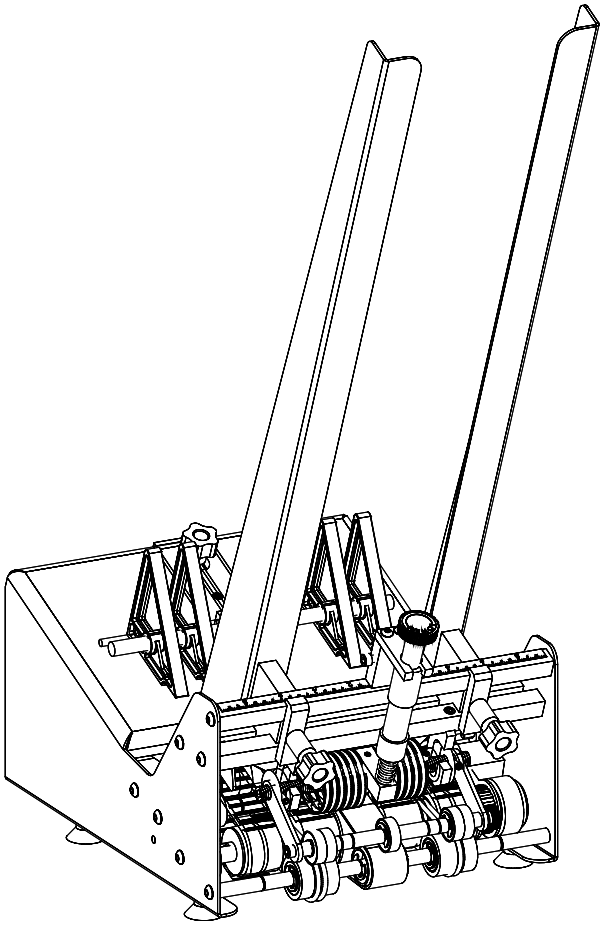
V-900IJ
(115v)

Manual



BW Integrated Systems
A **Barry-Wehmiller** Packaging Company

Streamfeeder®

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CONTENTS

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.

TECHNICIAN indicates that a qualified technician should be alerted to the corresponding tasks and information.

OPERATOR indicates that an operator should be alerted to the corresponding tasks and information.

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.

SAFETY

TECHNICIAN

OPERATOR

Make sure you thoroughly read this section to become familiar with all the safety issues relating to the safe operation of this product.

Please read all of the warnings that follow to avoid possible injury. Although Thiele-Streamfeeder has made every effort to incorporate safety features in the design of this feeder, there are residual risks that an installer or operator should be aware of to prevent personal injury.

Please read all of the cautions that follow to prevent damage to this product. This product is built with the highest quality materials. However, damage can occur if the system is not operated and cared for within design guidelines as recommended by Thiele-Streamfeeder.

To insure proper machine operation make sure that all the safety devices are installed properly and functioning. If the feeder has the media sensor on the side guides insure that these are properly installed. Do not attempt to defeat a safety interlock or safety feature.

Danger

Equipment interior contains incoming 115 or 230VAC electrical power. Bodily contact with these high voltages can cause electrocution, which can result in serious injury or death.

SPECIFICATIONS

Maximum Product Size..... 9.25 W x 6 L in (235 x 152 mm)

Minimum Material Size..... 2.125 in. W x 2.25 in. L (54 mm x 57 mm)

Min/Max Product Thickness.... .003 in to .250 in. (.076 mm - 6.35 mm)

Belt Speed..... 4800 in/min (122 meters)

Electrical Requirements..... 115vac, 60Hz, 1A

Weight..... 19 lbs. (8.6kg)

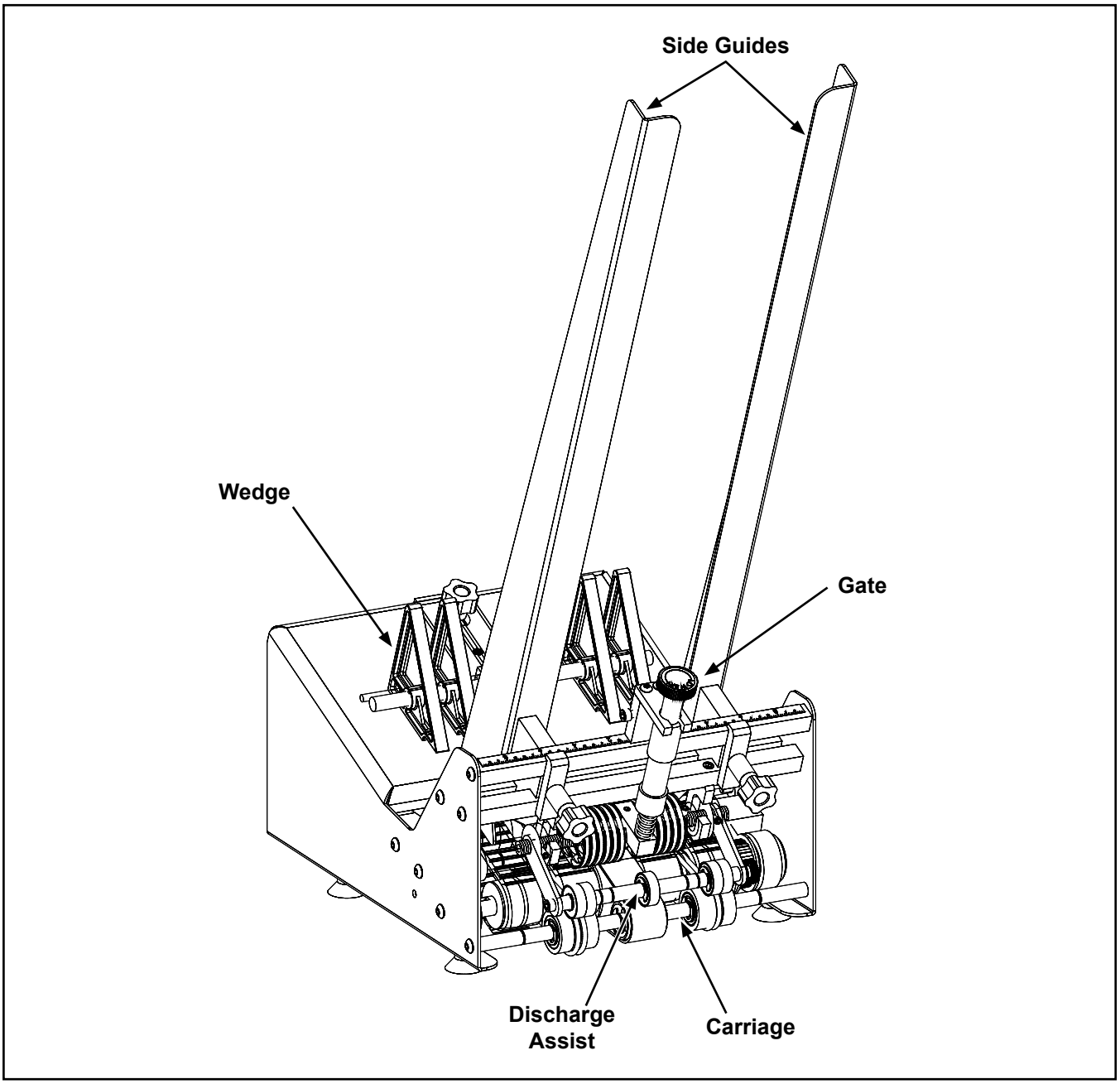
1 About the Machine

Features

The V-900IJ is designed for continuous feed of products on host bases including inkjet systems, tabbers, and more.

Review the main assemblies diagram below to become familiar with names and locations of feeder parts and adjustments.

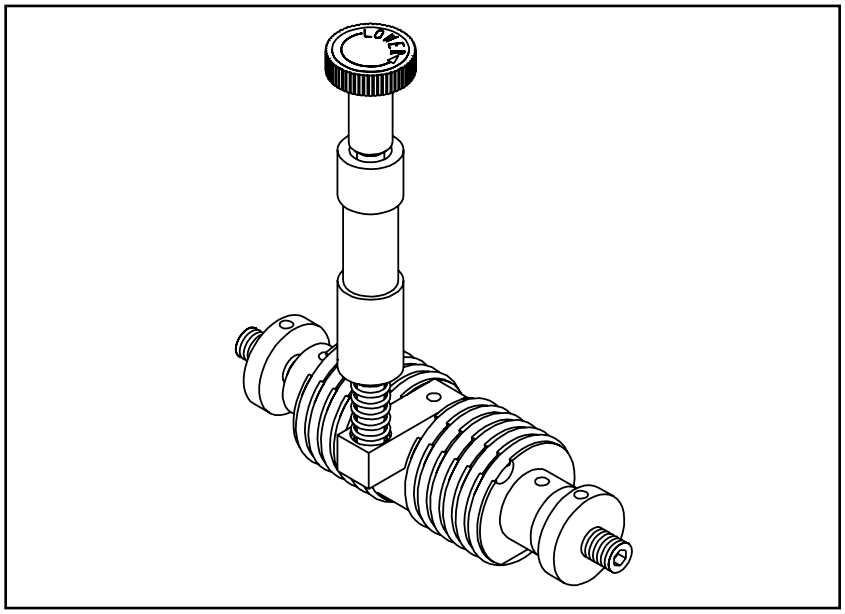
Main Assemblies



Main Assemblies Feature Descriptions

Feature	Description
Gate assembly and adjustment	Mounted on a gate plate directly above the feed belts, this device provides a curvature to help preshingle stacked product. Adjustment knob allows you to set downward pressure. When properly adjusted, a one-thickness gap is created to help singulate product.
Carriage	Holds a stack of product to be fed and helps keep it straight for proper entry through the gate assembly area. Adjustment knob allows you to move the side guides equally or offset for different size products.
Discharge Assist	This series of rollers provides a varying pressure on top of product to force it down on the discharge belt, helping to singulate product after it exits the gate assembly area.
Side guides and adjustments	Single knob adjust (one on each side) allows lateral adjustment from each side for different size product.
Wedge and adjustments	Lifts the product to keep it off the table top, reduces excessive contact with the feed belts, and helps push the product 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.

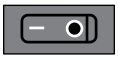
One of the design features that makes the V-900IJ unique is a part called the *gate assembly*. This patented device is the main reason the feeder can separate, singulate, and feed individual sheets with accuracy and reliability — even at high speeds. A single-knob adjustment allows you to easily setup the feeder for many different types of material.



Gate Assembly

Controls and Sensors

Read the descriptions below to become familiar with the controls and sensors.

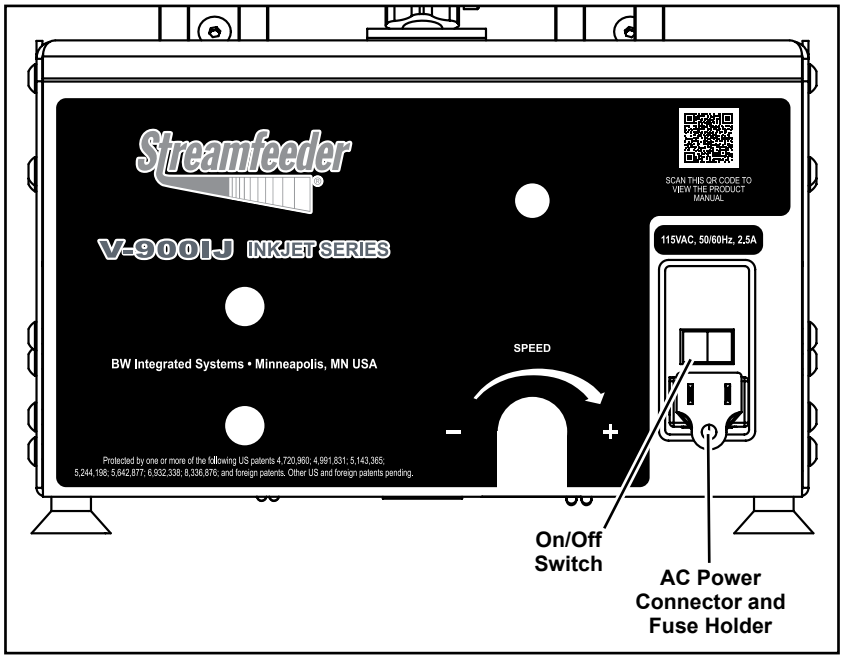


ON/OFF SWITCH. This rocker switch determines whether AC power to the feeder is “On” or “Off”. Push the horizontal line (—) to turn “On” and push the circle (**O**) to turn “Off”. It is located at the rear of the feeder.

Connectors and Cables

Read the descriptions below to become familiar with the controls and sensors.

AC POWER INLET/FUSE. This 3-prong connector receives incoming AC power from the designated power source. One end of AC power cord plugs into power inlet (rear of machine), while the other plugs into a three-prong grounded and fused outlet.



Feeder (Rear)

2 Installing the Machine

This section provides information on installing the V-900IJ 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."*

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.

Vacuum Base Installation for Shuttle Feed Bases

Installation of the V-900IJ 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 shuttle feeder 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

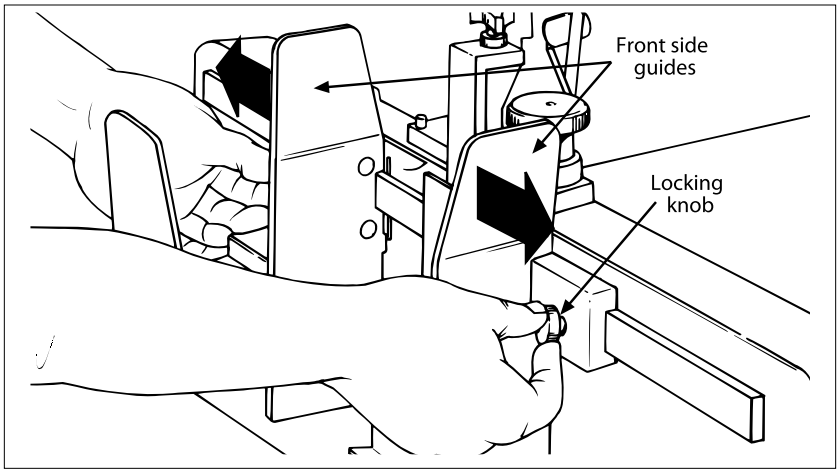
5: Initial positioning of feeder

6: Providing AC power to feeder

7: Checking product discharge from feeder

STEP 1: Repositioning Front Side Guides

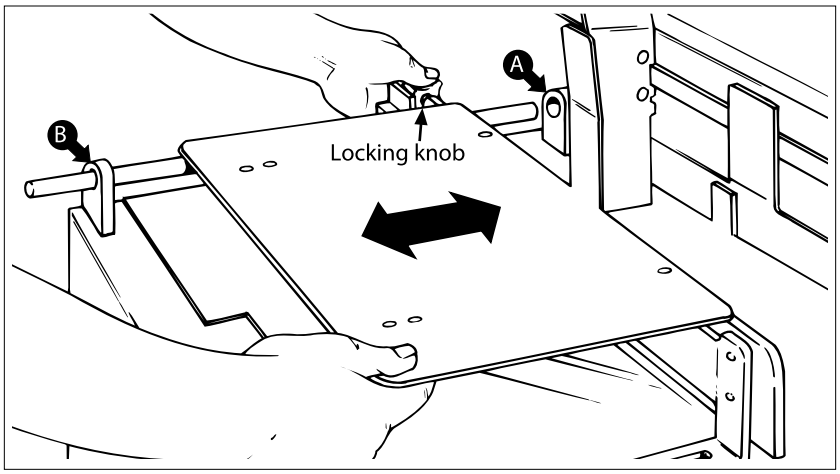
1. Loosen locking knobs at both side guides.
2. Slide each side guide to the outermost position. Do not lock in place.



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.
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.



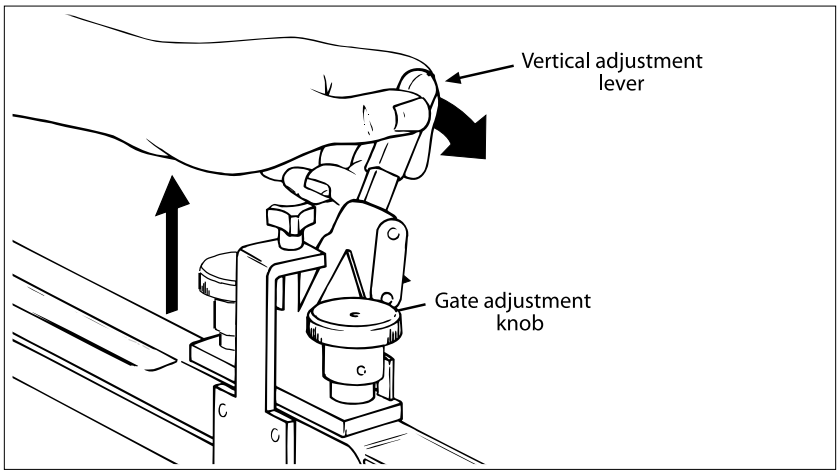
Back Jogging Plate/Back Hopper Guide Removal

STEP 3:
Raising Hopping Rollers

1. Locate the gate adjustment knobs 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.

NOTE

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.

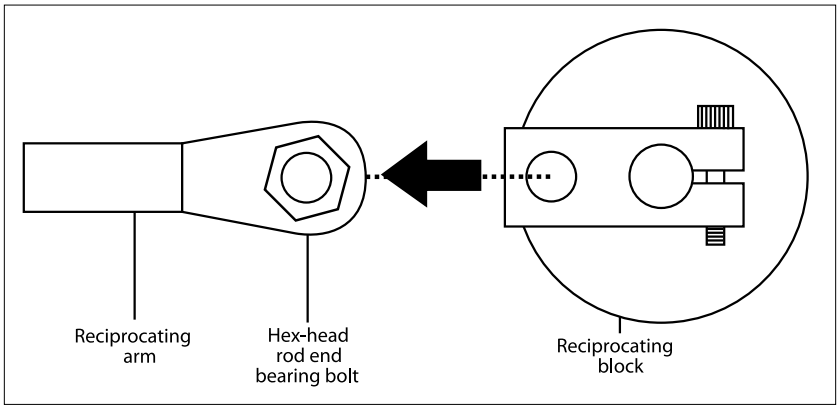


Using the Adjustments to Raise Hopping Rollers

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).

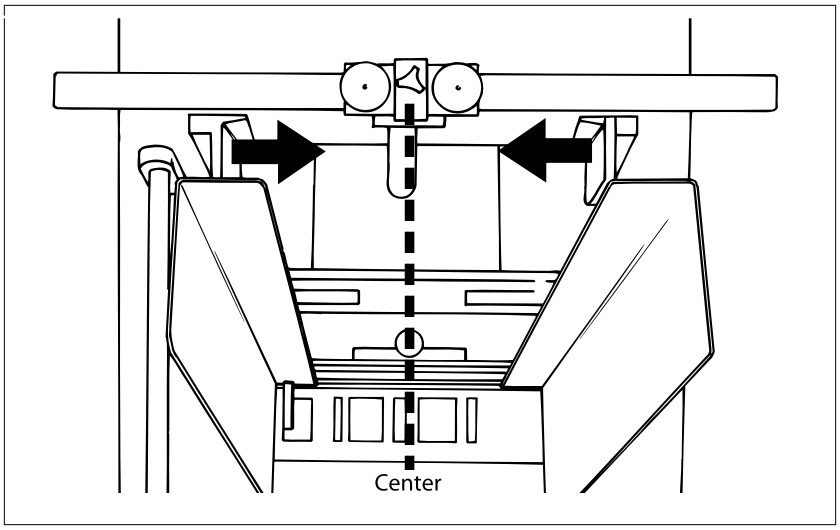
1. Remove side access panel from vacuum base enclosure.
2. Locate the reciprocating arm and reciprocating block directly beneath the underside of shuttle.
3. Using a box wrench, remove the hex-head rod end bearing bolt holding the reciprocating arm to the reciprocating block.
4. Once the bearing bolt 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).



Disabling the Shuttle from Inside the Access Panel

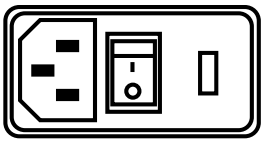
STEP 5: Initial Positioning of Feeder

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.
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.



Positioning the Feeder on the Vacuum Base

STEP 6: Providing AC Power to Feeder



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.

IMPORTANT

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

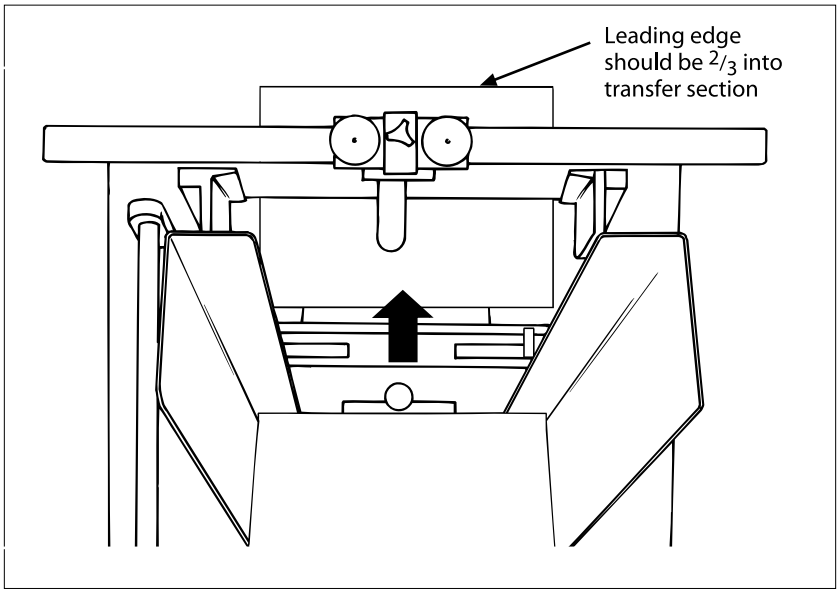
STEP 7: Checking Product Discharge from Feeder

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 product 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 product moves into the transfer section of the vacuum base unobstructed.

IMPORTANT

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



Checking for Proper Product Discharge from Feeder to Vacuum Base

4. Check to make sure the product 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 the inserter from the electrical power source. Failure to do so can expose you to a potential start-up, and therefore moving parts which can cause serious injury. In steps 1–3, do the same for the feeder.

Do not attempt to make any adjustments while the feeder(s) and inserter 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 Feeder is installed on the inserter, 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 inserter. *You will have to perform this procedure for material that you plan to feed.*

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

1: Gate assembly adjustment

2: Side guides setting

3: Wedge setting

STEP 1: Gate Assembly Adjustment

NOTE

Hopper refers to the space where the material is stacked (made up of the side guides).

NOTE

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

IMPORTANT

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

Review

The gate assembly provides the curvature to help preshingle material and provides the proper gap to help the feed belts pull material through the gate assembly area — one at a time. The downward pressure (or weight) of the stack in the hopper will provide the force to help push the material against the curvature of the gate assembly, and help it contact the feed belts. This preshingling will allow the gate assembly to separate (and singulate) material as it moves toward the gap.

To achieve the optimum separation, you have to use the adjustment knob to either increase (clockwise) or decrease (counter-clockwise) the gap between gate assembly and the feed belts. Depending on the characteristics of the material you are using, you may have to change the gate assembly from the factory-set *high* spring tension to a *low* spring tension. See “Changing from Factory Set High-Tension to Low-Tension”.

Objective

Adjust the gate assembly for minimum gap, with minimum pressure on the material. Your objective is to adjust the clearance so that a single piece of material passes without resistance. The optimum setting should be a gap adjustment of 1.5 thickness of material.

STEP 1: Gate Assembly Adjustment (continued)

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

If bottom piece of 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.

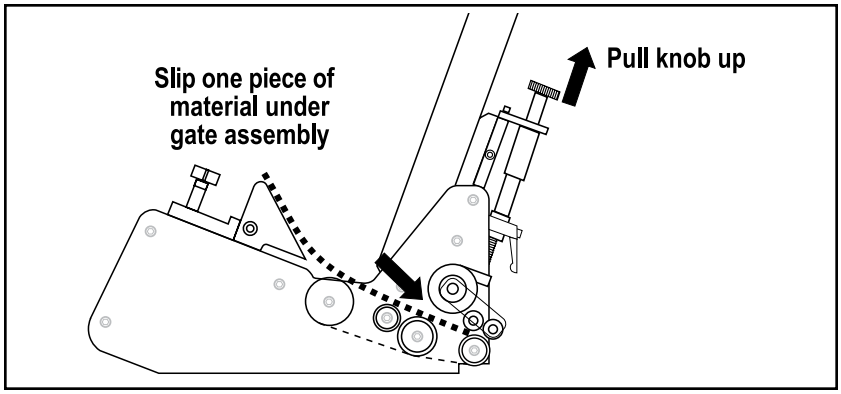
TIP

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

Procedure

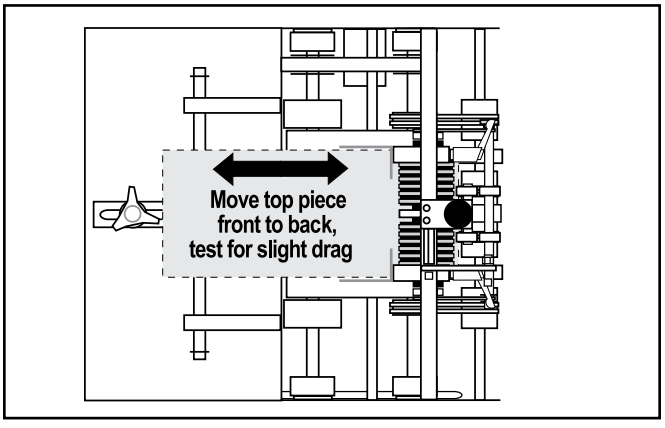
To adjust the gate assembly for proper gap,:

1. Slide one piece of material under the gate assembly. It may be necessary to pull up on the adjustment knob to allow the piece to be inserted.

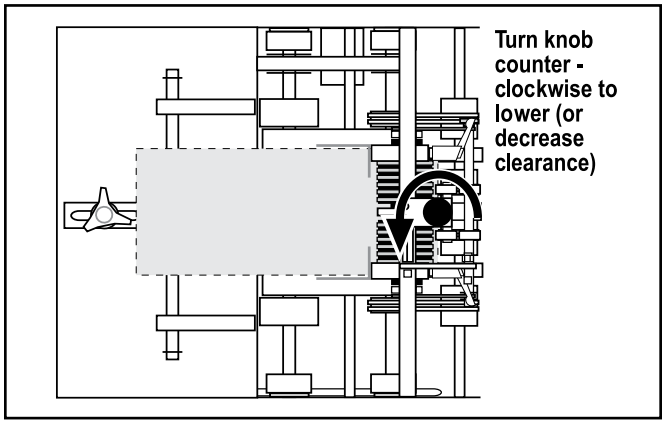


Lifting Gate Assembly Upward to Insert Material

2. Test the piece for clearance. Grasp the envelope 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 envelope.
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.



Using Two Pieces of Material to Set Gap



Adjusting Gate Assembly for Correct Gap

STEP 1: Gate Assembly Adjustment (continued)

NOTE

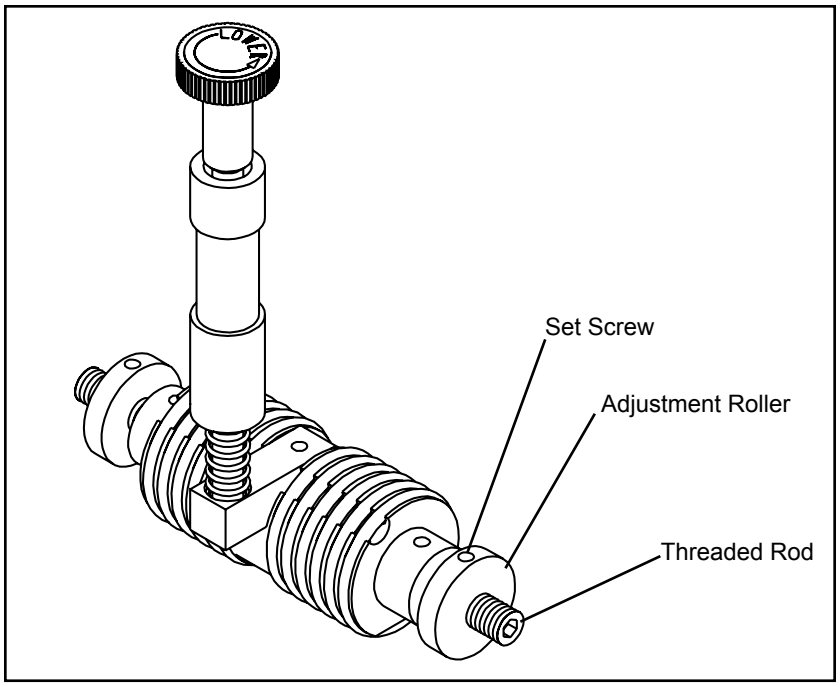
When feeding product with varying thickness throughout, it may be necessary to turn both adjustment rollers 1-2 ***full turns*** *counterclockwise to compensate for the differential thickness. This procedure allows the gate horizon to "float."*

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

1. Repeat material drag test.
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 "How to Operate").

IMPORTANT

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



Horizon Adjustment Mechanism

Changing From Factory Set High-Tension to Low-Tension

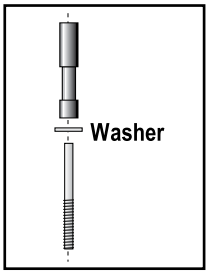
Excessive lowering of the gate assembly can damage material lead and/or lead to premature wear of the O-rings or feed belts.

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 cylinder reversible can provide. To increase tension even further, place a high-tension washer between the cylinder and spring.



The Reliant Inserter Feeder is shipped with a high-tension spring in the gate assembly. This works well for most materials, allows for tall stack height, and helps provide the best performance in preventing doubles. However, 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).

If you are feeding a material of irregular thickness, you should change to low-tension. This provides the following benefits:

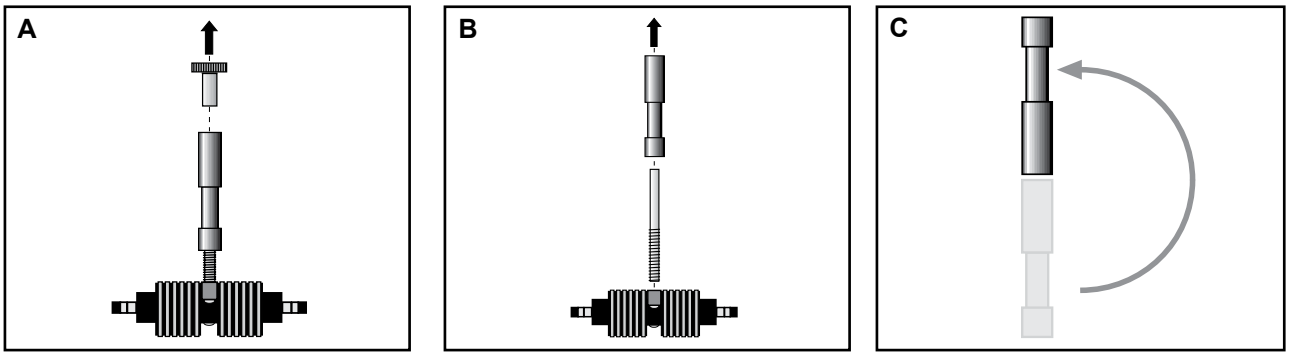
1) allows the gate assembly to adjust to the irregular thicknesses.
2) prevents marking on the material by the gate assembly.
3) prevents peeling back the top sheet of a multi-page item.

Procedure

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

1. Move the feeder back from the gate plate to allow working clearance. To do so, loosen the two T-handle screws from underside of feeder. *You can save much realignment time if you mark the current position on the back deck plate before moving.*
2. 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.
3. Remove the adjustment knob by turning counter-clockwise (Figure A). Then lift the cylinder off of top of spring (Figure B).
4. Turn the cylinder around so that the cylinder collar faces up (Figure C). Then place the cylinder on top of the spring.
5. Replace the adjustment knob (make about 8 revolutions of the knob before reinstalling gate assembly on gate plate).
6. Return feeder to original position marked on back deck plate and tighten T-handle screws.

Adjusting Gate Assembly for Low-Tension



STEP 2:
Side Guides Setting

Review

The side guides hold the stack of material being fed, and guide the material through the feeder in a straight line of movement without horizontal drift. The side guides can be adjusted to accommodate different sizes of material.

Objective

Adjust the side guides so that the material stack maintains uniformity from top to bottom, with no drifting or binding. Adjustments are made *horizontally only*.

For adjustment, make sure the space between the side guides can accommodate the size of the material being fed. Consider the following as you adjust the guides horizontally:

- Initial starting point should always be that each guide is of equal distance from the center point of the machine.
- Each edge of the material should rest equally on feed belts at either side of gate assembly. *However, there can be certain instances where guides do not need to be centered due to material characteristics.*
- Adjust both side guides to be as close as possible to either sides of the material, without causing binding, curling of edges, or resistance to movement.

Procedure

Adjust each side guide for proper horizontal spacing:

1. With a small stack of material in the hopper and centered in front of the gate, start by loosening each side guide wing adjuster (counter-clockwise). This will allow you to move each side guide as needed.
2. Grasp the lower part of each guide and slide to the recommended distance from the material: 1/16 in. (1.6 mm) from each edge, 1/8 in. (3.1 mm) overall. Tighten each wing adjuster after you establish proper position for each guide.
3. Check final clearance by moving the stack of material up and down between the side guides.

TIP

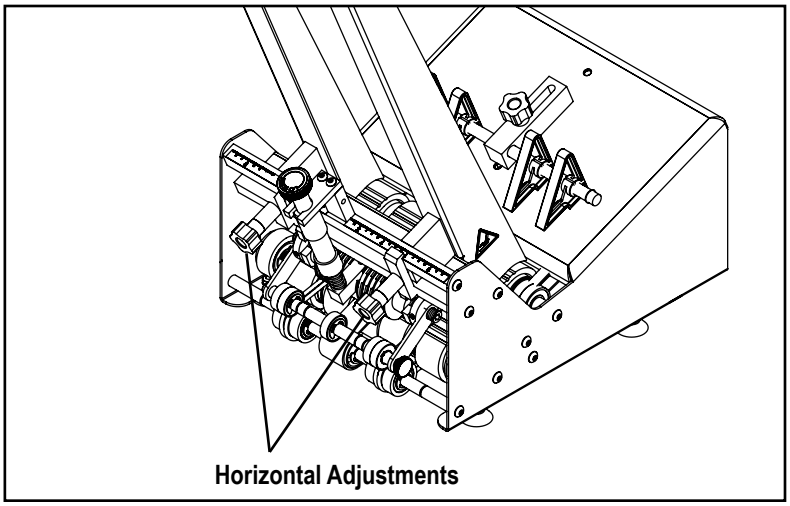
A good "rule-of-thumb" measurement to use is about 1/16 in. (1.6 mm) between material edge and side guide (1/8 in. or 3.1 mm overall).

TIP

To help ensure the stack has even edges from top to bottom, "jog" each handful of material on a flat surface before placing in hopper.

TIP

Try to establish a "sweet spot" in stack height whereby you can stack the maximum amount of material without compromising performance. A stack too high may cause double feeds; a stack too low may cause slipping.



Adjusting Side Guides for Clearance

STEP 3: Wedge Setting

NOTE

Keep in mind that the 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.

TIP

There are a number of feeding problems which can be solved by simply adjusting the 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.

NOTE

For more information about optional wedges and their use with various materials, see "Additional Wedges".

Review

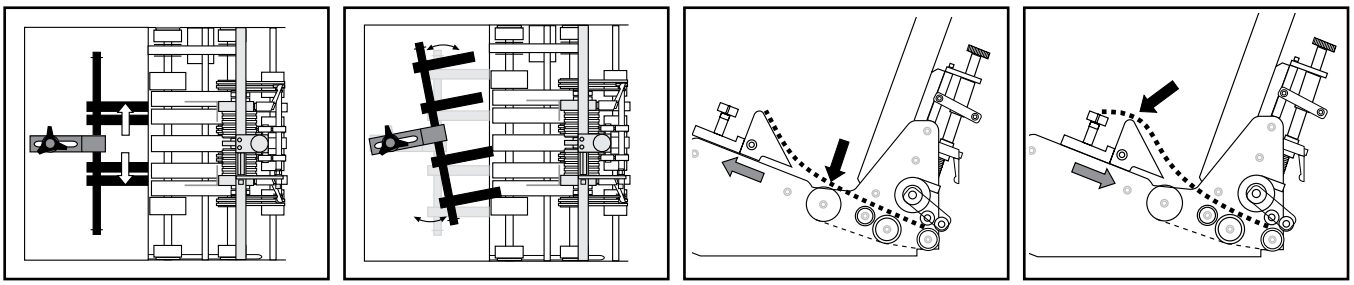
The wedge provides proper lift to the material to help keep it off the table top and feed belts, and it creates the force necessary to push material against the gate assembly. By adjusting it back and forth from the gate assembly or pivoting side to side, you can create the lift and force necessary to preshingle material against the curvature of the gate assembly. Also, it keeps other sheets off the feed belts until proper separation of the bottom sheet at the gate assembly has occurred.

Here are some general guidelines that should help you determine how the wedge should be positioned for your particular material:

- *Moving the individual triangle wedges to the outside* of the wedge shaft (Figure A) will create a bow in the center. The bow will stiffen the material to promote better singulation of thinner material.
- *Pivoting the wedge from its perpendicular to the gate assembly* (Figure B) will increase or decrease the amount of drag or contact (or traction) on the feed belts for a given side. This can also be used to control twisting or skewing of material as it leaves the gate assembly area.
- *If the wedge is positioned too far backward* from the gate assembly (Figure C), then the belts are driving the material before the bottom sheet has separated and left the gate assembly area. This pushes the gate assembly up, creating more pressure on the material, O-rings, and feed belts. The result can be premature buildup of ink or varnish on the belt surfaces. It can also cause more than one piece of material at a time to be forced under the gate assembly, thus creating a double feed.

  By moving the wedge forward, only the bottom material can make contact with the belt surface. Slippage is reduced, minimizing buildup on the belt surface. Double feeding is also reduced.
- *If the wedge is positioned too far forward* to the gate assembly (Figure D), then a pinch point can be created between the top corner of the individual wedges and the material. Moving the wedge even closer towards the gate assembly can allow material to overhang the corner of the wedge, creating too much lift of the material off the feed belts.

Tips for Proper Wedge Adjustment

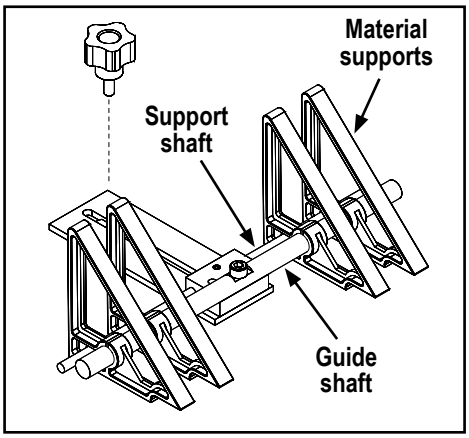


A B C D

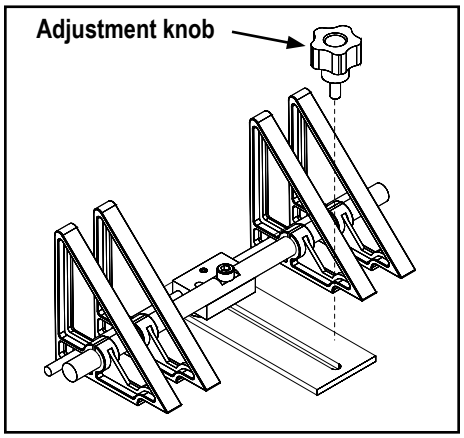
STEP 3: Wedge Setting (continued)

Objective

For products longer than 5 inches you will need to reconfigure the assembly of the wedge.



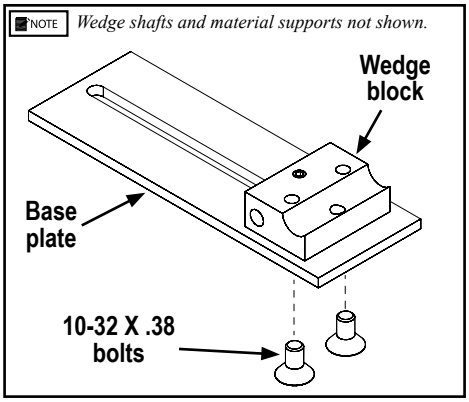
Standard set up

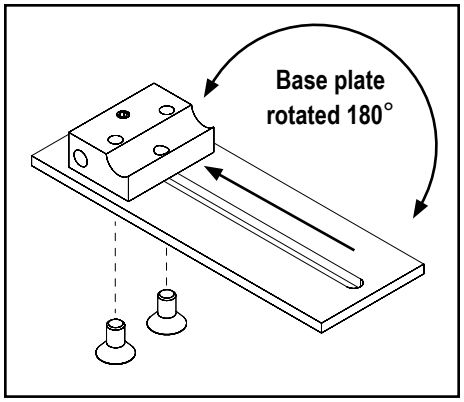


Large product setup

Procedure

1. Turn the adjustment knob counter-clockwise to loosen the wedge and remove from the feeder deck.
2. Remove the two 10-32 X .38 bolts and rotate base plate 180°. Move the wedge block as shown below and reinstall the two bolts.
3. Reinstall the wedge assembly on the feeder.





STEP 3: Wedge Setting (continued)

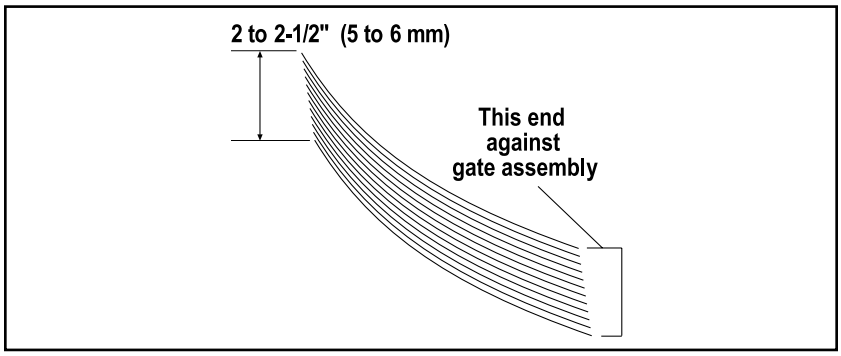
Objective

Adjust the wedge for proper support of the material off the table top, without creating any pinch or stress points.

Procedure

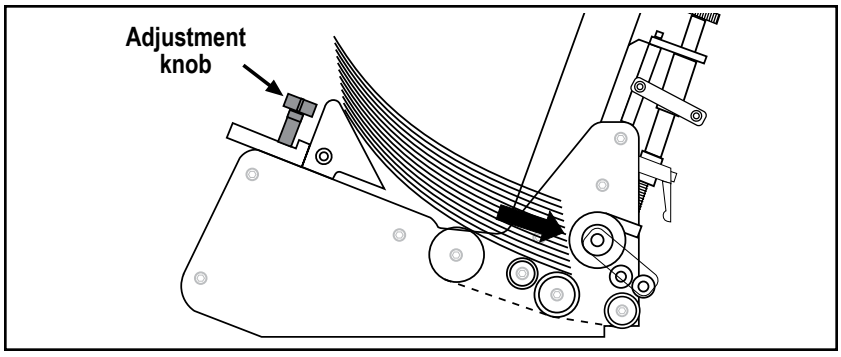
To adjust the wedge for initial proper positioning, follow these steps:

1. Grasp a handful of material, approximately 2 to 2-1/2 in. (5 to 6 cm) thick, and preshingle the edges with your thumb.



Preshingling a Small Stack of Material By Hand

2. Place the preshingled material in the hopper so that the edges rest against the curvature of the gate assembly.
3. Turn the adjustment knob counter-clockwise to loosen the wedge.



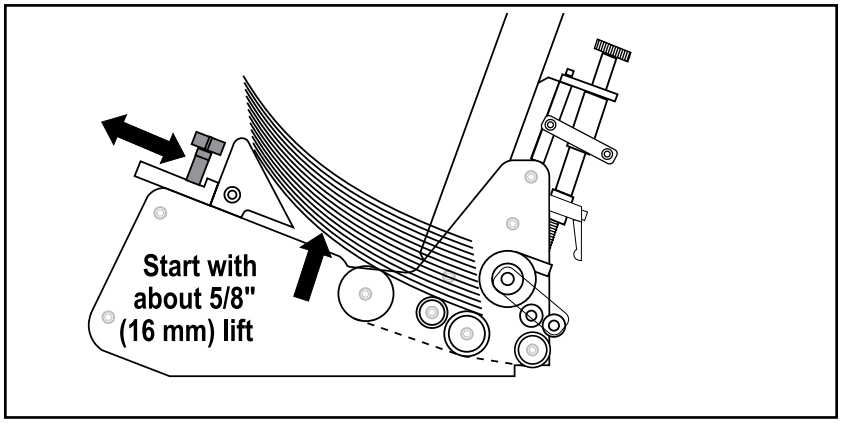
Positioning Material Prior to Loosening Wedge

NOTE

Moving the 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 wedge in is not effective, then an optional wedge may be required.

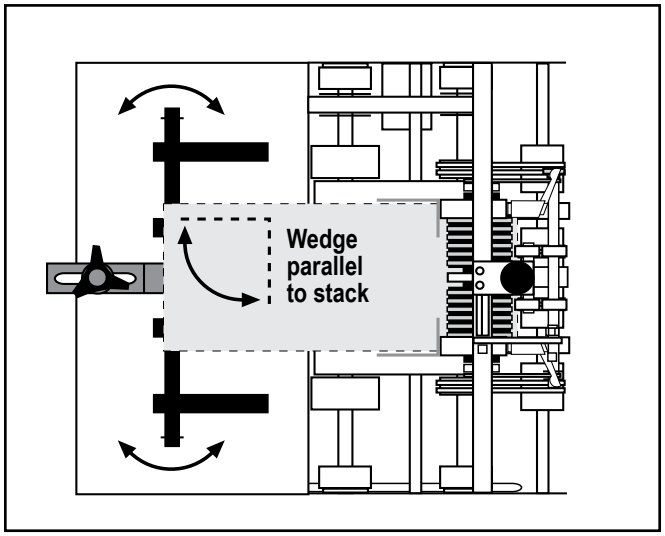
STEP 3: Wedge Setting (continued)

4. Move the wedge forwards and backwards until the bottom sheet is not touching the table top. A good starting point is to measure about 5/8 in. (16 mm) from the bottom sheet to front edge of table top. Then as you test, you can “fine tune” from this point.

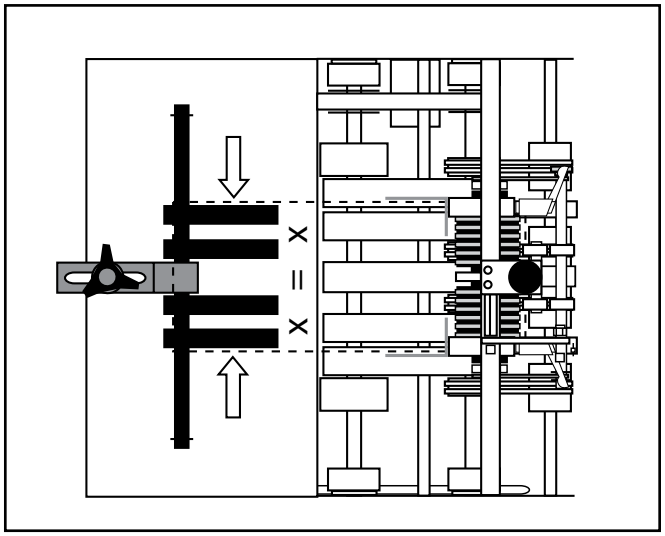


Adjusting Wedge for Proper Lift

5. Make sure the edge of the wedge assembly is parallel with the edge of the material stack (Figure 24). Adjust as required and then tighten knob.
6. Check that individual triangle wedges are evenly spaced to provide enough support to lift the material off the table top and feed belts, without any bowing or twisting.



Adjusting Wedge for Parallel



Evenly Adjusting Individual Wedges

4 How to Operate

Sequence of Operation

Follow these steps for successful power-up and operation.

STEP 1: Loading Material in the Hopper

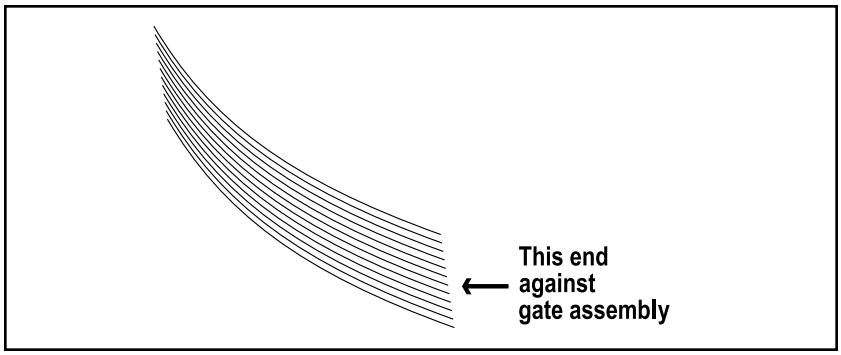
NOTE

Preshingling prevents multiple sheets from jamming under the gate assembly at start-up.

NOTE

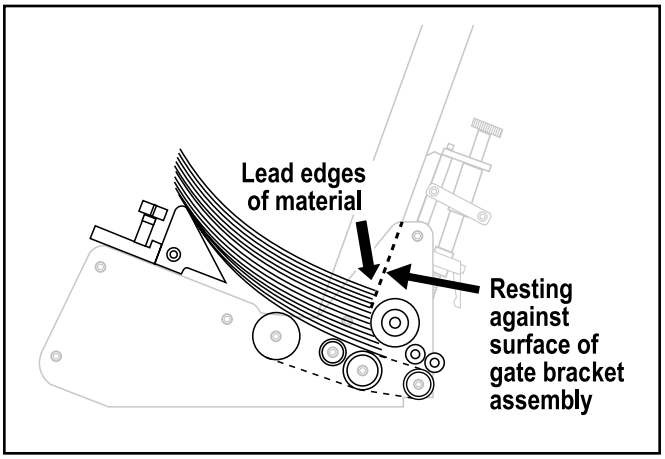
If you wish, loading of material can be accomplished from the front side of the inserter.

- Start by preshingling by hand a small stack of material so that it conforms to the curvature of the gate assembly.

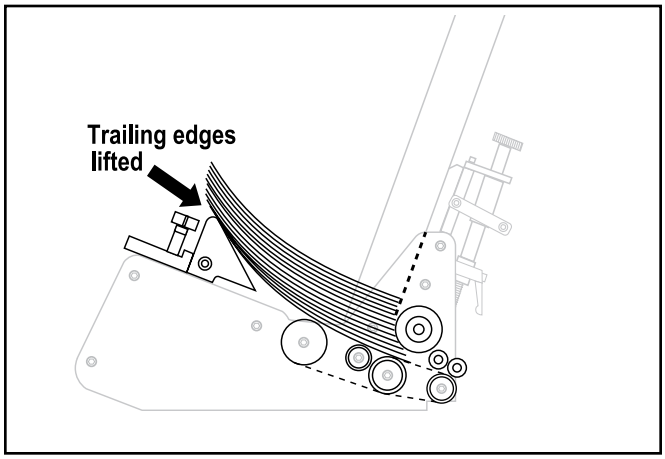


Preshingling of First Stack

- Push in gently to make sure lead edges touch the gate bracket assembly and front edges of the hopper guides (Figure A).
- At the 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 (Figure B).



A. Leading Edges Against Gate Bracket Assembly and Side Guides



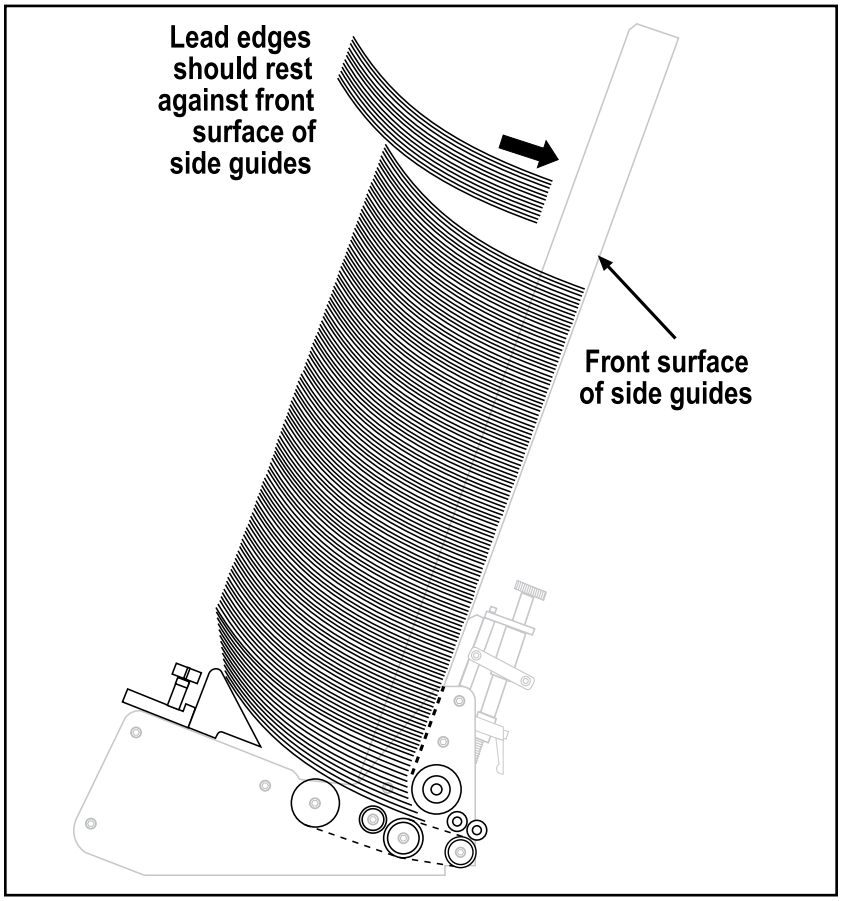
B. Trailing Edges Lifted by Wedge

STEP 2: Determining Stack Height

- 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 the effective range of height.
- Make sure the material is loaded in the hopper as straight as possible. Before adding to hopper, "jog" each hand-full 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.

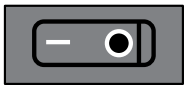
TIP

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



Adding More Material to Hopper

STEP 3: Powering On Feeder



- Turn the feeder power On by pushing the horizontal line (—) at the **Power** On/Off rocker switch.
- With power On, the feeder motor should immediately move the bottom sheet of material from the stack and through the gate assembly area to "stage" the first piece. As the photo sensor "sees" the leading edge, the feeder motor should turn Off.
- Check the leading edge of bottom sheet. It should be in-line with the front hopper plate and ready for cycling.

5 Troubleshooting

The following are quick solutions to the more common day-to-day problems you may encounter.

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 cord loose or not plugged into AC power inlet at rear of feeder.	Check and secure cord at AC power inlet at rear of feeder.
Feeding doubles	1. Gate assembly improperly adjusted (possibly more than one sheet thickness).	Review gate assembly adjustment in Section 3 "Preparing for Operation".
	2. Wedge improperly adjusted.	Review wedge adjustment in Section 3 "Preparing for Operation".
	3. Worn O-rings (or if applicable, angled wedge).	Rotate O-rings. If applicable, replace angled wedge (see Section 6 "Inspection and Care). 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 weight is too low when stack height is down, resulting in a reduction of down pressure.	Review photo sensor adjustment in Section 3 "Preparing for Operation".
	2. Product binds at side guides.	Review loading the material in Section 4 "How to Operate".
	3. Slippery feed belts due to buildup of glaze on belt surface.	Adjust side guides further apart to allow freedom of movement.
	4. Sheet adhesion or interlocking between bottom and next sheet.	Clean or replace belts.
	5. Gate assembly may be down too tight.	Review loading the material in Section 4 "How to Operate", or review wedge adjustment in Section 3 "Preparing for Operation". Review gate assembly adjustment in Section 3 "Preparing for Operation".

Troubleshooting (continued)

Problem	Cause	Solution
Feed belts are operating but material not feeding (cont)	6. Too much weight in hopper.	Remove material from stack. Test again.
	1. Exessive weight in hopper.	Reduce weight. Test again.
Feed belts not tracking on rollers	2. Excessive down pressure on gate assembly.	Rotate clockwise 1/8 turn to increase gap and manually test. Review gate assembly adjustment in Section 3 "Preparing for Operation".
	3. Off-centered product from center point of machine.	Review side guide setting in Section 3 "Preparing for Operation".
	4. Stack is bearing down on edge of belt.	Move stack away from belt, even if this causes stack to be aligned off-center from machine center line.
	5. Belt wear.	Review gate assembly adjustment in Section 3 "Preparing for Operation". See also Section 6 "Inspection and Care". 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 any of the following areas: • *Gate assembly* • *Wedge* • *Hold-down assembly*	1. Turn the power switch to "Off". 2. Remove jammed material. Attempt to determine the cause of the jam. 3. Verify each adjustment by reviewing Section 3 "Preparing for Operation".
Material skewing	1. Wedge not adjusted properly.	Review wedge adjustment in Section 3 **"**Preparing for Opertion".
	2. Hold down spring too tight or too loose.	Review hold-down spring installation in Section 2 "Installing the Machine".

6 Inspection and Care

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 start-up, and therefore moving parts which can cause serious injury.

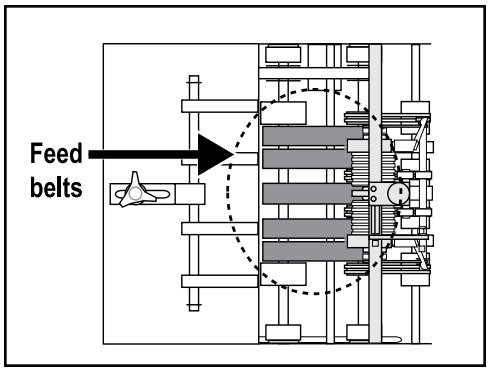
Do not attempt feeder installation while the inserter is running. Failure to do so can expose you to moving parts which can cause serious injury.

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

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

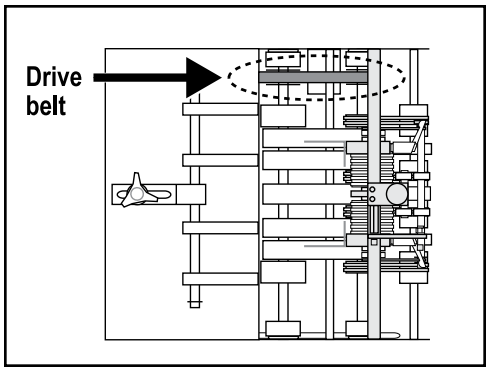


Inspecting Feed Belts

Checking for Feed Belt Wear

Check for visual signs of:

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



Inspecting Drive Belt

Checking for Drive Belt Wear

Check for visual signs of:

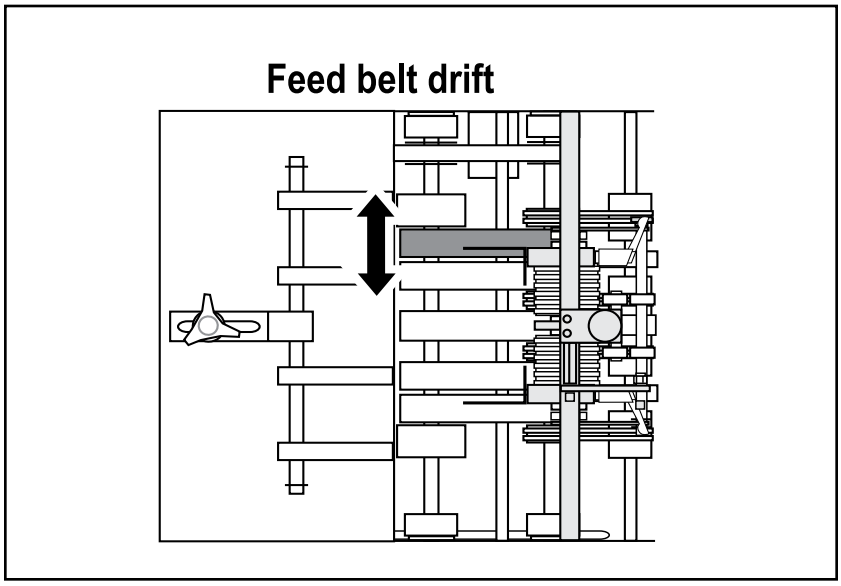
- Fraying. Replace as required.
- Missing teeth. Replace as required.
- Cracking. Replace as required.
- Paper residue buildup. Clean from belts, especially in grooves. For more information, see “Preventive Care”.

Visual Inspection (continued)

Ensuring Proper Feed Belt Tracking

Check for visual signs of:

- Stretching.
- Improper roller adjustment.

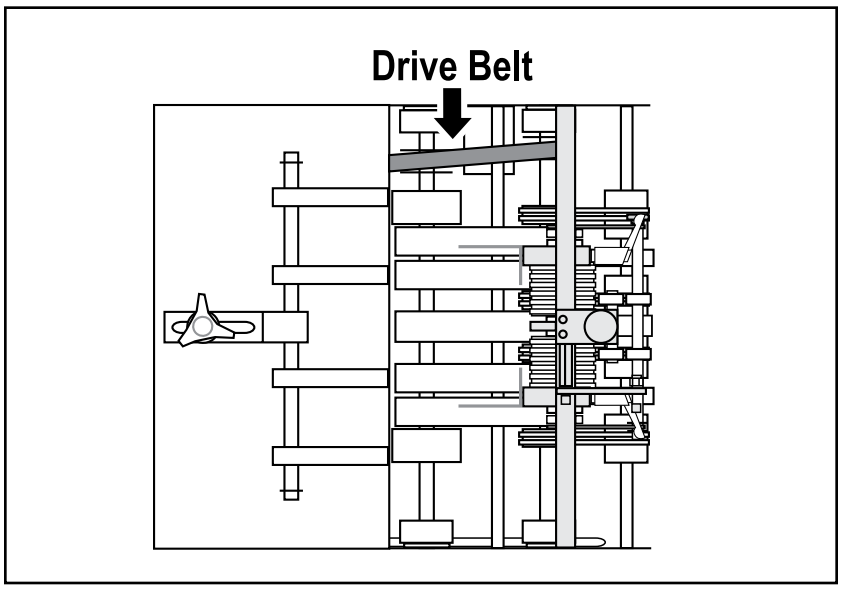


Ensuring Proper Feed Belt Tracking

Ensuring Proper Drive Belt Tracking

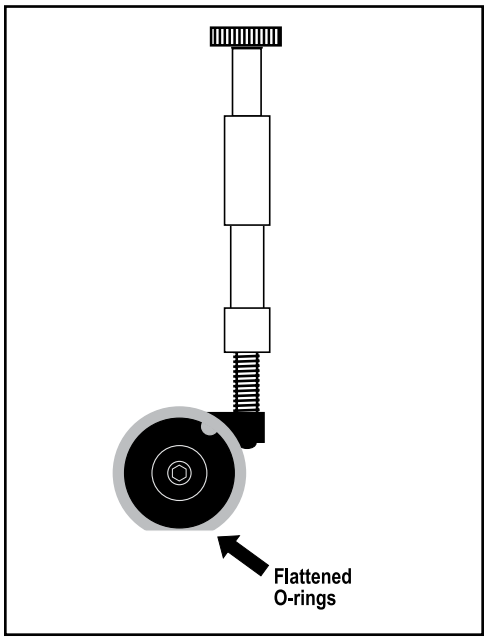
Check for visual signs of:

- Misaligned timing pulleys.



Ensuring Proper Drive Belt Tracking

Visual Inspection (continued)



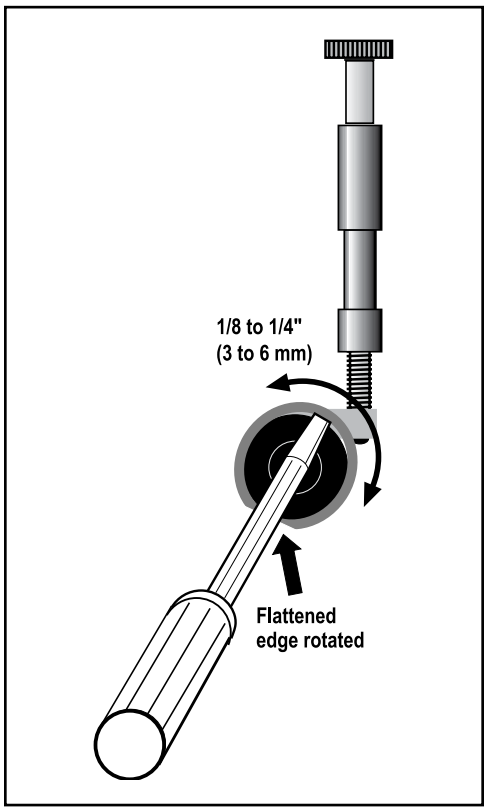
Checking O-Ring Gate for Wear

Checking for Gate Assembly Wear

Check for visual signs of wear:

- Flat areas along the O-rings.

For mor information see “Preventive Care”.



Adjusting Worn O-Rings

Adjusting Worn O-Rings

To adjust worn O-rings on Gate:

1. Turn Off feeder and remove power cord from outlet.
2. Move the feeder back from the gate plate to allow working clearance. *You can save much re-alignment time if you mark the current position on the back deck plate before moving.*
3. Remove gate assembly from gate bracket assembly.
4. 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 1/8 to 1/4 in. (3 to 6 mm).
5. Remove screwdriver and repeat for each ring as necessary.
6. Reinstall gate assembly and restore power.
7. Return feeder to original position marked on back deck plate. Restore power.

Preventive Care

Use only isopropyl alcohol (98% concentration). Other solvents can cause belts to wear prematurely, and even cause total breakdown of material.

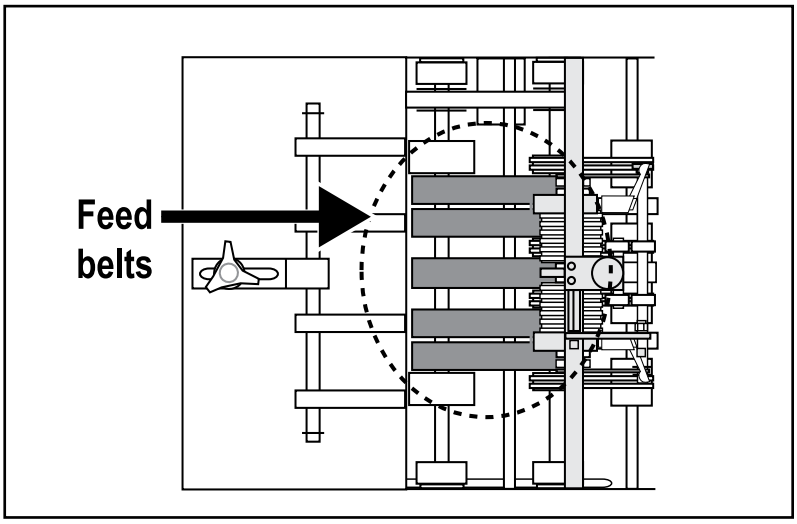
Cleaning schedule for various materials:

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

Cleaning Feed Belts

To clean feed belts:

1. Turn Off feeder and remove power cord from outlet.
2. Apply a small amount of isopropyl alcohol to a soft cloth.
3. Use your thumb or finger on the drive belt or one of the feed rollers to manually move feed belts. Start with one belt at a time (there are five total).
4. Carefully press the moistened area of the cloth to the belt. As you move 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. Restore power.



Cleaning Feed Belts

Preventive Care (continued)

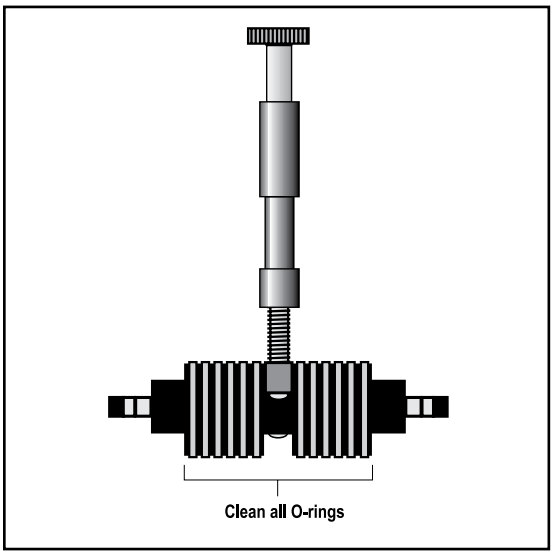
Use only isopropyl alcohol (98% concentration). Other solvents can cause belts to wear prematurely, and even cause total breakdown of material.

Cleaning schedule for various materials:
• *Typical: every month*
• *Dusty: after every shift*
• *High ink or varnish: 1 time per shift*

Cleaning Gate Assembly

To clean gate assemblies:

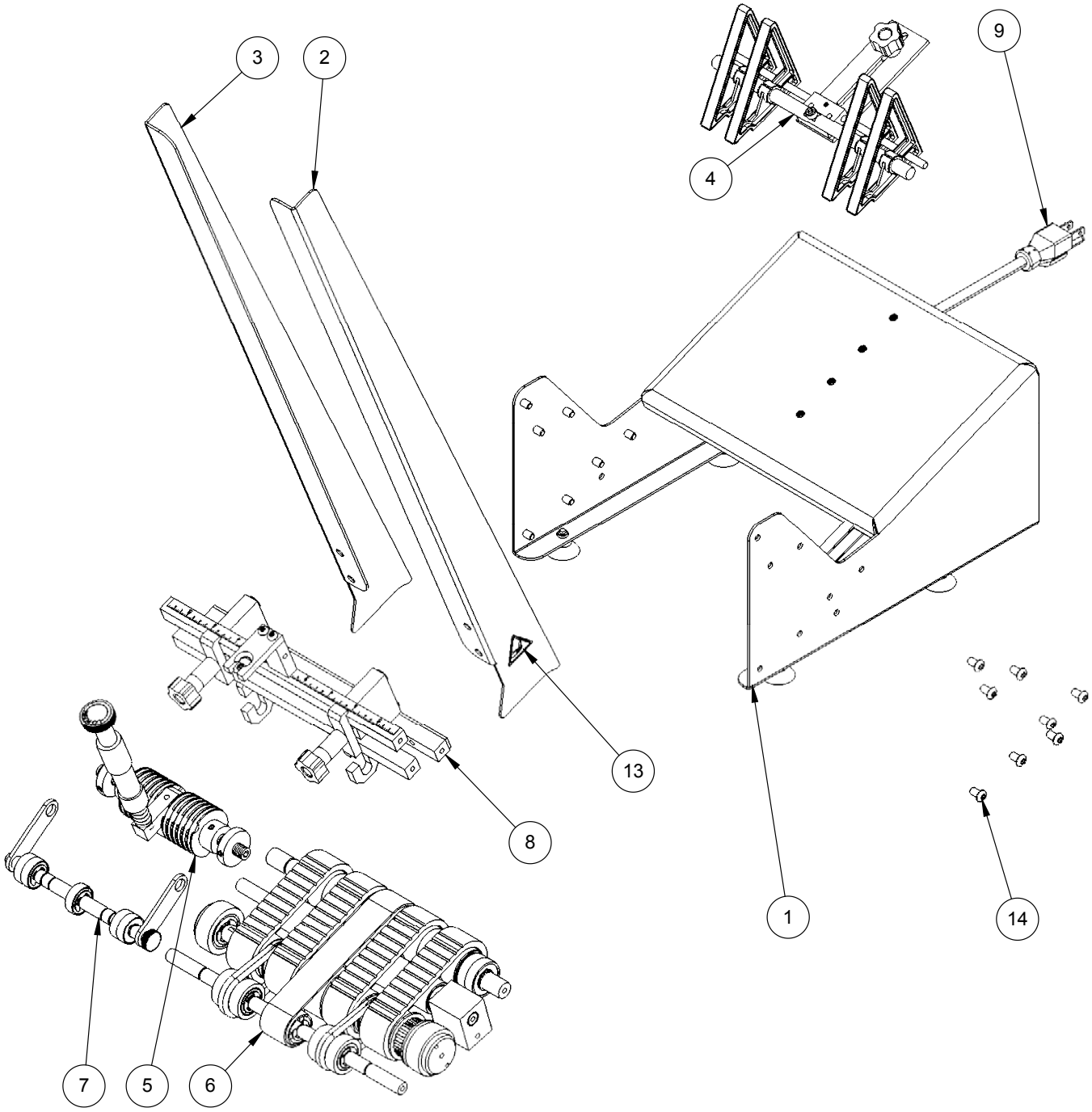
1. Turn Off feeder and remove power cord from outlet.
2. Move the feeder back from the gate plate to allow working clearance. *You can save much re-alignment time if you mark the current position on the back deck plate before moving.*
3. Remove gate assembly from gate bracket assembly.
4. Apply a small amount of isopropyl alcohol to a soft cloth.
5. Wipe across O-rings, first in one direction then the other.
6. Taking a dry portion of the cloth, go back and wipe all surfaces to ensure they are dried.
7. Return feeder to original position marked on back deck plate. Restore power.



Cleaning Standard O-Ring Gate

7 Mechanical Components

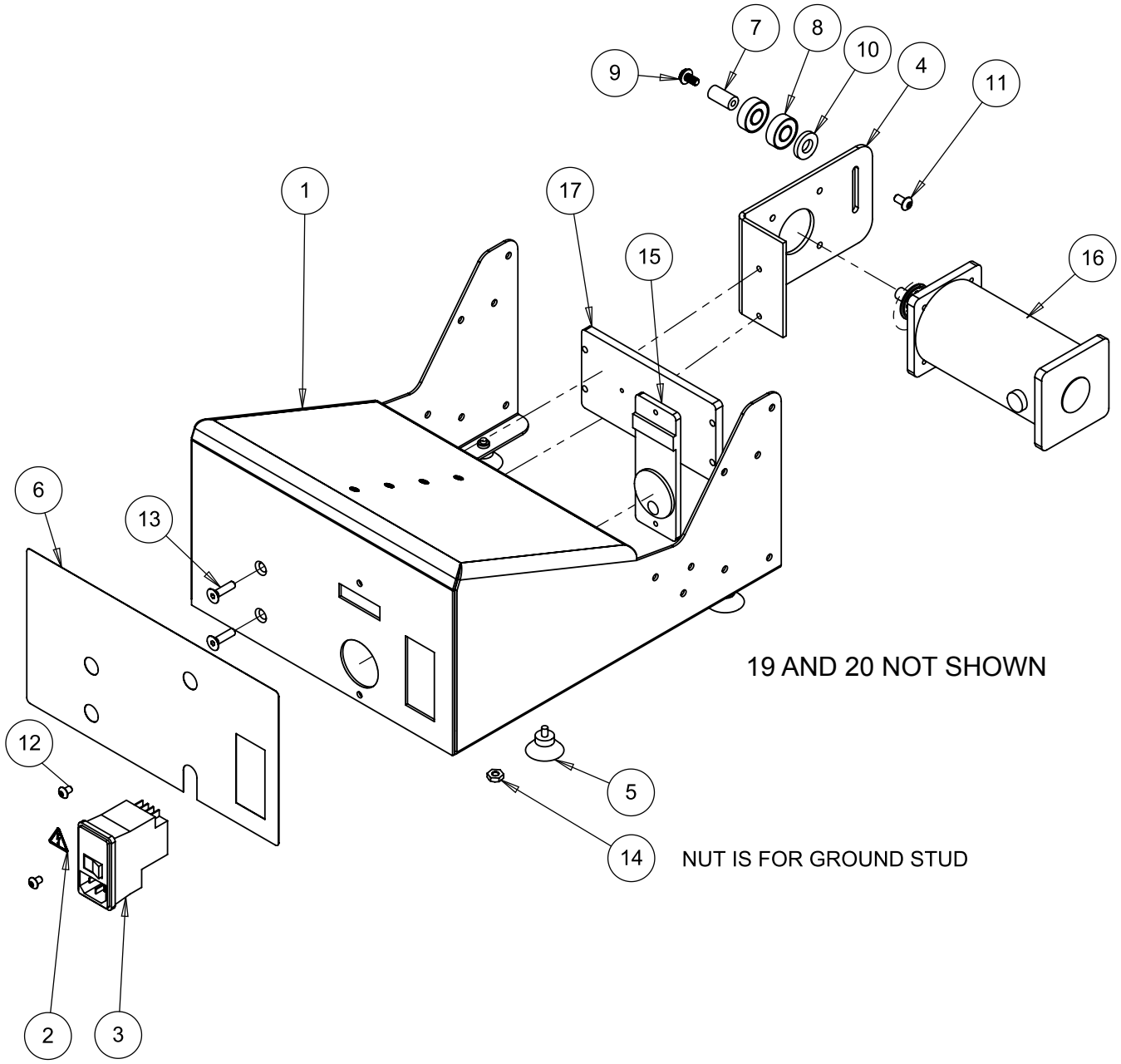
V-900IJ ASSEMBLIES
Assembly # 311-1773



V-900IJ ASSEMBLIES
Assembly # 311-1773

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	311-1775	ASSY BASE V-900IJ 115V
2	1	44846014	Guide, Left
3	1	44846013	Guide, Right
4	1	17451105	WEDGE ASSEMBLY
5	1	13511872	ASSY, STD O-RING GATE SDO
6	1	13511065	Assy, R1500Carriage
7	1	13511050	Assy, DschrAsst R1500
8	1	84611001	ASSY, GATE PLATE 2 KNOB V500
9	1	53500002	CORD, PWR 115 VAC IEC 3 PRGGND
14	15	102708B02	BHCS BLACK OXIDE 10-32 X .38

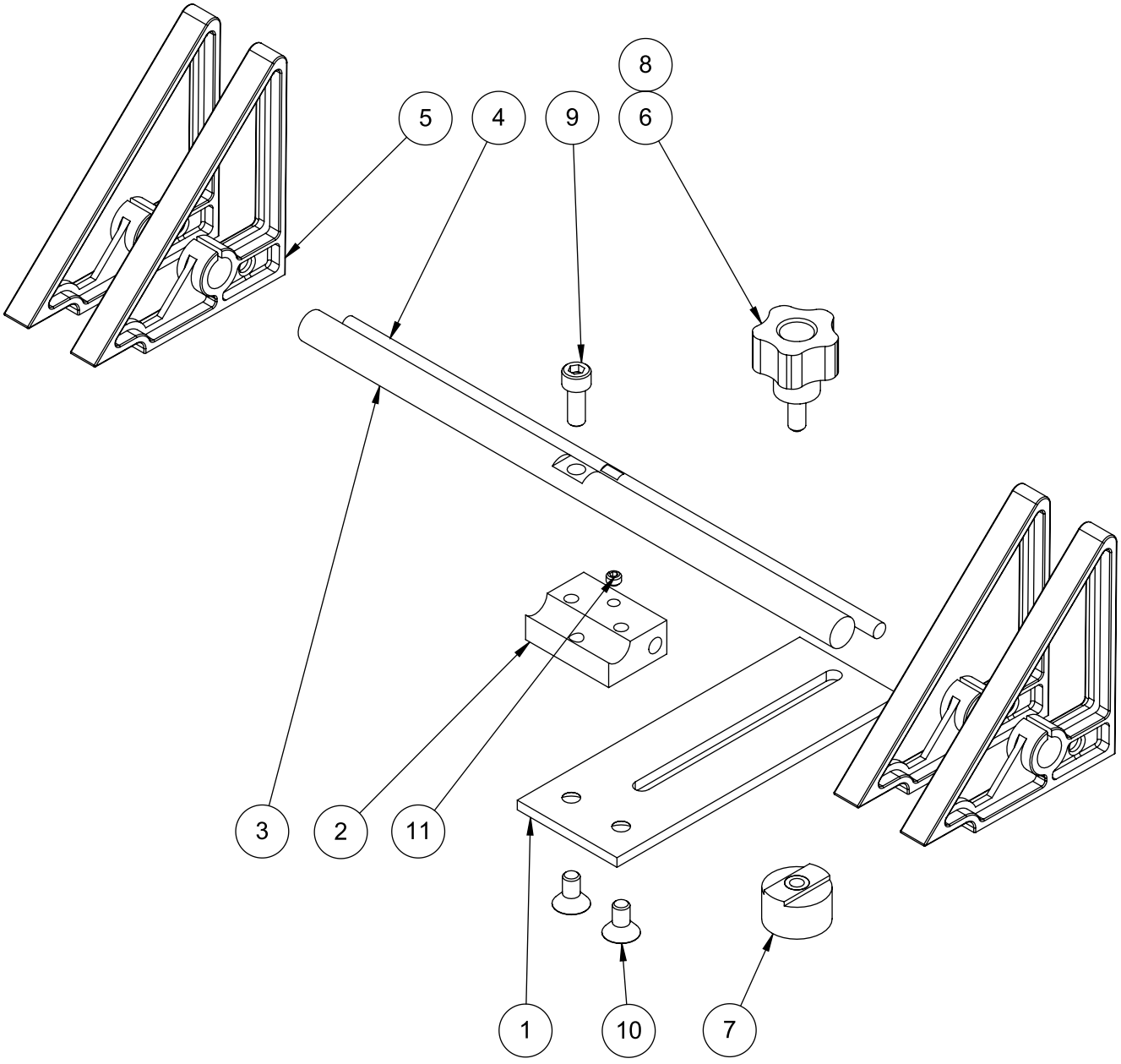
BASE ASSEMBLY
Assembly # 311-1775



BASE ASSEMBLY
Assembly # 311-1775

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	904646	SHELL R-1500 VAR-SPEED
2	1	900802	LABEL, ELECTRICAL SHOCK
3	1	44649034	MODULE, POWER ENTRY
4	1	905971	BRKT, MOTOR MOUNT V-900IJ
5	4	44846058	FOOT, SUCTION CUP
6	1	905973	GRAPHIC R1500 SERVO
7	1	904900	SHAFT .373 OD X 3/4 LG. #10-32
8	2	23500095	BEARING BALL R6 .375 BORE
9	1	00002300SF	SCREW, HWMSSL 10-32 X 3/8 GRN
10	1	119023B08	BEARING THRUST .378 X .75 X .125
11	1	102708B02	BHCS BLACK OXIDE 10-32 X .38
12	2	2210	BHCS BLACK OXIDE 8-32 X .25
13	2	102637B05	FHCS BLACK OXIDE 10-32 X .75
14	1	600623B04	10-32 KEP NUT
15	1	905969	PLATE, BACK PANEL V-900IJ
16	1	311-1780	ASSY, MOTOR 90VDC V-900IJ
17	1	905974	PLATE, MOUNT MOTOR CTRL
18	1	98005-001	POTENTIOMETER, 90V MOTOR CONTROLLER
19	1	905992	BELT, TMG 190XL037
20	1	903882	PULLEY, TIMING 11T 5/16 BORE

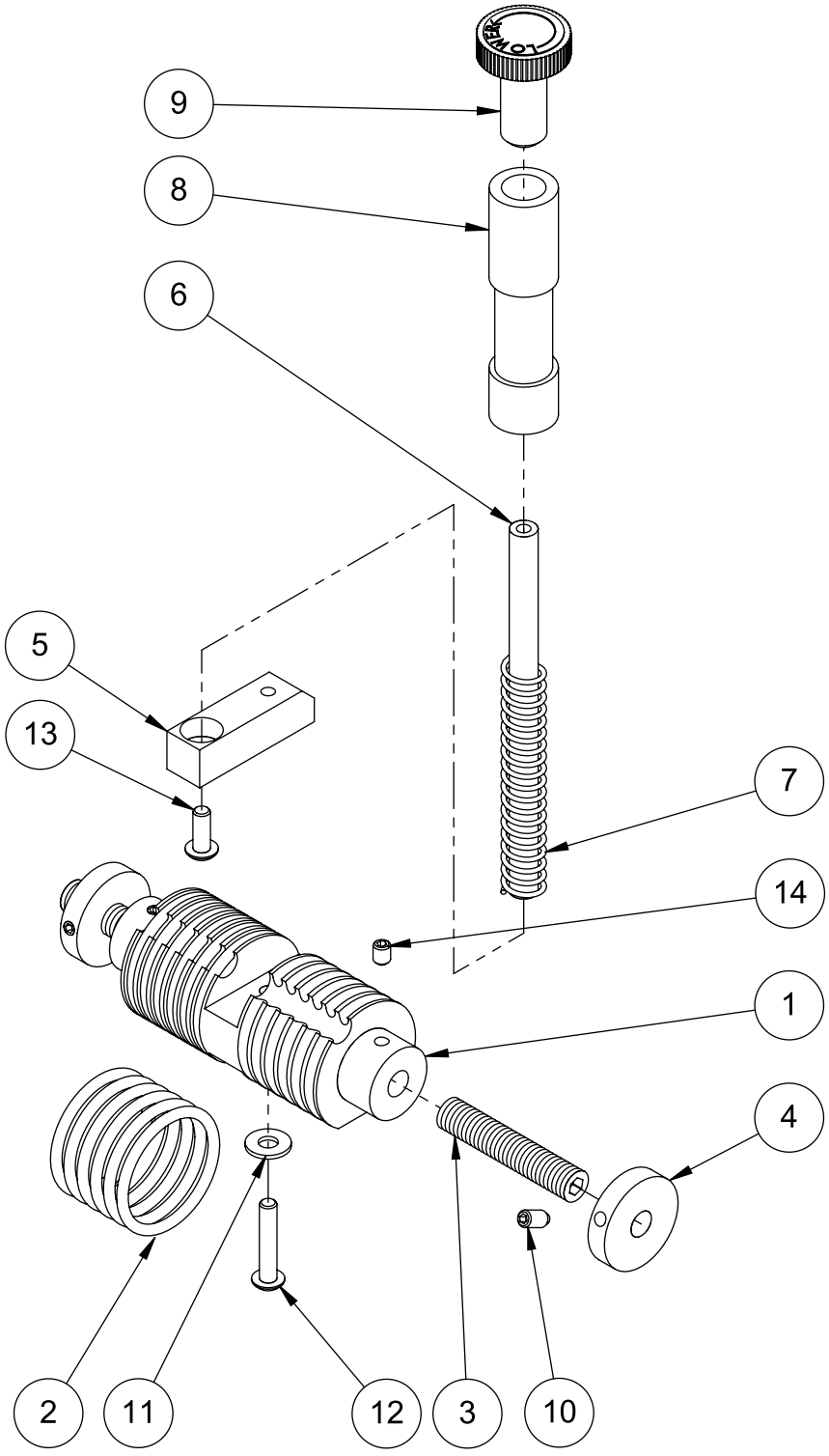
WEDGE ASSEMBLY
Assembly # 17451105



WEDGE ASSEMBLY
Assembly # 17451105

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	51745008	PLATE, WEDGE BASE
2	1	51745062	BLOCK, WEDGE
3	1	44633018	WEDGE GUIDE SHAFT
4	1	44759076	WEDGE SUPPORT SHAFT
5	4	44759086	MATERIAL SUPPORT
6	1	44963102	KNOB, 5 LOBE WITH 10-32 THREADED INSERT
7	1	44633016	ROUND T-NUT
8	1	102732B11	SSSCPPT BLACK OXIDE 10-32 X 1.00
9	1	102688B03	SHCS BLACK OXIDE 10-32 X .50
10	2	102637B02	FHCS BLACK OXIDE 10-32 X .38
11	1	102729B01	SSSCPPT BLACK OXIDE 8-32 X .12

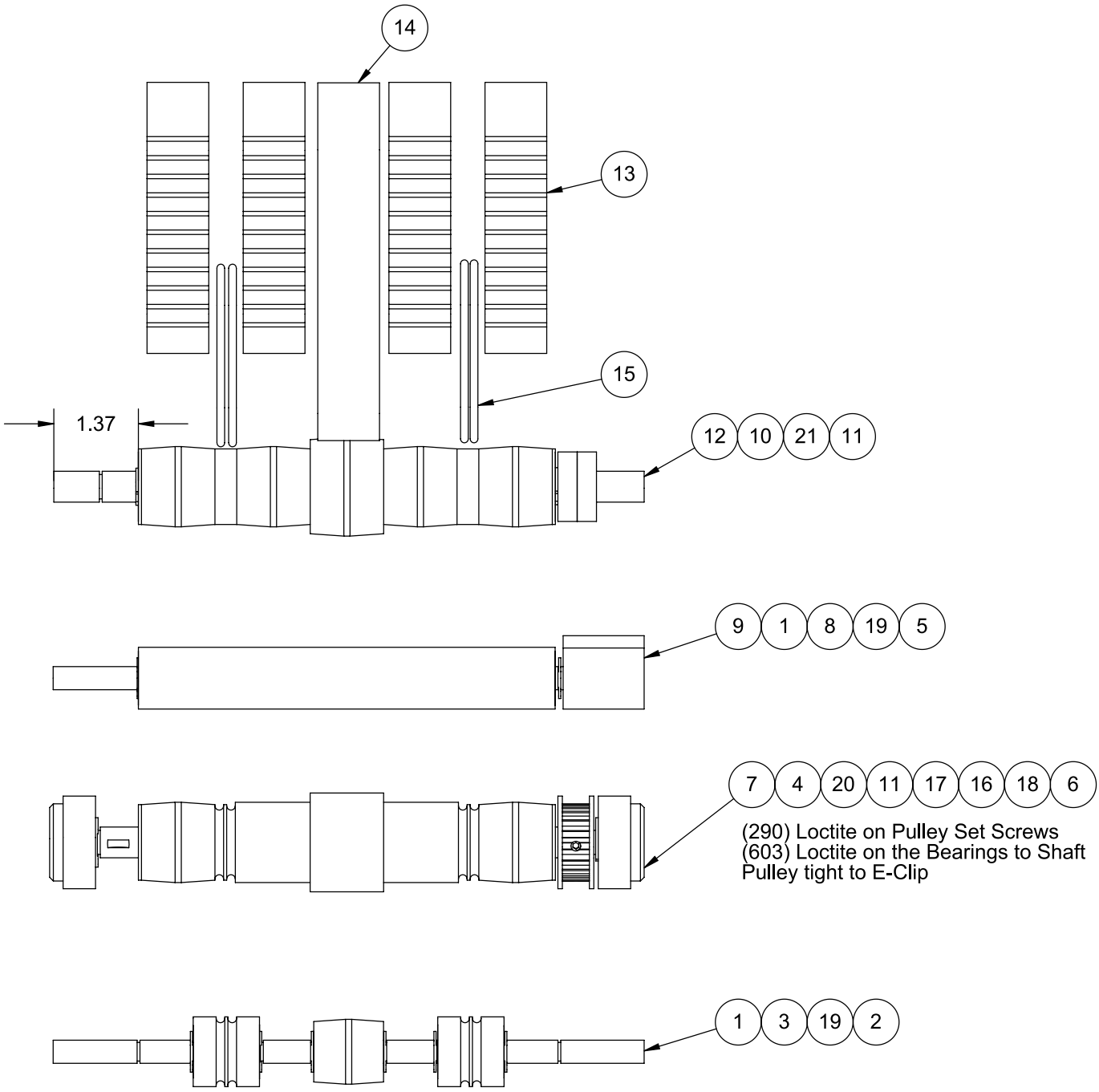
GATE ASSEMBLY
Assembly # 13511872



GATE ASSEMBLY
Assembly # 13511872

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	51101001	GATE CYLINDER
2	12	23500089	O-RING, STANDARD GATE
3	2	44872005	SCREW ADJUSTMENT
4	2	44872003	ROLLER
5	1	15000001	GATE LIFT SHAFT MOUNT
6	1	23560084	GATE LIFT SHAFT
7	1	23500083	GATE COMPRESSION SPRING
8	1	23500019	CATE SPRING
9	1	23511037	ASSY, KNB GAT CYLNDR ADJSTMNT
10	2	44872007	SSSNYLTIP 10-32 X .38
11	1	103240B04	FLAT WASHER ZINC STEEL #10
12	1	102708B07	BHCS BLACK OXIDE 10-32 X 1.00
13	1	102708B03	BHCS BLACK OXIDE 10-32 X .50
14	2	102732B03	SSSCPPT BLACK OXIDE 10-32 X .25

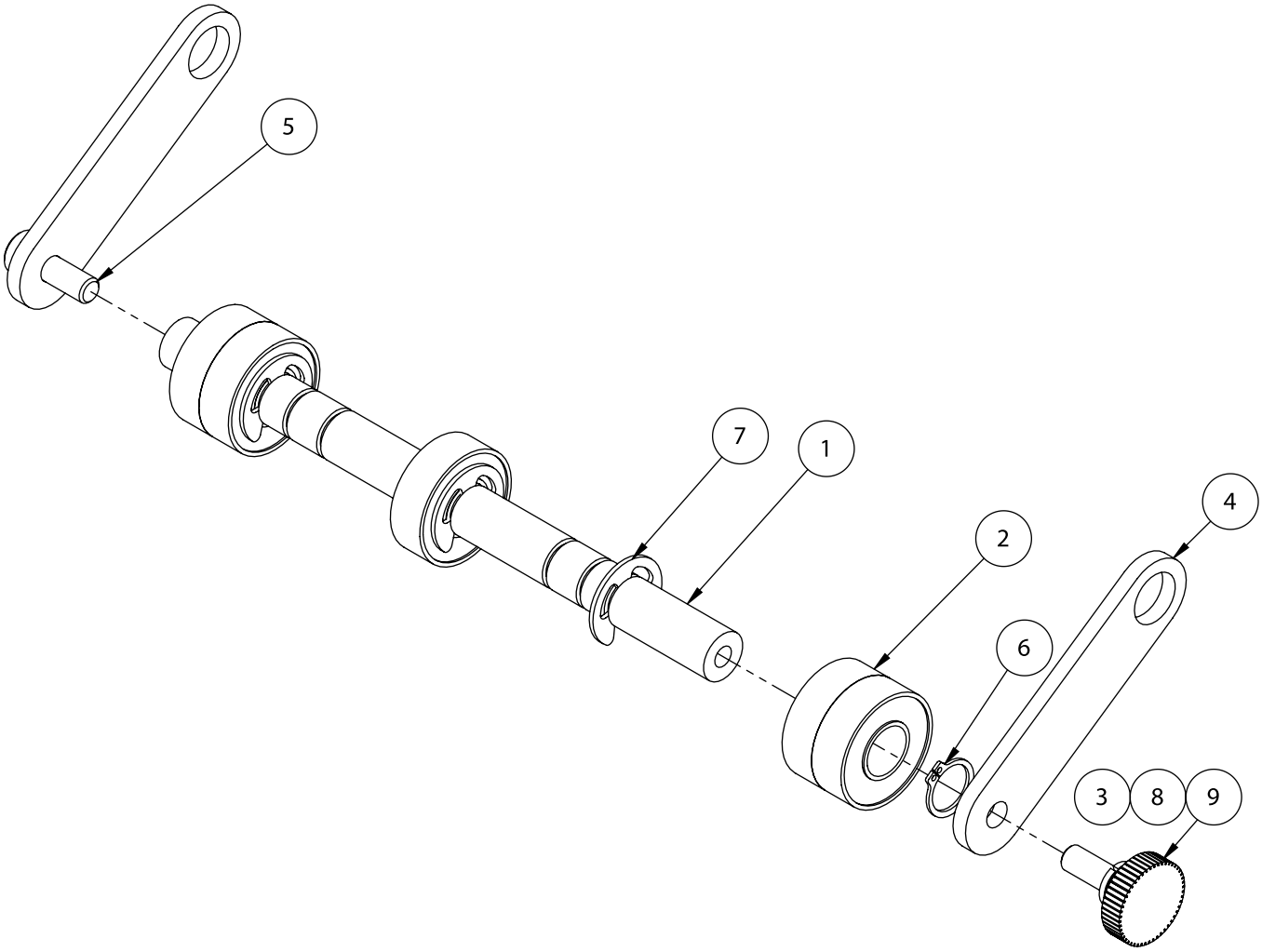
CARRIAGE ASSEMBLY
Assembly # 13511065



CARRIAGE ASSEMBLY
Assembly # 13511065

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	2	15000075	SHAFT
2	1	44846021	ROLLER, CROWN
3	2	23511029	ROLLER, O RING
4	1	44846019	TUBE, DRIVEN
5	4	23500095	BEARING BALL R6 .375 BORE
6	1	23500097	PULLEY, 20T TIMING .50 BORE
7	2	23500032	HOLDER, R8 BEARING CUP
8	1	44846018	BELT, SUPPORT TUBE
9	1	15000017	GUARD, PINCH
10	1	44846017	TUBE, DRIVEN
11	6	23500094	BEARING BALL R8 .500 BORE
12	1	23560047	IDLER SHAFT
13	4	23500162	FEED BELT TAN GUM
14	1	15000065	BELT DISCHARGE
15	4	15000068	O RING, DISCHARGE
16	1	103296B18	1/8 X 3/8 WOODRUFF KEY
17	1	102732B04	SSSCPPT BLACK OXIDE 10-32 X .31
18	1	102732B03	SSSCPPT BLACK OXIDE 10-32 X .25
19	8	104308B04	E-TYPE, STEEL CLIP FOR 3/8 SHAFT
20	2	104308B02	E-TYPE, STEEL CLIP FOR 1/2 SHAFT
21	2	103274B05	SNAP RING EXTERNAL STEEL .50

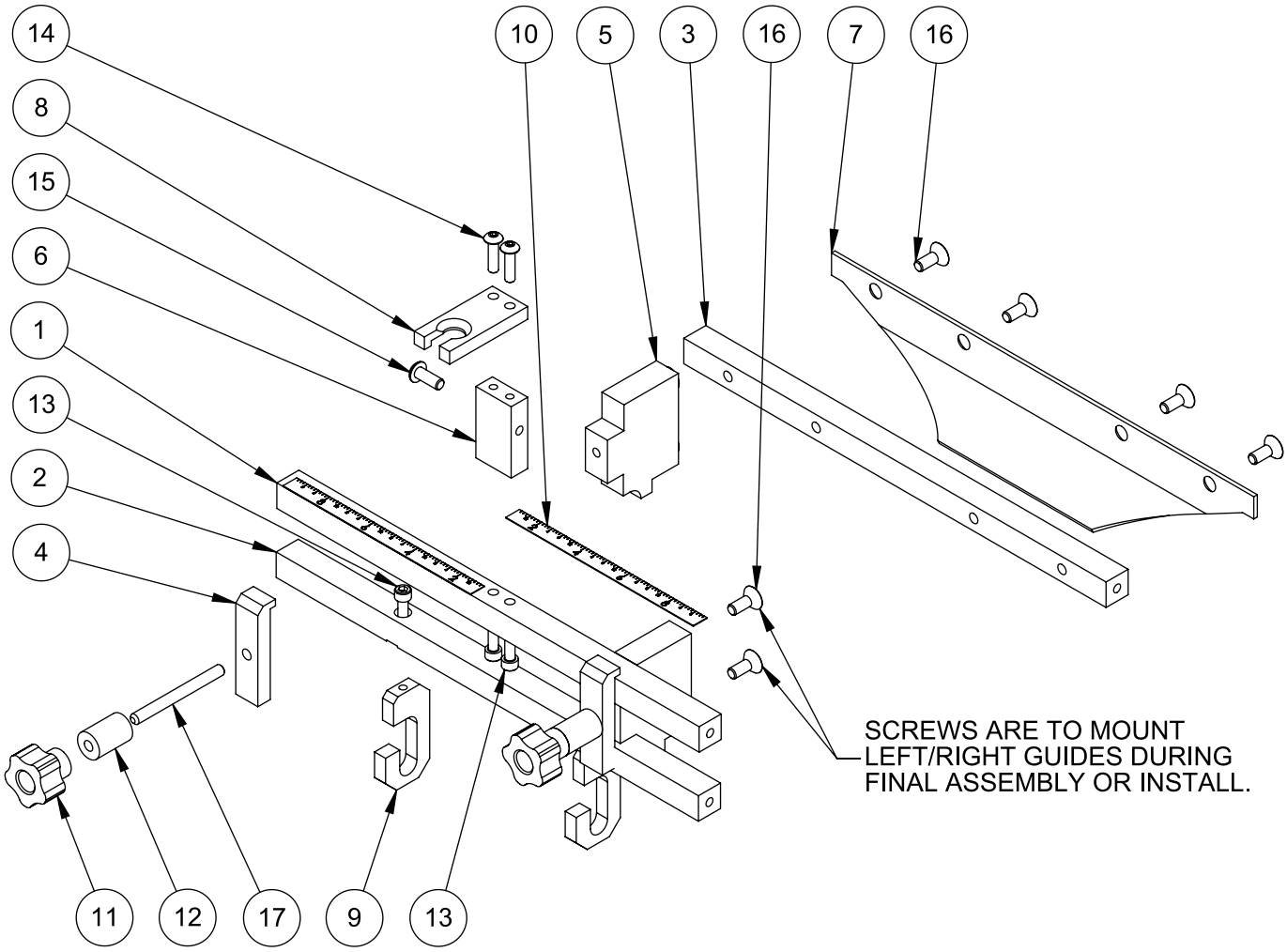
DISCHARGE ASSIST ASSEMBLY
Assembly # 13511050



DISCHARGE ASSIST ASSEMBLY
Assembly # 13511050

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	51101003	SHAFT, DISCHARGE
2	5	23500095	BEARING BALL R6 .375 BORE
3	1	23500091	PRESS-FIT KNOB HEAD FOR #10 SHCS 5/8 DIA
4	2	44841040	BRACKET, DISCHARGE
5	1	44350017	SHCS BLACK OXIDE 10-32X.50 NYLOC.
6	2	103274B04	SNAP RING EXTERNAL STEEL .38
7	4	104308B04	TYPE, STEEL CLIP FOR 3/8 SHAFT
8	1	102688B03	SHCS BLACK OXIDE 10-32 X 0.5
9	1	103238B01	LOCK WASHER SPRING SST #10 SCREW

GATE PLATE ASSEMBLY
Assembly # 84611001

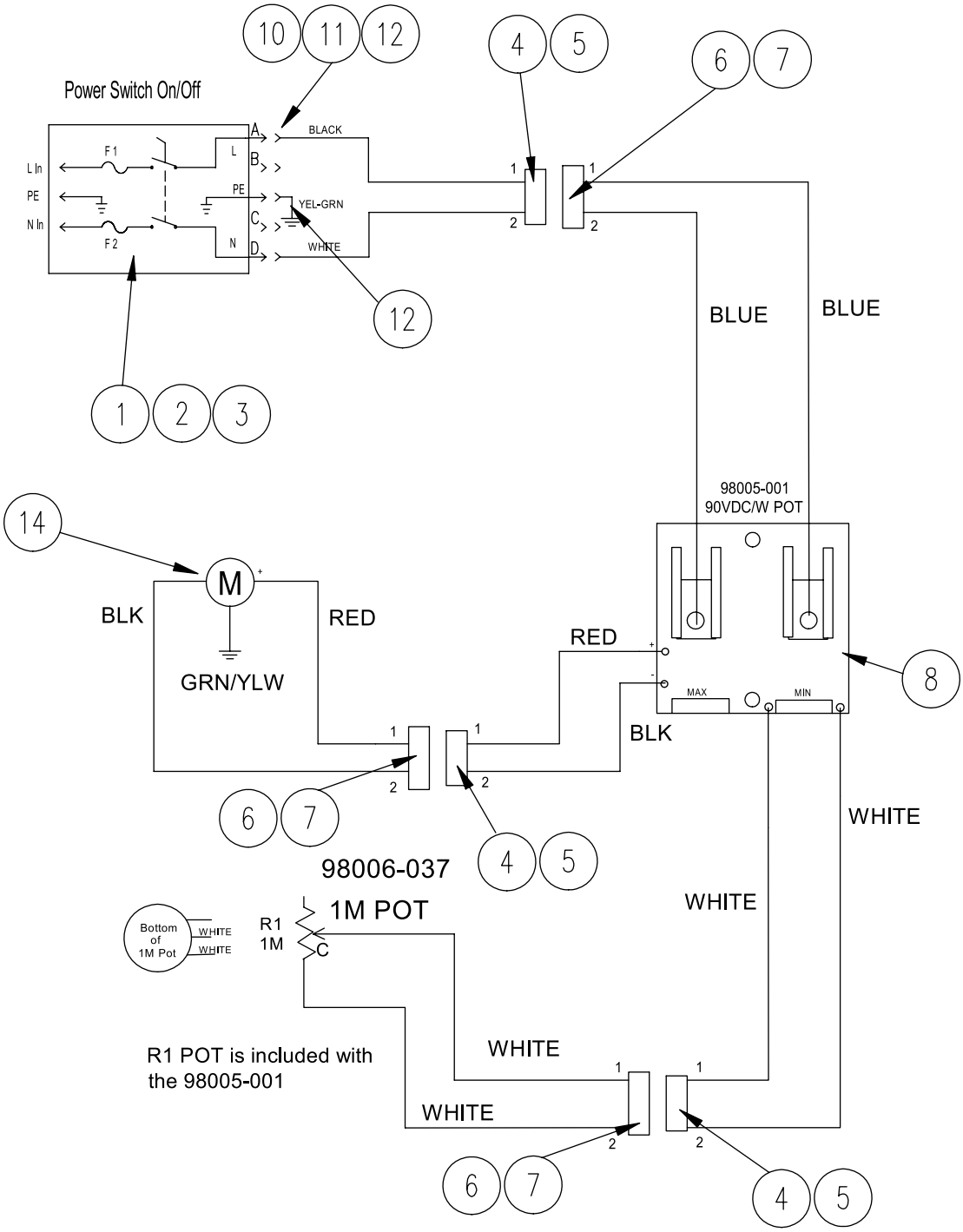


GATE PLATE ASSEMBLY
Assembly # 84611001

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	44846005	SUPPORT, BAR GATE TOP
2	1	44846006	SUPPORT, BAR GATE BOTTOM
3	1	44846007	BAR, PREGATE
4	2	44846009	CLAMP, ADJ SIDE GUIDE
5	2	44846010	CLAMP, ADJ SIDE GUIDE REAR
6	1	44846015	BLOCK, MOUNT REFERENCE
7	1	44846016	GATE, PRE-GATE
8	1	44841019	BLOCK, ADJUSTMENT REFERENCE
9	2	44841011	HOOK, GATE J
10	1	15000064	LABEL, RULER KIT
11	2	44963102	KNOB, 5 LOBE WITH 10-32 THREADED INSERT
12	2	904726	SPACER .192 ID X .50 OD X .75 LG
13	4	102685B04	SHCS BLACK OXIDE 8-32 X .62
14	2	102706B04	BHCS BLACK OXIDE 8-32 X .62
15	1	102708B03	BHCS BLACK OXIDE 10-32 X .50
16	8	102916B03	FHCS SSTL 10-32 X .50
17	2	102732B15	SSSCPPT BLACK OXIDE 10-32 X 2.00

8 Electrical Components

ELECTRICAL CONTROLS ASSEMBLY
Assembly # 611-0561



ELECTRICAL CONTROLS ASSEMBLY
Assembly # 611-0561

ITEM	QTY.	PART NUMBER	DESCRIPTION
1	1	44649034	MODULE, AC PWR ENTRY - TUV EA
2	2	53500006	FUSE 3.15A EA
3	1	904950	CORD 115V 15A 7.5FT TUV EA
4	3	98016-024	CONNECTOR 2-POS RECEPTACLE (. EA
5	6	53500387	PIN, CRIMP FEMALE .093 EA
6	3	98016-023	CONNECTOR 2-POS PLUG (.093 EA
7	6	53500386	PIN, CRIMP MALE .093 TUV EA
8	1	98005-001	CONTROLLER MOTOR 90V DC EA
9	1	44675030	KNOB, BLIND HOLE EA
10	10	10 53500050	WIRE 18 AWG BK TUV UL1007 IN
11	30	30 53500054	WIRE 18 AWG STR WT TUV UL1007 IN
12	2	53500254	TERMINAL, DSCF .020 22-18 -TUV EA
13	1	10501136	ASSY, WIRE GROUND V710 EA
14	1	311-0780	ASSY, MOTOR 90VDC V900IJ 115V

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