly	10501138
	1	Standoff Fem/Fem 5/16 Hex 8-32 x 1-5/16 AL	51050115
8-6	1	Block Pivot Right	44841065
8-7	1	Block Pivot Left	44841064
8-8	1	Block Pivot Center	44841063
8-9	1	Motor 90VDC Assembly (115V Models Only)	10501133
	1	Motor 180VDC Assembly (230V Models Only)	10502233
8-10	2	Mount Front Base Plate	44675003
8-11	1	Base Plate	51050237
8-12	1	Bracket Belt Tensioner	44846056
8-13	1	Belt Tensioner Assembly	23511290
8-14	1	Pulley 18T 1/2 Bore w/ Flange & Hub	44350053
	2	Screw Socket Set 10-32 X 1/8" LG	00003352
NS	1	Harness SCR to Circuit Board	10501134
NS	1	Ground Wire Assembly	10501135
NS	1	Ground Wire Assembly	10501136
NS	2	Terminal Disc Female .020 22-18 AWG	53500254
NS	1	Power Cord (115V Models Only)	53511020
	1	Power Cord & Allen Wrench Kit (230V Models)	53522210
NS	1	Cable DC Motor Extension	84111008
NS	1	Jumper Run Enable (J7)	84111013
NS	1	Harness SCR Enable	84111017



8 Electrical Components



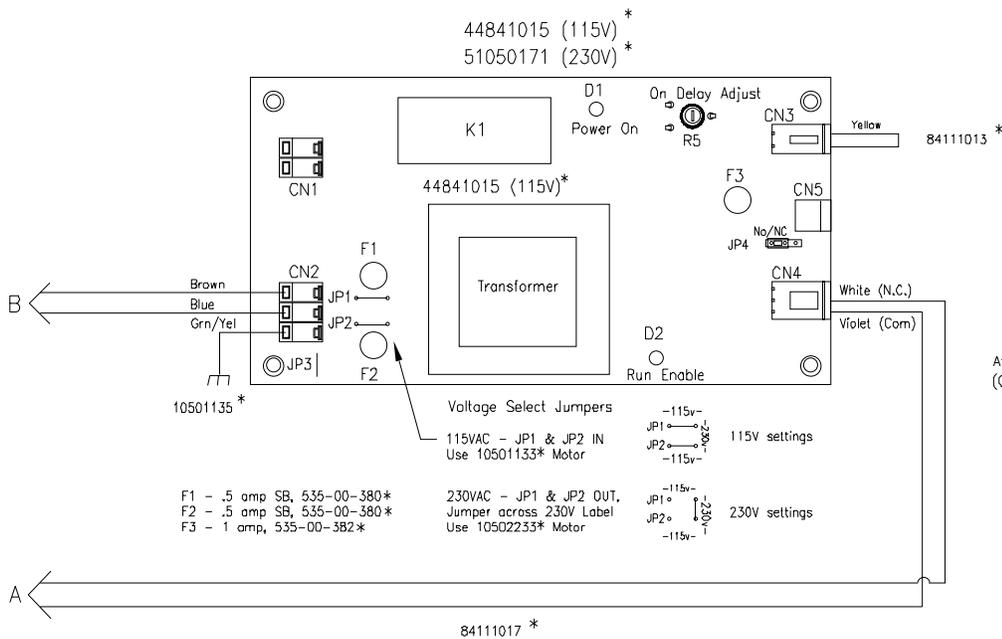
Caution: for continued protection against risk of fire, replace only with same type and rating of fuse.

* Streamfeeder part number.

See Engineering Bulletin # 332 for External Run Input options.

– IMPORTANT –

- 115V models use:
*10501133 Motor (90vdc)
*44841015 Control Board
- 230V models use:
*10502233 Motor (180vdc)
*51050171 Control Board

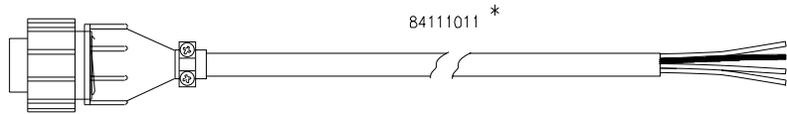
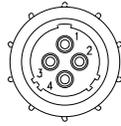


D1 - Power on LED is illuminated any time power is applied to CN2.

D2 - Run Enable LED is illuminated any time the CN3 is jumpered or K1 is energized. The LED will also be on during the timing cycle. The timing cycle is adjustable via R5 for a period of 0-12 seconds. The timing cycle is an 'ON' Delay timing period.

* Streamfeeder part number.

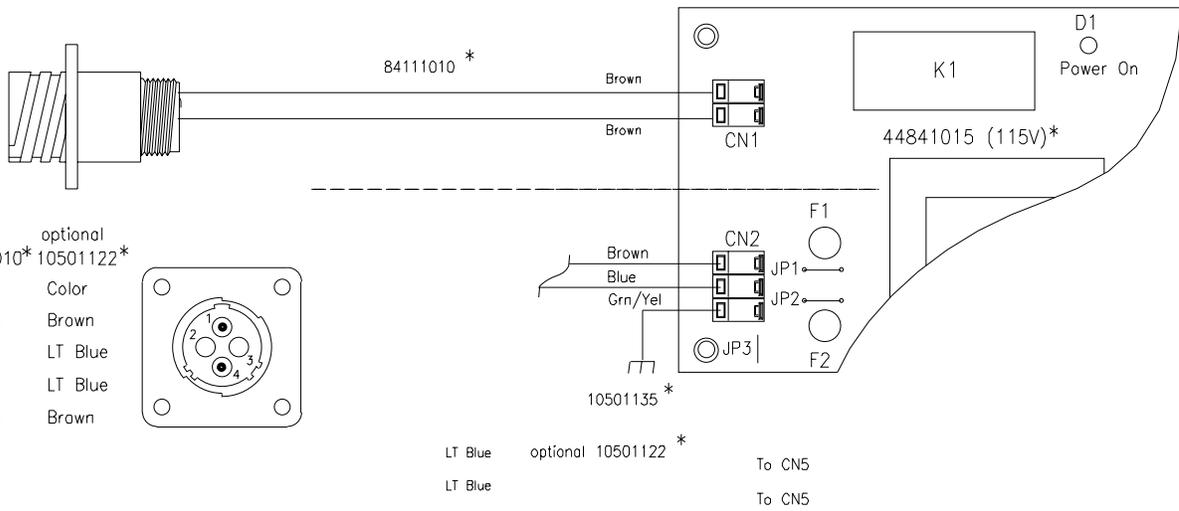
Pin	Color	Function
1	White	Ext. Run In
2	Green	Status Out
3	Red	Status Out
4	Black	Ext. Run In



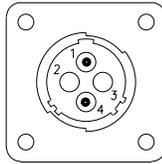
NOTE: Status Output is an option

External Run Input Option(s) – 12, 24 VDC & 24, 115 VAC

44841015 (115V)*
51050171 (230V)*



Pin	Color	Color
1	Brown	Brown
2	-	LT Blue
3	-	LT Blue
4	Brown	Brown

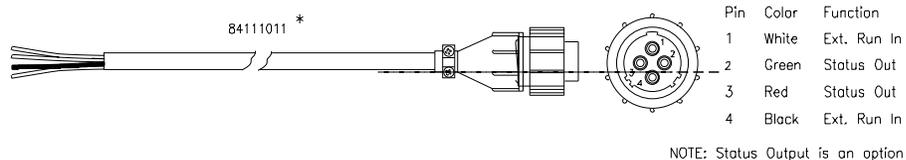


LT Blue optional 10501122* To CN5
LT Blue To CN5

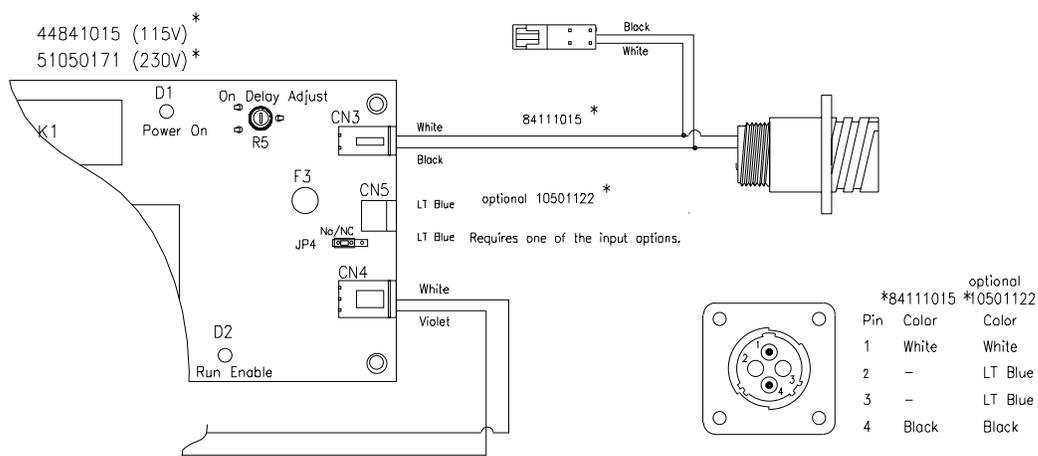
Option P/N	Input Voltage	K1 Relay P/N
*10501118	115 VAC	*44841013
*10501119	24 VAC	*44841014
*10501123	12 VDC	*44841038
*10501120	24 VDC	*44841012

Requires one of the external run input options
*10501122 Status Output

* Streamfeeder part number.



External Run Input Option 10501121* – Dry Contact



Requires one of the external run input options
*10501122 Status Output

* Streamfeeder part number.

Thiele
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