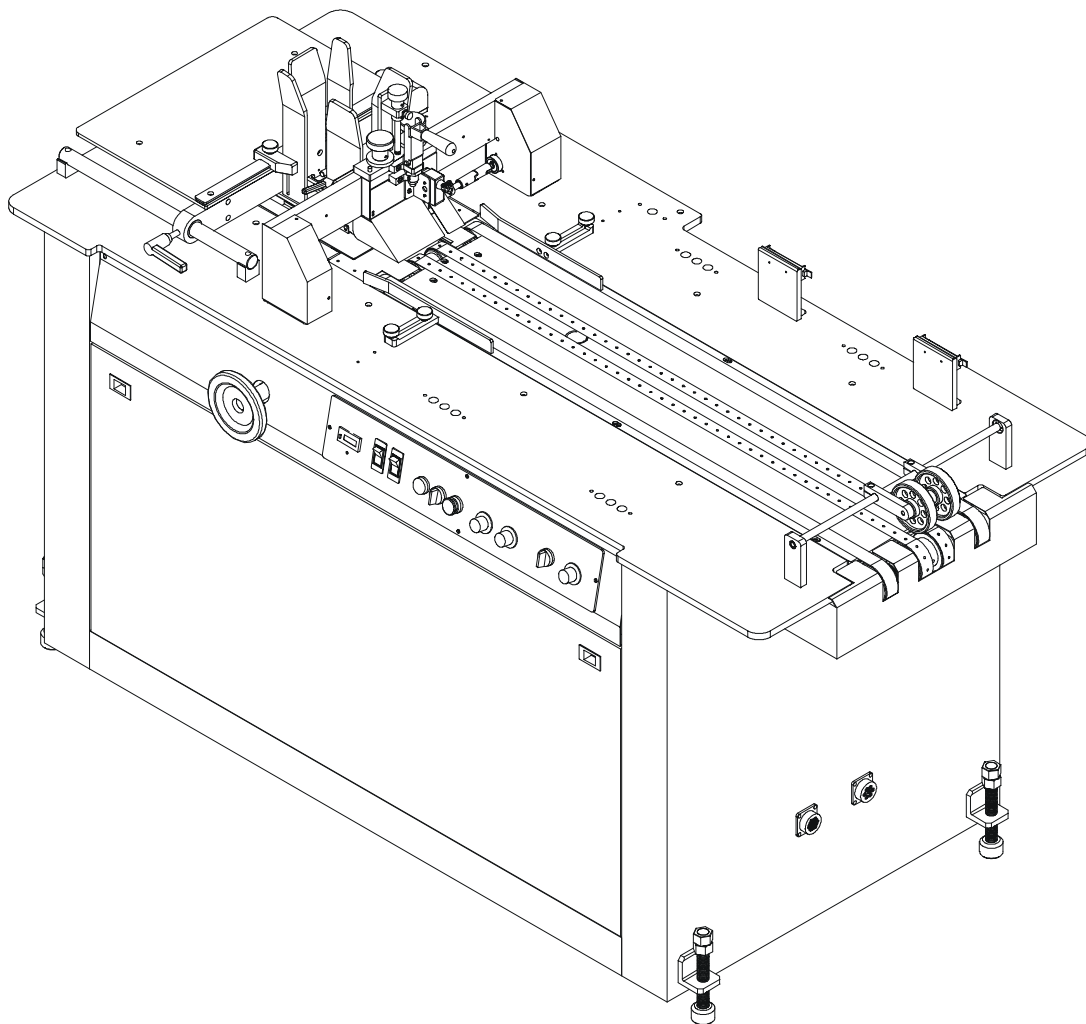


BUSKRO®

BK60B Offline Inkjet Base, R2



BK60B Offline Inkjet Base User's Guide

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Manual History

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		Updated the electrical schematic diagram (Appendix B)	471

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1.1 Description

The Buskro Offline Inkjet Base is a transport system with an integrated vacuum shuttle feeder. When used in conjunction with the BK700 Inkjet Controller, the resulting system (known as the BK665) produces some of the highest quality imaging within one of the simplest and most efficient operating environments.

In order to accommodate various material sizes (length, width, and thickness), the feeder is equipped with adjustable guides, feed rollers, and differing feed plates. The transport section is equipped with vacuum assisted tabletop belts and material guides to reduce material skew, and an electronic variable pitch control that regulates belt movement to adjust to the material size. These features are discussed in more detail later in this manual.

1.2 Features

1.2.1 Vacuum Shuttle Feeder

The Buskro Inkjet Base features a vacuum shuttle feeder capable of feeding a wide variety of material from single sheets to thick publications. The feeder is equipped with adjustable side and rear guides, variable height material gate and upper feed rollers, and various feed plates and a valve for vacuum regulation. If needed, the shuttle plate also comes with two rear pushers which provide feeding assistance for heavy material. In addition, the unique vacuum plate construction enhances the separating capabilities of the feeder.

1.2.2 Vacuum Table Belts

The table belts, which transport the material from the feeder past the inkjet imaging region, are equipped with vacuum to provide positive adhesion and transport resulting in a completely unhindered area for printing. This enables unparalleled head placement capabilities.

1.2.3 Controller

The BK6OB inkjet base is designed to be modular. As a result, a BK700 inkjet controller with any Buskro ink technology can be easily added and interconnected to the base with minimal effort and time.

1.2.4 Quiet Operation

The vacuum pumps mounted on damping feet have been placed in a separate chamber lined with sound-abatement foam resulting in reduced noise levels below 75 db.

1.2.5 Electronic Gap Controller

The BK6OB has a unique gap controller which aids in increasing productivity without sacrificing print quality. In essence, the BK6OB can electronically monitor and regulate the gap spacing between material and minimize it for optimum print quality and performance. Gap control is achieved by transferring the speed control of the feeder to the control of the BK6OB's gap control circuitry.

Gap control is done through an adjustment of the gap dial mounted on the machine's instrument panel (described in Chapter 2). Similarly, the conveyor dial can be adjusted to achieve a desired shingle spacing (material overlap) of the material on the conveyor bed.

1.2.6 Complete Instrument Panel

All necessary controls required to operate the BK6OB are easily accessible to the operator on a central instrument panel. The control panel comes complete with circuit breaker equipped rocker switches, large pushbuttons for all machine/conveyor functions, variable speed potentiometers for machine/conveyor speed regulation, and a resetable piece counter.

1.2.7 BK1600 Series Conveyor Compatibility

The BK60B is fully compatible with any BK1600 series conveyor from a 6-foot model through to an 18-foot model. Connection to the conveyor is made through a 7-pin circular connector located at the rear of the base. A DC-speed controller mounted inside the base comes with a speed potentiometer, located on the front panel, for complete control of the conveyor's belt speed. As previously mentioned, the conveyor dial will automatically regulate shingle spacing in the automatic mode. However, it is possible for the user to manually set the shingle spacing if desired.

1.2.8 Tabber Compatibility

The inkjet base is compatible with all Buskro Tabbers. This allows for full integration between the Tabber and base controls such that the controls on either system can directly stop and/or start the entire system. Connection to the Tabber is made through a connector located at the rear of the base.

1.2.9 Auxiliary Feeder Compatibility

The inkjet base is equipped with a 14-pin connector for complete control of a BK720 friction feeder. The friction feeder may be installed by removing the shuttle feeder components. Its start/stop operation, as well as its speed can be controlled automatically from the base via the operator speed controls situated on the base's instrument panel.

1.2.10 Maintenance Considerations

The Buskro inkjet base is designed to facilitate maintenance should it be required. The front upper panel and tabletops are easily removable in order to expose all the mechanical components. Electrically, all of the base's controls are centrally located on the Base Control Board making troubleshooting simple.

1.3 Specifications

1.3.1 Product handling			
	Minimum	3.0" x 5.0"	76 mm x 127 mm
	Maximum	16.0" x 17.0"	406 mm x 432mm
	Thickness	Single Sheet to 1 1/8"	Up to 28 mm
1.3.2 Physical			
	Weight (<i>crated</i>)	800 lbs	363 kg
1.3.3 Production rate			
	Belt Speed	0 to 600 ft/min	0 to 3.05 m/s
	Cycle Speed	0 to 30,000 pph	
	Cycle Pitch	3.0" to 17.0"	76 to 432 mm
	Conveyor Speed	0 to 26.0" in/s	0 to 0.7 m/s
1.3.4 Electrical requirements			
	Line Voltage	220 VAC	
	Line Current	20 Amps	
	Power	4.4 kVA	
	Base Motor	½ hp, 180 VDC at 2.8A	
	Feeder Pump	¾ hp, 220 VAC @ 5.9 A	
		1.8 CFM @ 20 Hg	
	Transport Blower	1/3 hp, 230 VAC at 2A	
		42 CFM, 39" H ₂ O Max Pressure	
	Conveyor Interface	1/8 hp, 90 VDC @ 1.3A	
		DC Controller	
1.3.5. Operator controls			
	Circuit-Breaker Switch	Main, Vacuum	
	Machine Pushbuttons	Start, Stop, Run/Jog	
	Conveyor Selector	On/Off/Auto	
	Potentiometers	Gap, Production, Conveyor	
	Counter	6-digit resetable	

1.4 Inkjet System Drawings

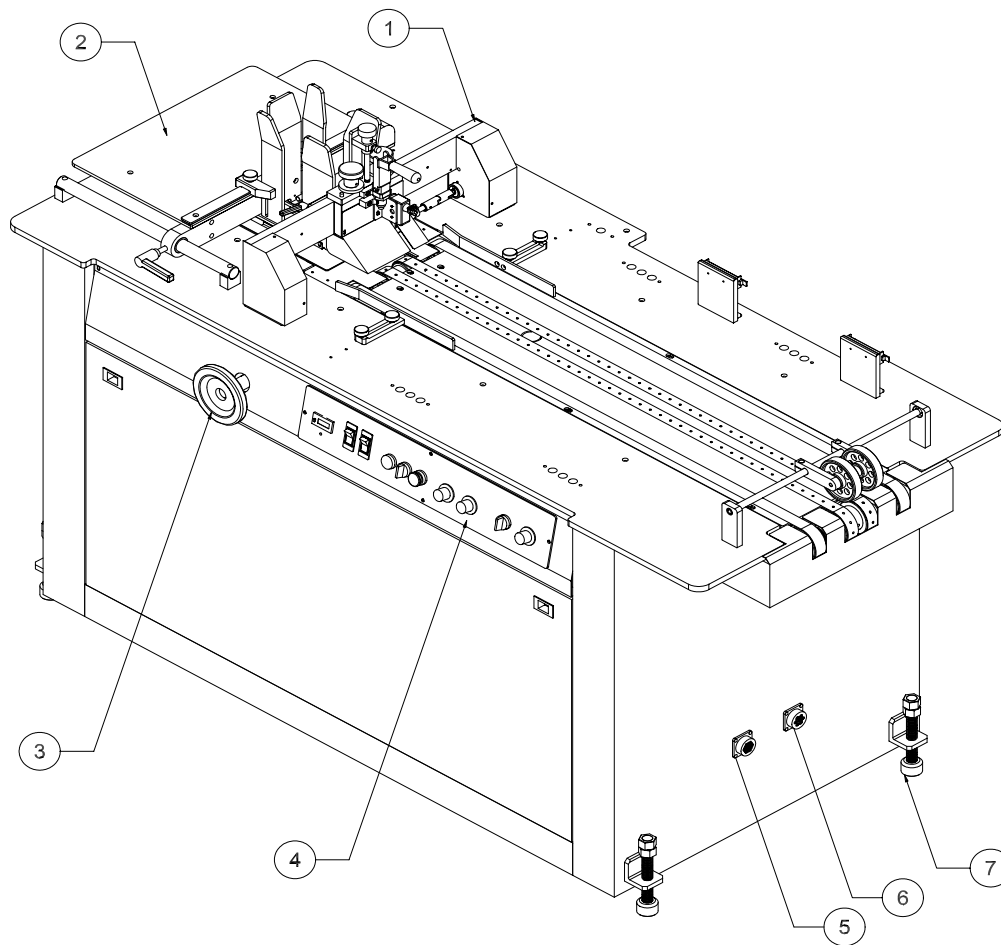
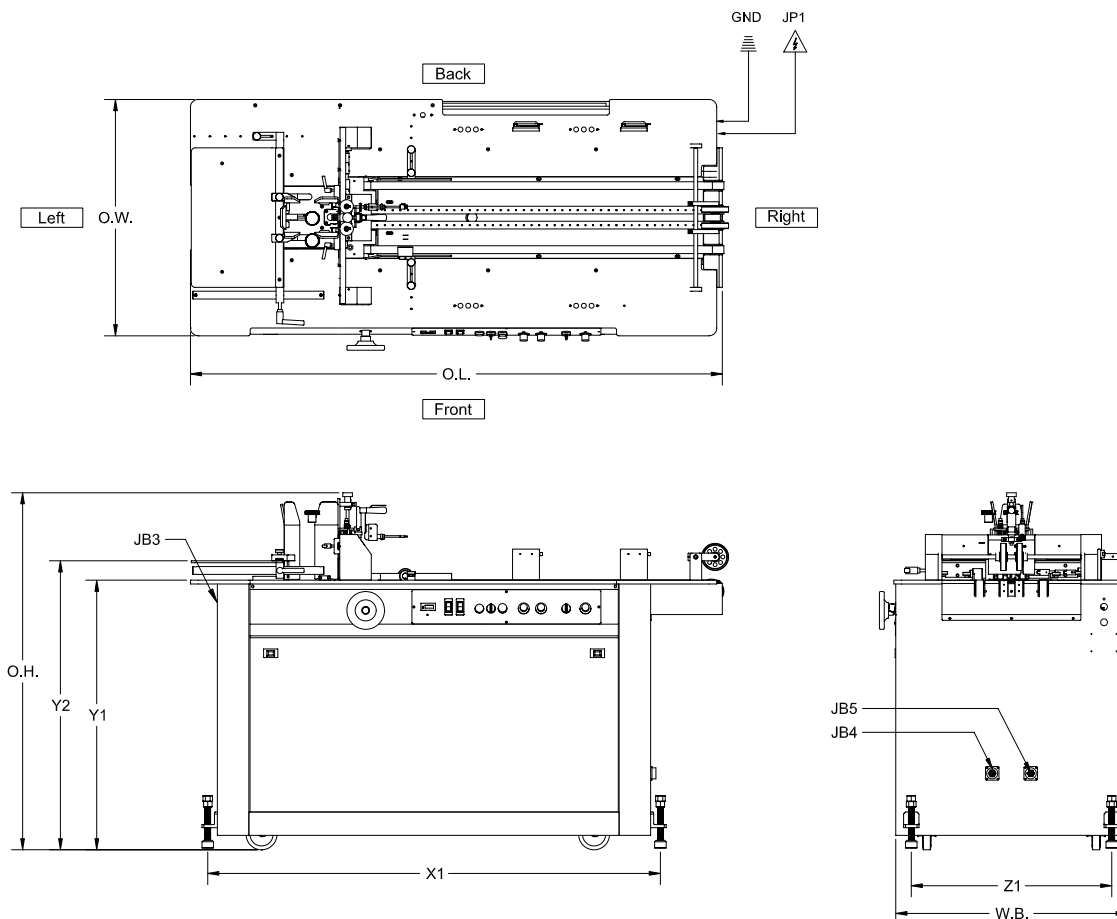


Table 1-1: *BK60B Operator Controls, Features, and Installation Points*

Item	Description
1	Shuttle Feeder Bridge
2	Rear Table
3	Handwheel
4	Instrument Panel
5	Inline Downstream Connector (57-Pin)
6	Conveyor Connector (7-Pin)
7	Base Mounting Foot

**Table 1-2: BK60B Dimensions and Interface Specifications**

Symbol	Description	Dimensions	
O.W.	Overall Width	30.50"	775 mm
O.L.	Overall Length	69.00"	1752 mm
O.H.	Overall Height	46.09" to 47.59"	1170 mm
W.B.	Overall Base Width	30.00"	762 mm
X1	Leveling Foot Length	58.68"	1490 mm
Y1	Tabletop Height	35.5" to 37"	901 mm to 940 mm
Y2	Rear Table Height	38.00" to 39.50"	965 mm
Z1	Leveling Foot Width	26.00"	660 mm
JB3	Auxiliary Feeder Connector	14 pin CPC Receptacle (AMP P/N 206043-1)	
JB4	Inline Downstream Connector	57 pin CPC Receptacle (AMP P/N 206438-1)	
JB5	Conveyor Connector	7 pin CPC Receptacle (AMP P/N 206227-1)	
JP1	Base Power Connector	Twist-Lock Plug, 20A, 250V (HUBBELL P/N. 2321CN)	

2.1 The Base Interface Board

The Base Interface Board (BIB) contains the central control circuitry for the BK6OB. It is located inside the rear cabinet of the base. Specific information on the BIB can be found in Appendix B and C.

The BIB monitors the settings of all the front panel controls and provides the appropriate signals to the various speed control boards and the gap control. In addition, it also interfaces to the computer when a controller, such as a BK700 Portable Controller, is used. This board handles communication with downstream equipment as well.

Access to the BIB should only be required if the system configuration is changed. This includes adding or removing downstream equipment from the system or when the operating mode is changed. When changes are required, the system must first be turned off using the main power switch. Changes to the switch settings on the BIB must not be made while the base is powered up. Once the changes are made, the machine can be turned back on.

2.2 Instrument Panel Functions

The Buskro BK6OB Inkjet base is equipped with a centrally located instrument panel (**Figure 2-1**) that displays all the necessary controls to operate the base. The controls can be sub-divided into the following four distinct classes of functions:

- Rocker Switches
- Control Dials
- Pushbuttons
- Piece Counter

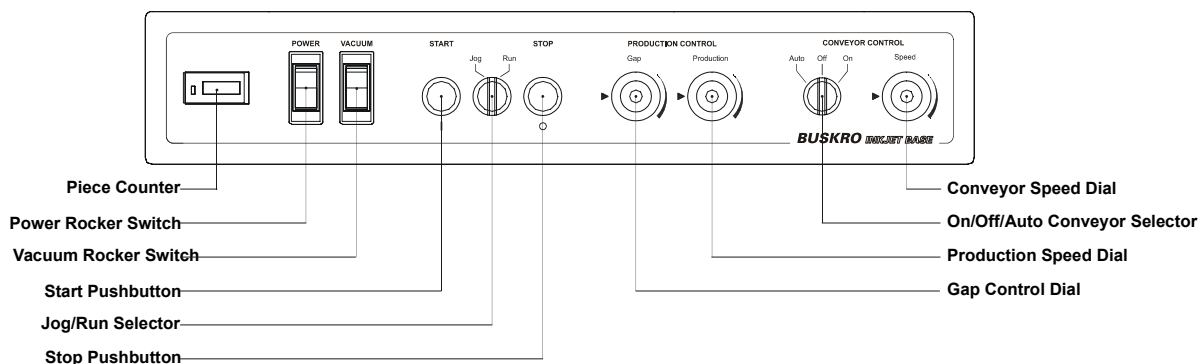


Figure 2-1: *Base Instrument Panel*

2.2.1 Rocker Switches

The two rocker switches located to the right of the piece counter provide power to the inkjet base and the vacuum pumps. These switches are equipped with resettable circuit breakers to protect against overload conditions.

The **Power Rocker Switch** turns on the main power to the inkjet base. When the “I” is pressed down, power is on. Otherwise, when the “O” is pressed down, power is off.

The **Vacuum Rocker Switch** turns the vacuum pump and transport blower on and provides vacuum to the feeder and transport tabletop. When the switch is ON, it should illuminate.

Note: When working on electrical components, disconnect the power plug for complete safety. Turning the **Power** rocker switch OFF will not disengage all 220 VAC circuitry.

2.2.2 Gap, Conveyor, and Production Controls

In order to control the speed of the base, conveyor, and feeder, three dials are provided.

These three dials are labeled *Gap*, *Production*, and *Speed* as shown in **Figure 2-1**.

Gap and Conveyor Speed Dial

The BK60B is equipped with an electronic gap-control device that monitors and maintains the desired gap spacing between the material being transported. In addition, the gap-control device also automatically adjusts the conveyor speed to maintain shingle spacing (material overlap) on the delivery conveyor. This is true regardless of the transport base speed.

The functions of the gap and conveyor speed dials (labeled *Gap* and *Speed* respectively) are dependent on the operating mode selected. The operating mode is controlled by switch **S4** (**Figure 2-2**) on the Base Interface Board (BIB).

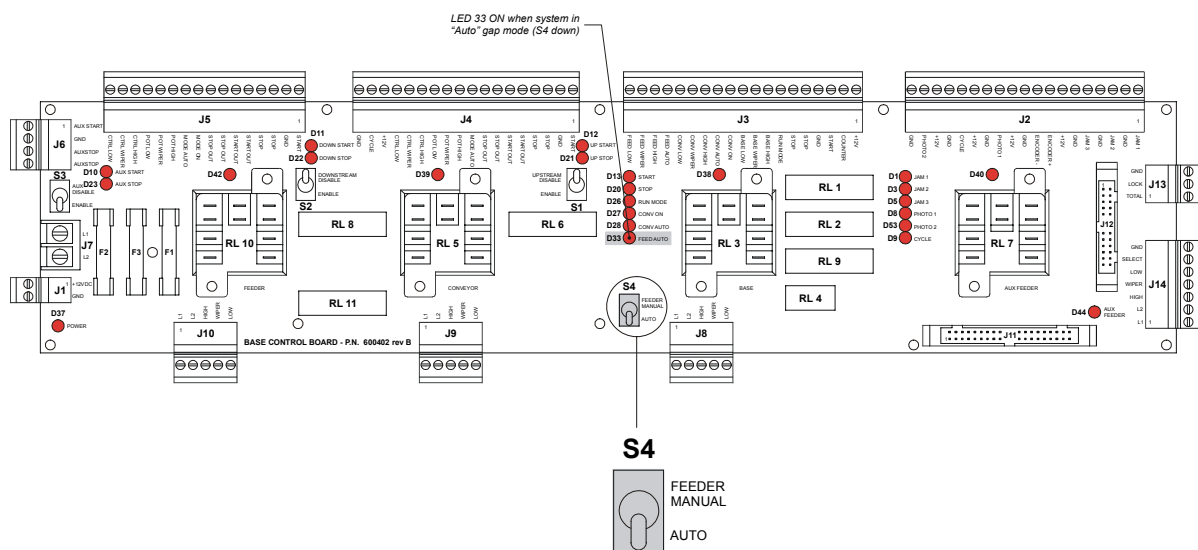


Figure 2-2: Base Interface Board Feeder Mode Switch (S4)

When switch S4 is placed in AUTO mode (switch down), the gap dial is used to adjust the gap spacing between the material being transported. In addition, the conveyor speed dial regulates material shingling on the delivery conveyor. In the Feeder Manual mode (switch up), the gap and conveyor speed dials directly control the speed of the feeder and conveyor respectively. These two modes are summarized in **Table 2-1**.

Table 2-1: *Feeder Mode Switch Settings (S4)*

S4 Setting	Gap Dial	Conveyor Speed Dial
Feeder Manual (Up)	Manual feeder speed control. Feeder speed must be less than base speed.	Manual conveyor speed control.
Auto (Down)	Regulates material gap from 1 to 5 inches.	Regulates material shingle from 1 to 5 inches.

In the AUTO mode setting, a clockwise rotation of the gap dial results in an increase in gap spacing to a maximum of 5 inches. When the gap dial is rotated counter-clockwise, the gap spacing decreases to a minimum of 1 inch. In the Feeder Manual mode, a clockwise rotation of the gap dial results in a feeder speed increase and a smaller gap spacing. As a result, the gap dial has an opposite affect on the gap spacing depending on the operator setting (AUTO or Feeder Manual).

In the case of the conveyor speed dial, AUTO mode controls material overlap on the conveyor. A clockwise rotation of the conveyor speed dial corresponds to an increase in material shingle spacing to a maximum of 5 inches. When the dial is rotated counter-clockwise, the shingle spacing reduces to a minimum of 1 inch. In addition, the shingle spacing is maintained in this mode regardless of the transport base speed. In Feeder Manual mode, the conveyor speed dial controls the speed of the conveyor independently of the transport base. As a result, a clockwise rotation of the dial results in a speed increase and an increase in shingle spacing.

Production Dial

The production dial controls the speed of the transport belts. A clockwise rotation corresponds to a speed increase while a counter-clockwise rotation results in a speed decrease.

2.2.3 Machine and Conveyor Function Pushbuttons

The pushbuttons and selector knobs located on the instrument panel permit control of the machine and conveyor operation. The **Start** (*green*) and **Stop** (*red*) pushbuttons allow engagement and suspension of the inkjet operation while the **Run/Jog** (*black*) selector sets the system to run continuously (RUN) when the **Start** button is momentarily depressed, or intermittently (JOG) while the **Start** button remains depressed.

The conveyor is equipped with its own control in the form of an **On/Off/Auto** selector knob (*black*) which determines the operating mode of the conveyor. It can be operated continuously, in conjunction with the base, or turned off completely.

Stop Pushbutton

The red **stop** button suspends operation of the inkjet system by interrupting the power to the machine relays located on the Base Interface Board (BIB). This button is used mostly as an emergency stop since depressing it will cause the machine to stop immediately regardless of the printing status. *LED #20* on the BIB will illuminate when the **Stop** button is pressed.

Note: The Stop pushbutton has a locking feature, which when engaged, will prevent the system from functioning. Should this condition occur, twist and release the locking mechanism to allow base operation.

LED #20 will light when **Stop** button pressed.

Start Pushbutton

The green **start** pushbutton energizes relays *RL3* and *RL10* on the BIB applying power to the feeder and transport motor controllers. When this button is pressed, *LED #13* will turn ON and the machine should cycle provided the following conditions have been met:

- The **base stop** button is not locked in a depressed condition. *LED #20* on the BIB would be ON if this is true.
- The **conveyor stop** button is not depressed (if present).
- The auxiliary switch **S3** is set to **disable** (up) with **no conveyor**.
- The downstream switch **S2** is set to **disable** (up) with **no downstream device**.
- The upstream switch **S1** is set to **disable** (up) with **no upstream device**.

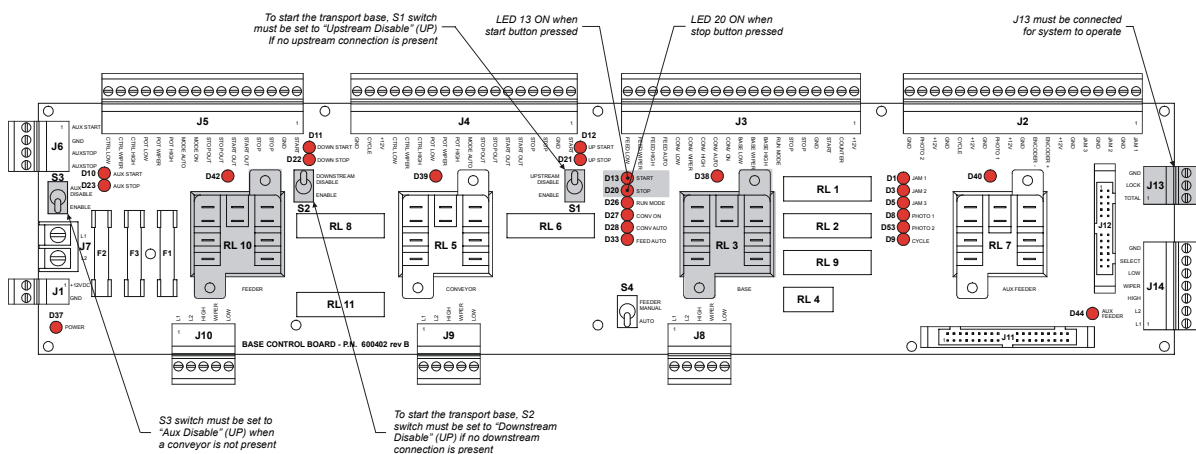


Figure 2-3: Base Interface Board Switches (S1, S2, S3) and Counter Connector (J13)

Run/Jog Selector

The Run/Jog selector is a knob that permits a choice between continuous and intermittent machine operation. When the **Run** mode has been selected and the **Start** button is pressed, the machine will operate continuously. In the **Jog** mode, the machine will cycle only as long as the **Start** button remains pressed.

- **Run Mode** - Machine will operate when the momentary **Start** button is pressed. *LED #26* on the BIB will light when system is in the “Run” mode.
- **Jog Mode** - Machine will operate only while the **Start** button is pressed.

Note: *LED #26* on the Base Interface Board will illuminate when system in RUN mode.

On/Off/Auto Selector

The conveyor On/Off/Auto selector determines the operating mode of the conveyor. When set on *auto*, the conveyor is on when the transport base is on, and off when the base is off. In *on* mode, the conveyor runs continuously and independently of the operating mode of the base. Finally, an *off* selection suspends the conveyor’s operation altogether.

Note: LED #28 on the Base Interface Board will illuminate when the conveyor selector is set to AUTO.

LED #27 will illuminate when the conveyor selector is set to ON.

2.2.4 Resettable Piece Counter

The counter located on the left side of the instrument panel monitors and totalizes the number of mailpieces that are detected by the photocue sensor. The counter can be reset to zero by pressing the reset button located on the front of the counter. In order to prevent accidental resets, the counter reset button shown in **Figure 2-4** can be locked out by clicking it in the down position.

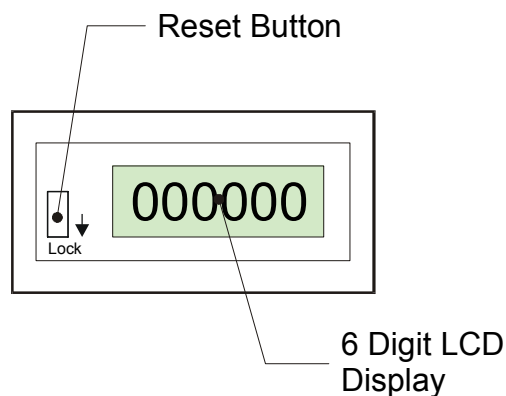


Figure 2-4: *Resettable Piece Counter*

2.3 Feeder Setup Instructions

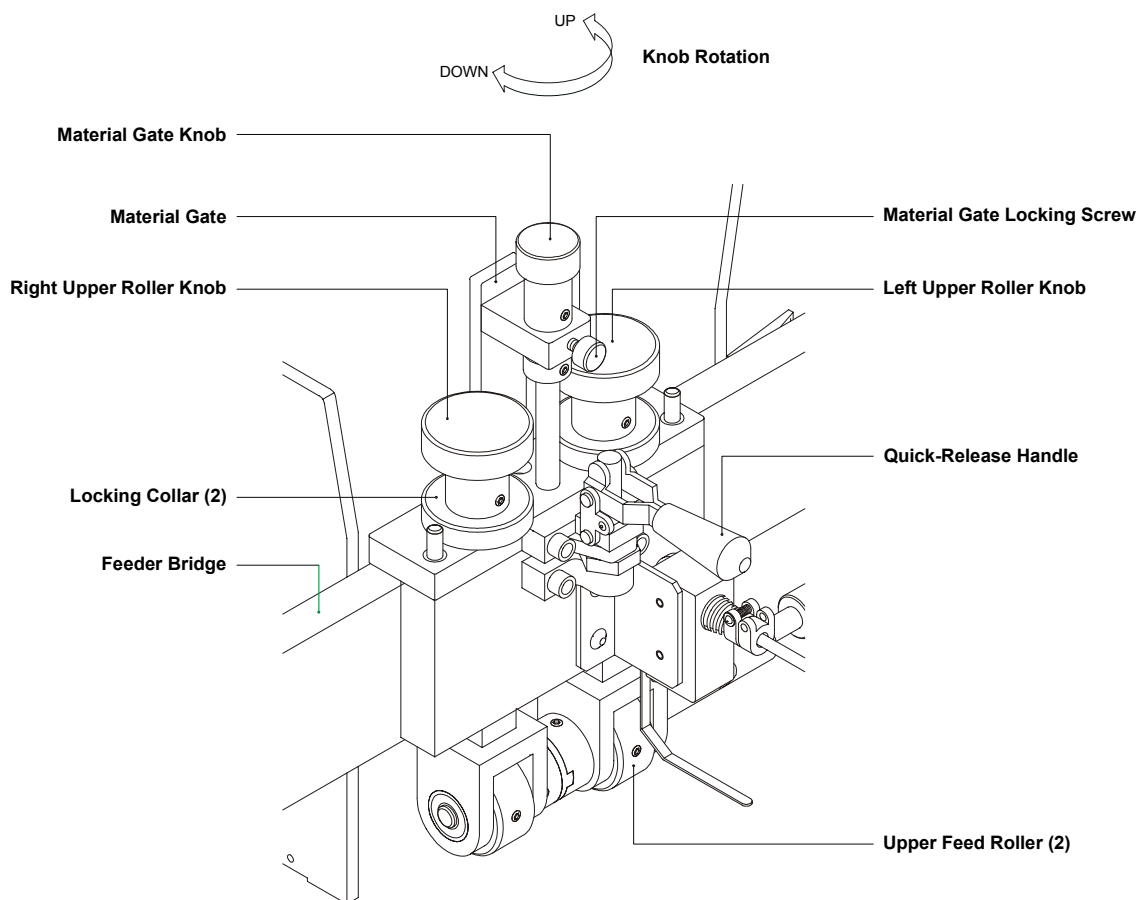
The feeder setup instructions comprise all the adjustments necessary to properly separate and feed any mailpiece which conforms to the specifications outlined in **Section 1.3**. Proper feeder setup will include the following:

- The selection of an appropriate feed plate and possibly the regulation of vacuum in the event of thin materials.
- An upper feed roller and gate adjustment for material thickness.
- Side and Rear guide adjustments to accommodate product size.
- The use of feeder pushers to assist feeder vacuum for thick pieces.
- Adjustment of material side guides to correct material skew prior to entry in the inkjet region.

2.3.1 Upper Feed Roller and Material Gate Adjustment

In order to accommodate different material thicknesses, the upper feed rollers and the material gate must be adjusted (**Figure 2-5**). A successful adjustment of these items will result in a single piece of material being deposited onto the transport belts without skewing.

Figure 2-5: *Feeder Bridge Details*



When setting the upper feed rollers, adjustment should be made so that there is just enough tension on the material between the upper and lower feed rollers such that it cannot be removed by pulling it. Adjustment of the left and right upper feed rollers should be done evenly to prevent the material from skewing upon exit from the rollers. In order to set the feed rollers:

1. Loosen the material gate locking screw. Then loosen the locking collars by rotating them counterclockwise.
2. Position the material gate sufficiently so that a single piece of material easily clears the tip. This is done by turning the material gate knob.
3. Position both the left and right upper feed rollers until a single piece of material clears both rollers. This is accomplished by turning the feed roller knobs.
4. Ensure that the lower feed rollers are fully upward. This can be accomplished by rotating the handwheel until the shuttle plate is fully forward.
5. Place the desired piece of material in between the upper and lower feed rollers. Grip the rear of the mailpiece with one hand and lower the left upper feed roller onto it until firm pressure is applied. A clockwise rotation of the left upper roller knob corresponds to a lowering of the feed roller. Repeat for the right upper feed roller.
6. When the proper upper feed roller setting has been attained, tighten the locking collars of the feed roller by rotating them clockwise until they lock against the gate adjuster plate.

Note: An improper setting of the upper feed rollers may result in skewed or delayed feeding.

Do not over-tighten the upper feed rollers as this will result in rapid wearing of the upper and lower feed rollers as well as placing an excessive load on the hopper roller cam assembly. This condition is usually detected when the feed rollers make a "clunking" noise when they meet.

Always make sure that the lower feed rollers are up when making this adjustment, otherwise the aforementioned wear condition may occur.

In order to set the material gate:

1. Ensure that the material gate is in a raised position as described in the previous instructions.
2. Turn on the feeder pump by engaging the **Vacuum** switch on the instrument panel.
3. Place the material centrally in the hopper and advance the feeder shuttle plate until the lead edge has passed by the material gate. This is accomplished by rotating the handwheel clockwise.
4. Now place a second piece of material over the first one and lower the material gate onto it by rotating the material gate knob clockwise. Grip the rear of the top piece of material and pull it away from the material gate. Slight resistance should be present.
5. After removing the top piece, lower the material gate slightly by incrementally rotating the material gate knob clockwise. **Do not** lower the material gate excessively (i.e. to pitch the remaining material).
6. After the proper setting has been attained, tighten the material gate locking screw.

Note: An improper gate setting will result in multiple pieces being dispensed if the gate is too high. Conversely, damaged or unfed pieces will result if the gate is too low.

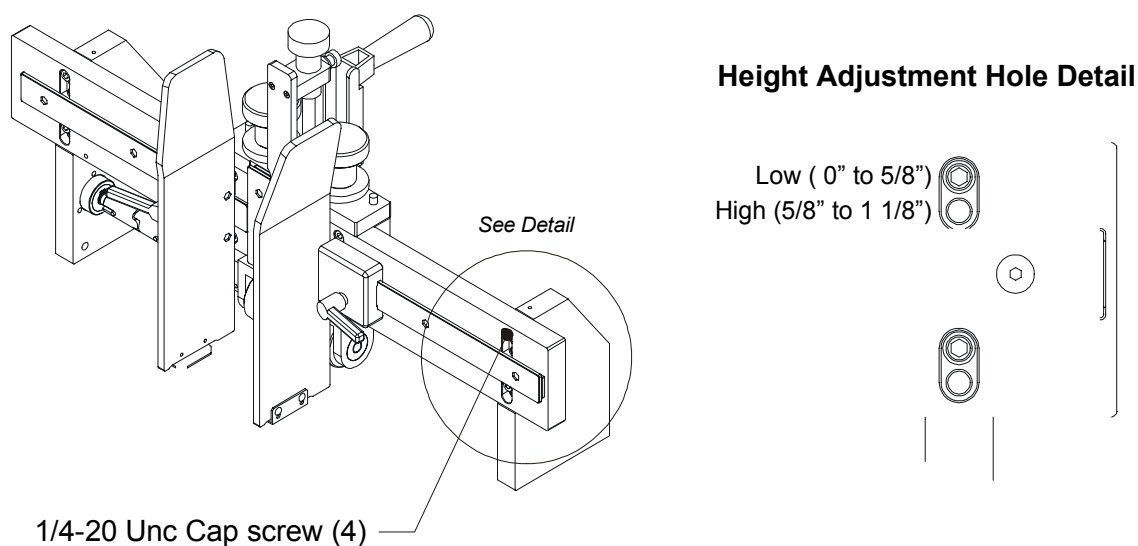
In the event that a very thin material is used with a concave plate, it may be necessary to regulate the vacuum flow in addition to adjusting the material gate to obtain the desired result.

When changing feed plates (Section 2.3.5), ensure that the material gate is raised up since interference may occur between the new vacuum feed plate and the material gate. This would result in damage to the vacuum feed plate and possibly the material gate. Adjustments for material thicker than 5/8" must be done by screw re-adjustment on the feeder.

In order to set the feeder bridge for material thicker than 5/8" (16 mm):

1. Loosen off the 4 bridge 1/4-20 UNC cap screws with a 3/16" hex key (**Figure 2-6**).
Remove them from the upper holes of the bridge.
2. Carefully lift the bridge assembly up until the lower bridge mount holes line up with the 1/4-20 UNC threaded holes.
3. Place a cap screw in one of the holes and gently re-tighten it. Do the same for the other 3 cap screws. Once all screws are in place, tighten them all securely.
4. Adjust the upper feed rollers.
5. Adjust the material gate.

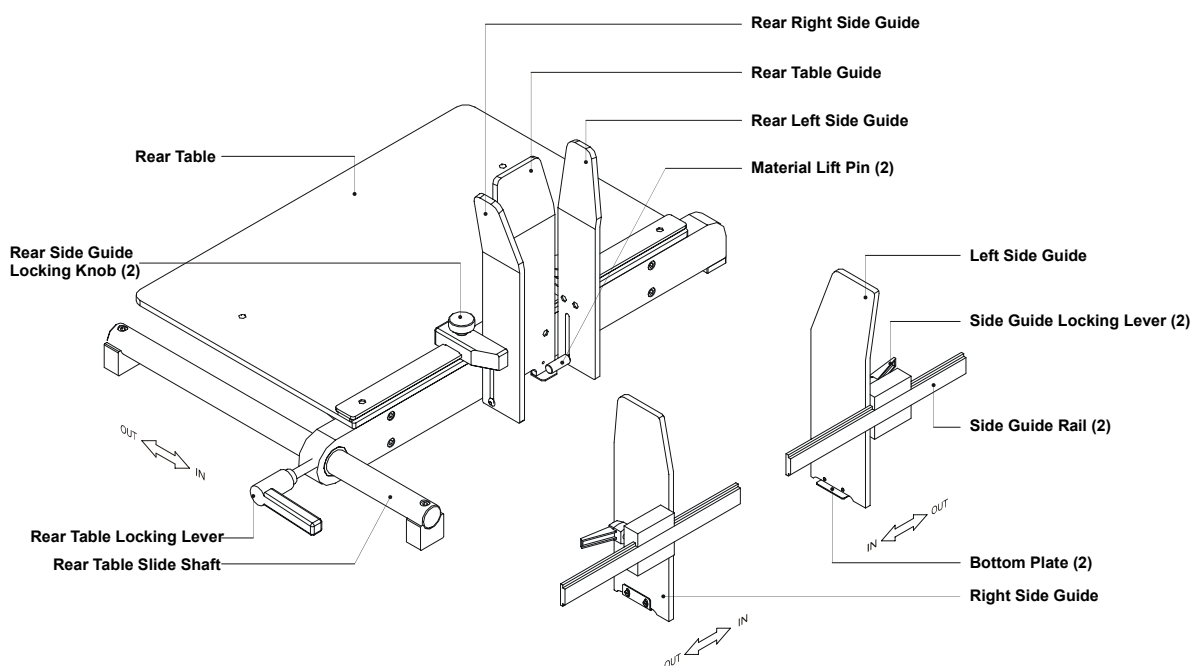
Figure 2-6: Feeder Bridge Height Adjustment (5/8" Thicker or higher)



2.3.2 Feeder Side and Rear Guide Adjustment

In order to accommodate various material sizes, the feeder guides (**Figure 2-7**) must be adjusted. If not properly set, improper material feeding may occur. In general, there should be approximately 1/16" between the guides and the material being fed. The material must also be above the material lift pins on the rear guides and the bottom plates on the front guides.

Figure 2-7: *Material Feeder Guides*



Note: If the guides are closed too tightly, the material may be pinched. This may cause misfeeds and will prevent the material stack from dropping onto the shuttle plate.

If the rear table guide is set too loosely, the material may oscillate back and forth and prevent the vacuum from securing and advancing the front of the material.

In the event that the material is thin and narrow, the side guide bottom plates may be removed. In some situations, the bottom plates can hinder the separating and feeding operation by preventing the material from being sucked into the vacuum feed plate.

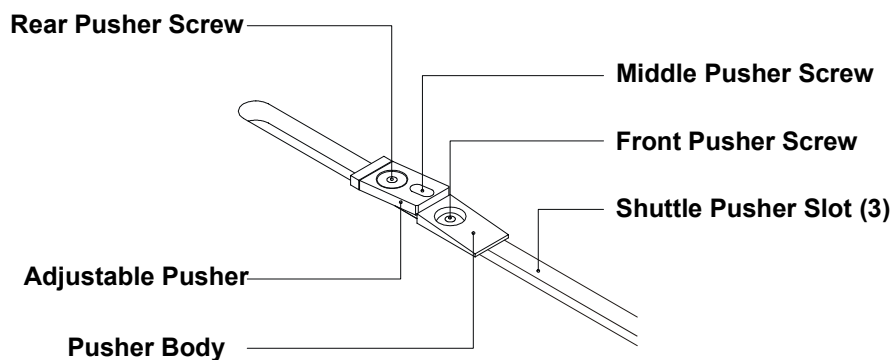
Occasionally, due to the edge of the piece that is presented to the material gate, it is better to offset the material slightly along the centerline in order to improve the feeding operation.

2.3.3 Feeder Rear Pusher Setting

The function of the feeder rear pusher (**Figure 2-8**) mounted on the shuttle plate is to aid in feeding thicker, heavier material. In order to adjust the rear pushers:

1. Rotate the handwheel in a clockwise direction until the shuttle plate is fully back.
2. Loosen the front and rear pusher screws until the pusher assembly is just loose. If both pushers are used, loosen the screws for the second pusher assembly.
3. Slide the pusher(s) fully back in the slots of the shuttle plate.
4. Place material in the feeder hopper.
5. Advance the pusher(s) until it is up against the rear of the material. Set the height of the pusher just below the top surface of the material by rotating the middle pusher screw. A clockwise rotation corresponds to a lowering of the pusher.
6. After the proper height has been attained, set the pusher(s) so that the pusher is approximately 1/8" (3 mm) from the rear edge of the material.
7. Tighten both the front and rear pusher screws.
8. Ensure that the rear pushers do not remain under the material stack when the shuttle plate is fully back.

Figure 2-8: *Feeder Rear Pusher*



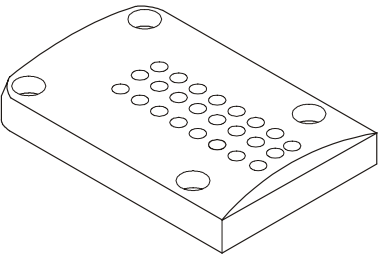
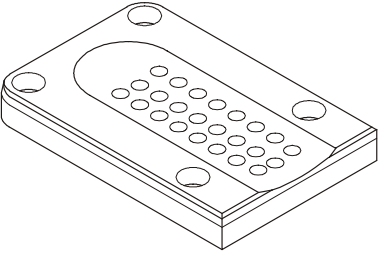
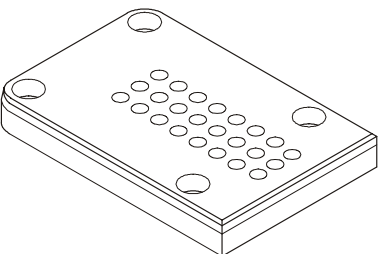
Note : Two pushers are provided. In the case of a narrow piece, only one pusher in the central pusher slot may be required.

An improper pusher setting will result in a damaged or jammed material if the pusher is set too high. Conversely, a pusher that is set too low or too far away will have no effect on feeding performance.

2.3.4 Vacuum Plate Selection

The selection of an appropriate vacuum plate (**Table 2-2**) for the material being processed is central to the proper operation of the feeding system. In most cases, the concave plate should be used first as most material fed are pliable and can conform to the surface of the plate. For thicker more rigid material such as magazines, a flat plate is ideal. For open-ended material (i.e. folded material) it is best to attempt the concave plate initially. However, if the upper page separates from the lower one(s) and interferes with the material gate, the convex plate should be used.

Table 2-2: *Vacuum Feed Plate Selection*

	<p>Convex</p>	<p>Open-edged pieces that must be fed from open side.</p> <p>Self mailers.</p>
	<p>Concave</p>	<p>Thin, pliable pieces conforming to the recessed surface.</p> <p>Single sheets, envelopes, leaflets, light card stock, thin pamphlets, and self-mailers.</p>
	<p>Flat</p>	<p>Non-compliant, thick material that will not bend to conform to Concave plate.</p> <p>Publications, newspapers, card stock.</p>

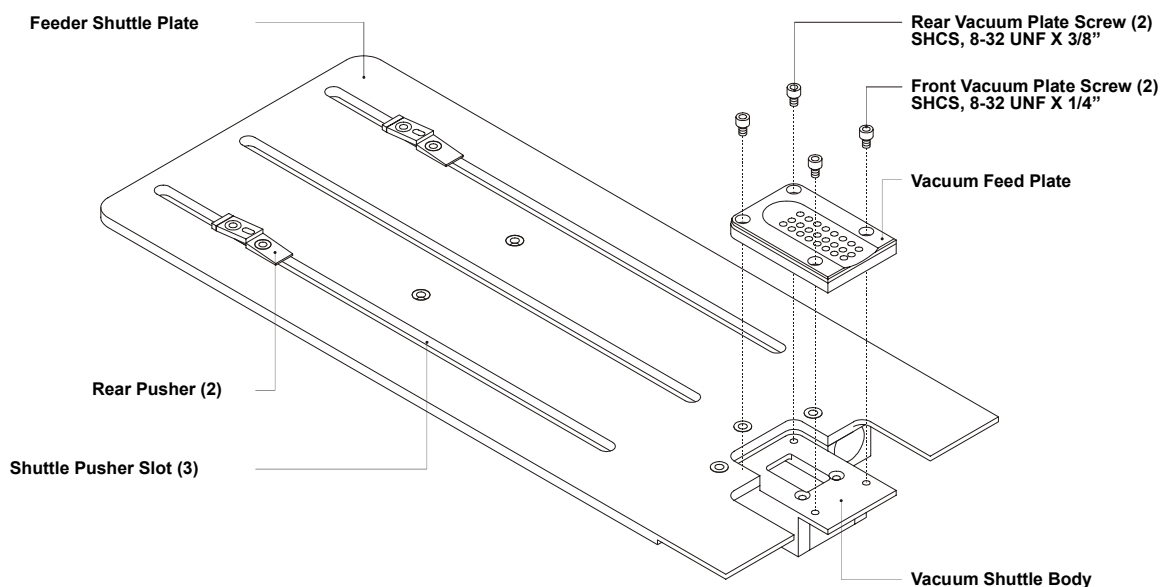
2.3.5 Installing the Vacuum Feed Plate

In order to install the desired vacuum feed plate, refer to the following instructions and

Figure 2-9:

1. Raise the Material Gate using the quick-release handle (**Figure 2-5**) to access the vacuum plate.
2. Rotate the handwheel so that the feeder shuttle plate is fully back, exposing most of the vacuum feed plate.
3. Loosen and remove all four 8-32 UNF vacuum plate screws. Remove the vacuum feed plate.
4. Place the required vacuum feed plate into position and replace the vacuum plate screws. Do not over-tighten the screws as it may result in the threads being stripped in the vacuum shuttle body.
5. Cycle the system manually with the handwheel to ensure that the vacuum plate does not interfere with the material gate tip.

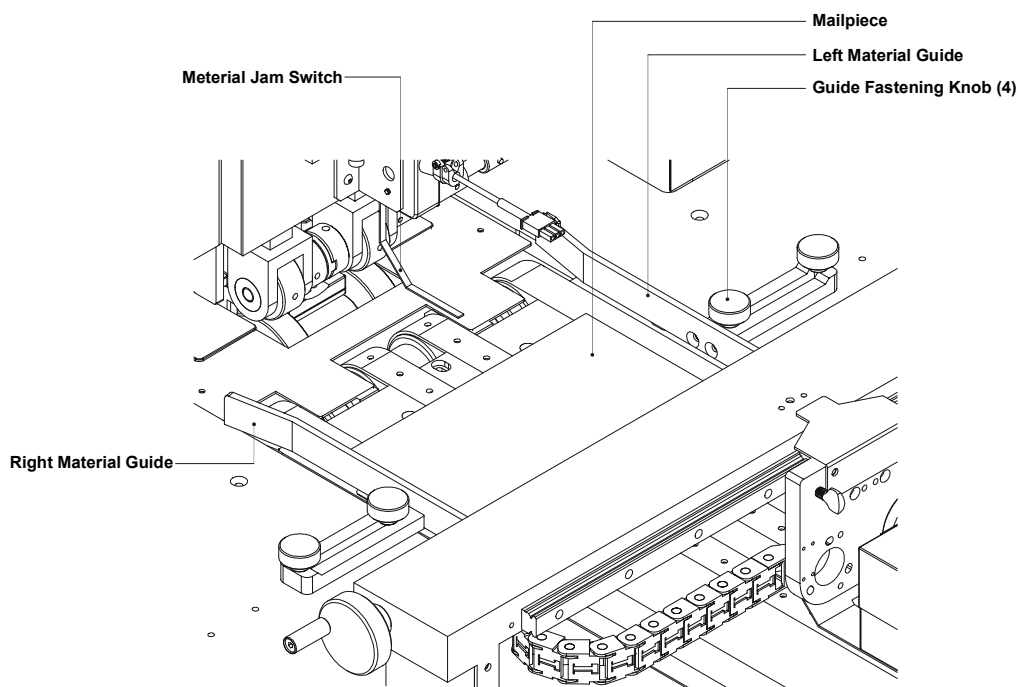
Figure 2-9: *Installing the Vacuum Feed Plate*



2.4 Material Side Guide Adjustments

Proper adjustment of the material side guides shown in **Figure 2-10** will permit dependable and accurate feeding of material so that they are correctly aligned when presented under the printhead(s). The objective of this section of the transport base is to straighten out any material that may come out of the feeder in a skewed manner. This will ensure that the image is properly placed. When adjustment of the side guides is performed, it is imperative that they not squeeze and retard the advancing material as this would result in incorrect print positioning. There should be approximately 1/16 to 1/8" from the edge of the material to the guide.

Figure 2-10: *Material Side Guides on the BK60B*



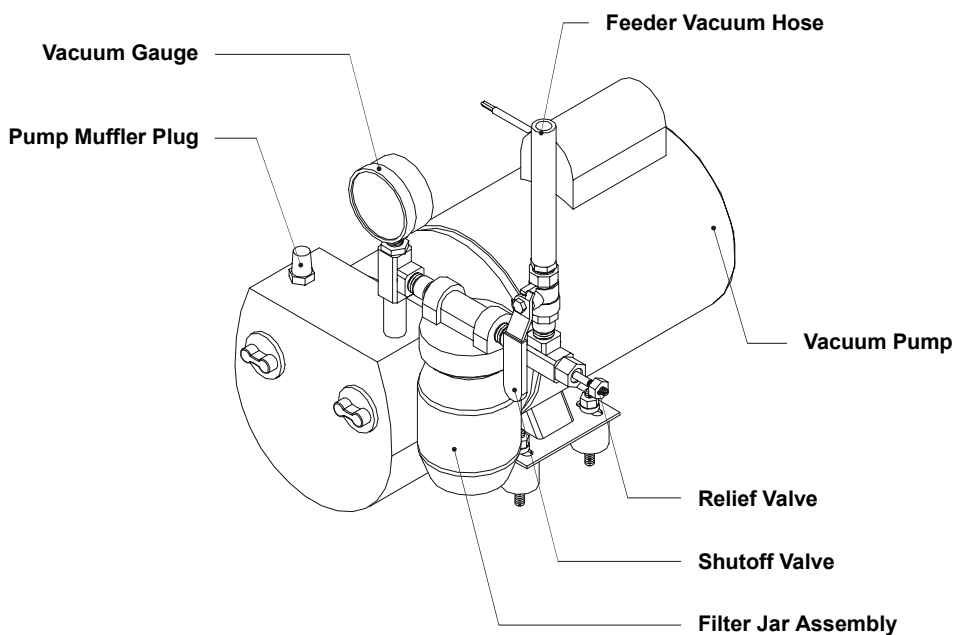
Note: If the material side guides are improperly set, the material may become trapped between them and/or cause a jam at the output of the feed rollers. If the material side guides are incorrectly set, the Material Jam switch may be activated resulting in a system stoppage.

In some cases, the side guides will need to be secured with one knob each (as opposed to two) depending on the size of the material.

2.5 Vacuum System Adjustments

The vacuum system consists of a Vacuum circuit-breaker switch, a centrifugal pump for the feeder, and a regenerative blower for the transport belts. In addition, the feeder pump system is equipped with a vacuum distribution block featuring a relief valve and vacuum gauge, and a hose leading to the feeder vacuum plate. Vacuum flow through the hose is regulated with a shutoff valve for light material (**Figure 2-11**).

Figure 2-11: *Feeder Vacuum Pump*



2.5.1 Feeder Vacuum Level Setting

Adjustments to the vacuum system are simple and accomplished quite readily by an operator. Most adjustment points are situated on the distribution block with filter replacement being done at the filter jar assembly. A vacuum pressure regulation in the range of 20 to 25 in. Hg is provided by the vacuum relief valve and is observed at the vacuum gauge. Should vacuum pressure remain persistently low even after filter replacement and relief valve adjustment, it may be necessary to replace the pump vanes. This change should only be performed by the factory or an authorized dealer.

Peak feeder performance is achieved when the vacuum level is set to its maximum, which is in the 20 - 25 in. Hg range. Adjustment is made via the vacuum relief valve located on the distribution block. In order to set the vacuum level to 25 in Hg:

1. Remove the front panel door to expose the vacuum pump and distribution block.
2. Close the shutoff valve by rotating it fully clockwise so that the valve handle points to the right (away from the vacuum pump).
3. Turn the vacuum pump ON with the **Vacuum** switch located on the instrument panel.
4. Take a vacuum level reading from the vacuum gauge. If it appears low (less than 20 in. Hg.), an adjustment of the vacuum relief valve will be required.
5. If adjustment is required, hold a flat screwdriver in the vacuum relief valve slot and rotate the nut in a clockwise direction in order to compress the spring. Keep rotating downward until maximum pressure (25 in Hg.) has been attained.

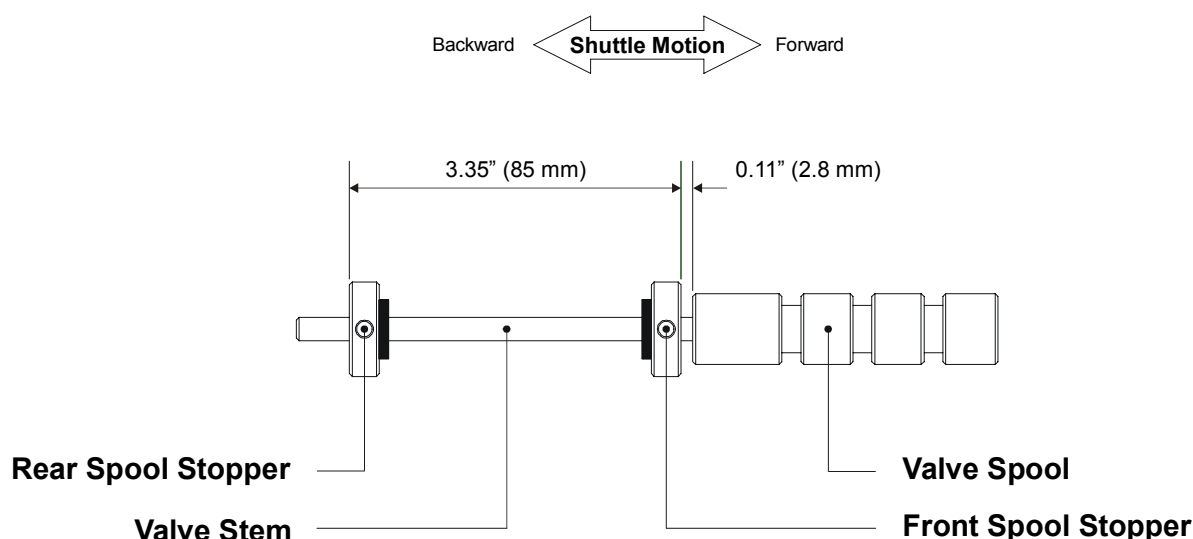
Note: If this adjustment does not result in an acceptable vacuum level (20 – 25 in Hg) and the filter has been replaced, the vacuum pump vanes may need replacing. This should only be done by an authorized technician.

If it appears that the vacuum pump vanes are worn, please contact your dealer or the factory for assistance.

2.5.2 Feeder Spool Valve Adjustments

The spool valve, which controls the vacuum flow to the vacuum feed plate, must be properly set to ensure optimum performance of the feeder station. The correct vacuum setting is such that when the shuttle plate is completely back, the vacuum is fully ON. Conversely, it must just go OFF when the leading edge of the material is 1/4" (6 mm) past the feed rollers.

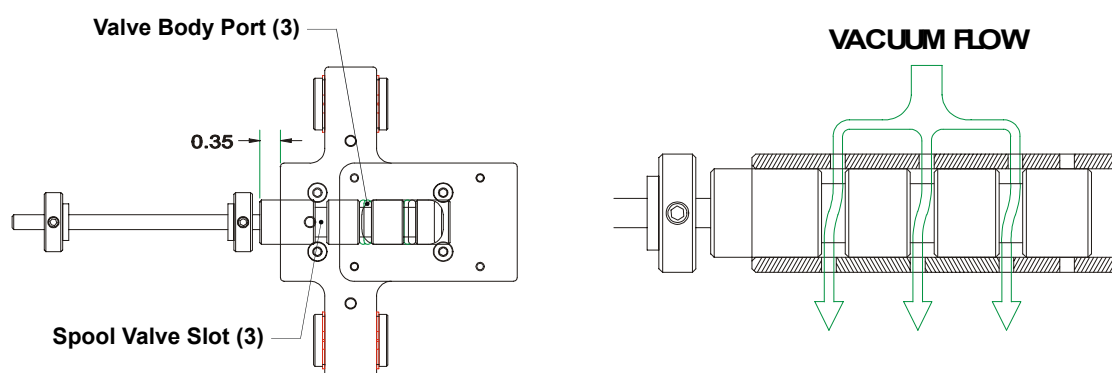
Figure 2-12: *Feeder Spool*



The spool valve controls the sequencing of the vacuum supply to the vacuum feed plate permitting proper material separation and dispensation. The front spool stopper regulates the vacuum turn ON time, which occurs when the shuttle feed plate is fully back. This causes the vacuum feed plate to "pull down" and separate the next piece from the stack. Vacuum supply begins when the shuttle feed plate is 1/8" (3mm) from the fully back position and is completely supplied at the fully back position. Once the vacuum is ON, it remains on until the rear spool stopper disengages it 1/4" past the center of the feed rollers. Improper setting of the front spool stopper will cause a partially obstructed vacuum port resulting in insufficient vacuum being supplied to the feeder.

The rear spool stoppers task is to shut OFF the vacuum after the front of the vacuum feed plate has past the center of the feed rollers by 1/4" (6 mm). The objective is to keep the vacuum supply ON until the shuttle feed plate has brought the separated piece into the feed rollers whereupon it is dispensed onto the transport belts. If vacuum is maintained too long, the material may be damaged as the feed rollers would attempt to advance it while the vacuum would continue to hold it down and act as a brake. Conversely, if the vacuum is not maintained ON long enough, the material might slip and cause a misfeed.

Figure 2-13: *Feeder Vacuum Valve in the Fully Back Position with End Port Blocked*



In order to adjust the front spool stopper (Vacuum ON setting):

1. Remove the vacuum feed plate.
2. Loosen both front and rear spool stoppers. The spool stopper screws should be accessed through the central pusher slot of the shuttle feed plate. If the screws are not aligned with the pusher slot, the feeder plate will have to be removed to access and rotate the spool such that the screws are visible from the top.
3. Adjust the front spool stopper as per the initial setting illustrated in **Figure 2-12**. Repeat for the rear spool stopper.
4. Rotate the handwheel until the shuttle feed plate is fully back. Observe the position of the spool valve's slot with respect to the corresponding valve body's port. The spool valve's slot should be centered over the upper and lower ports with no slot edges showing (**Figure 2-13**). If this is not so, the front spool stopper will have to be adjusted.
5. Loosen the front spool stopper screw with a 3/32" hex key.

6. Insert the $3/32"$ hex key in the rear spool stopper screw, and proceed to move the complete spool valve assembly until the spool valve's slot is centered over the upper and lower valve body ports. No spool valve slot edges should be visible.
7. With a $3/32"$ hex key, tighten the front spool stopper screw against the valve stem ensuring that the rubber washer and front spool stopper are resting against the Shuttle Slide Shaft Mount (P/N 330605).
8. Repeat step 4 to ensure that the front spool stopper is properly set. You can double-check this setting by measuring the distance by which the spool protrudes from the rear of the valve body. This measurement should be 0.35" (8.9 mm) as per **Figure 2-13**.

In order to adjust the rear spool stopper (vacuum OFF setting):

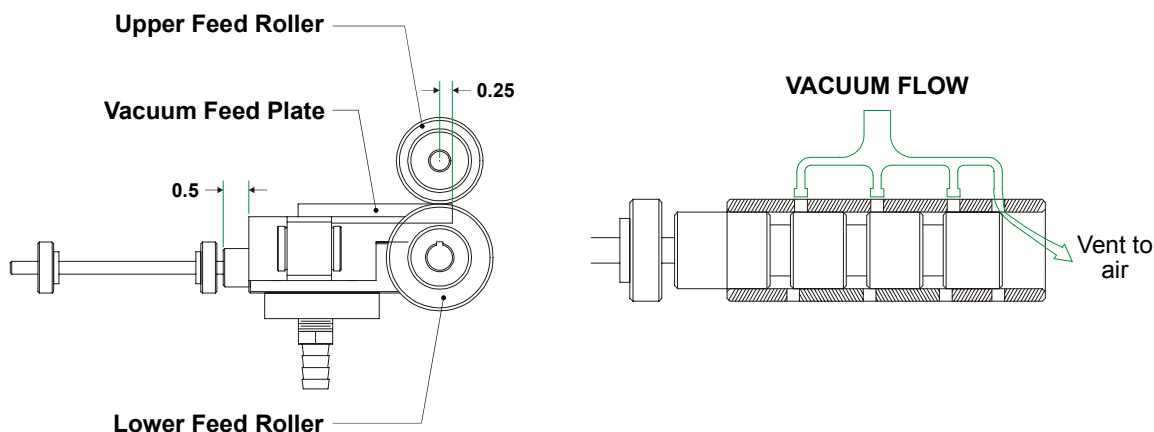
1. Once the proper position has been achieved for the front spool stopper, adjust the rear spool stopper such that the vacuum shuts off the instant the lead edge of the vacuum feed plate is $1/4"$ (6 mm) past the center of the feed rollers (**Figure 2-14**). With the initial rear spool stopper setting as per **Figure 2-12**, rotate the handwheel slowly until the vacuum is just OFF and is no longer supplied to the vacuum feed plate. Measure the position of the lead edge of the vacuum feed plate with respect to the center of the feed rollers.
2. If the vacuum shuts OFF too soon (the front of the vacuum feed plate position is less than $1/4"$), move the rear spool stopper backward the distance necessary to cause vacuum shutoff at $1/4"$. If the vacuum shuts OFF too late (the front of the vacuum feed plate position is greater than $1/4"$), then the rear spool stopper will have to be moved forward the distance necessary to cause vacuum shutoff at $1/4"$.
3. Once you have determined the amount of movement necessary and the direction in which the rear spool stopper should be moved, loosen the rear spool stopper screw with a $3/32"$ hex key.
4. Hold the spool valve assembly stationary by placing a $3/32"$ hex key in the front spool stopper screw.
5. Place another $3/32"$ hex key in the rear spool stopper screw and move it according to the distance determined in *step 2*. Ensure that the rubber washer and rear spool

- stopper are resting against the Shuttle Slide Shaft Mount (*P/N 330605*) and retighten the screw in the rear spool stopper when the distance has been achieved.
6. Cycle the machine by rotating the handwheel until the vacuum supply is just OFF. Observe the position of the lead edge of the vacuum feed plate with respect to the center of the feed rollers. The distance measured should be about 1/4". If this is not so, the rear spool stopper will have to be re-adjusted.
 7. Replace the vacuum feed plate.
 8. Cycle the machine with the handwheel and ensure that the vacuum sequencing is correct. If not "fine-tune" the settings as per the previous instructions until proper sequencing is achieved.

Note: Valve spool setting is very important to the smooth operation of the feeder station. Incorrect placement of the front and/or rear spool stopper will result in inconsistent or complete failure of the feeding operation.

An improper front spool stopper setting results in insufficient vacuum being supplied to the vacuum feed plate. The resulting lack of optimal vacuum supply may cause inconsistent material feeding because the vacuum feed plate may not be able to "pull down" and "hold onto" the bottom piece of material. If the rear spool stopper is improperly set, it will result in inconsistent or no material feeding since the vacuum feed plate is not depositing the front of the piece between the feed rollers. Damage of the material may also occur if the vacuum holds on too long to a piece after the feed rollers have engaged.

Figure 2-14: Feeder Vacuum Valve with End Port Fully Open



2.6 BK720 Friction Feeder

In order to use a Friction Feeder, the shuttle feeder must first be disconnected. This is done by removing the Feeder Bridge Assembly (300601A) and disconnecting the shuttle crank link (in 325603A) from the cam. Once this is done, the feeder shuttle plate should no longer oscillate.

The Friction Feeder is electrically connected through a 14-pin connector (JB3) on the left side of the base. This connector does not use the Start and Stop signals, but offers additional functions such as a Run signal and signals to allow the base to control the speed of the BK720 for automatic gap control. In this mode, the base will sense the gap between several successive mail pieces and regulate the speed of the BK720 to minimize this gap. The gap can be maintained over a wide range of printing speeds. This permits the system to maximize the operating efficiency, independent of the actual transport speed of the base.

The BK720 Feeder has been designed to take advantage of the special capabilities of the BK60B. Although the feeder can function as a stand-alone unit with its own ON/OFF switch and speed control potentiometer, its operating mode can be switched so that the Run function and the speed are under the control of the base. This allows the feeder to be synchronized to the speed of the base and also accommodates the Gap Control mode. In this mode (switch **S4** on the Base Interface Board must be set to *auto*), the BK60B will monitor the gap between successive mail pieces coming from the feeder and speed up or slow down the speed of the feeder to maintain a preset gap, regardless of the base's own transport speed.

Note: The stop function is not incorporated in the BK720 and therefore the S1 switch has to be set to *Disable* when a BK720 is used as a feeder.

2.7 Downstream Compatibility

Possible units which may be placed downstream from the printing base would be an extension table (BK701), or a tabber (BK530 or BK730). The required communication with a downstream device is carried out over the downstream connector (JB4, on the right side of the machine).

The DOWNSTREAM connector of the BK6OB is configured to communicate with the UPSTREAM connector of the downstream unit. The control signal for a downstream drier is also provided on this connector.

A separate 7-pin connector (JB5) is provided for a Buskro Conveyor. This connector only has a provision for a *Stop* signal from the conveyor to the base. However, the speed control circuit for the conveyor is actually part of the base and thus the drive voltage for the conveyor motor also has to be sent over the connector. This permits the base to provide such features as Stack Control (i.e. providing gaps between certain stacks of mailpieces for sorting or bundling purposes).

If there is no unit downstream from the BK6OB (other than a conveyor), then the sensing circuit for the *Stop* button has to be set to *DISABLE*, or the base cannot run. This function is performed by switch **S2** (**Figure 2-3**), the *DOWNSTREAM DISABLE/ENABLE* switch on the Base Interface Board.

The same function for the conveyor is provided by **S3**, the *AUX DISABLE/ENABLE* switch. If a conveyor is not present in the system, **S3** has to be set to *DISABLE*.

2.8 Maintenance Schedule

The maintenance schedule table presented below applies to equipment which is operated daily on an 8-hour basis. If the equipment is used more frequently, the maintenance schedule must be adjusted accordingly.

Table 2-3: *Maintenance Schedule Table*

Period	Maintenance Function
Daily	<p>Wipe table surface clean of paper dust and other accumulated debris.</p> <p>Remove the front door and clean any debris, which may have fallen into the machine.</p> <p>Check the vacuum filters. If they appear to be clogged, remove them from the jars and clean them. If they are beyond cleaning, replace the vacuum filters (P/N 802036).</p> <p>Wipe away any ink, which may have settled on the tabletops, belts, and rollers.</p>
Monthly	<p>The following operations should be performed with the shuttle feed plate removed for access (Reference 325604A):</p> <p>Remove vacuum feed plate and clean the vacuum valve assembly removing any dust, which may be present. This may best be accomplished with a small compressor (Section 2.3.5).</p> <p>Remove the feeder shuttle plate and clean the exposed shuttle mechanism assembly. Apply a few drops of light oil to the hardened shuttle slide shafts along the contact area of the linear bearings (100007H of 325603A).</p> <p>Using a grease gun with a flexible nozzle, apply grease to the rod ends (200009 of 325603A).</p> <p>Clean vacuum lines and fittings with compressed air.</p>
Semi-Annually	<p>The following operations should be performed with the Transport Belt Tabletop Ass'y removed for access (9102403A):</p> <p>Grease the two bearings holding the transport driveshaft. These bearings are equipped with grease nipples. Use any commercially available grease (500300 in 100601A).</p> <p>Examine all mechanical drive components for wear. Replace if necessary.</p> <p>Examine the table belts and feed rollers for wear. Replace if necessary.</p>

Note: The availability of a small air compressor is recommended. Compressed air is useful in removing debris and is indispensable in cleaning out the vacuum systems.

3.1 Introduction

In addition to being designed as a stand-alone controller, the BK700 controller was also designed to work together with the BK7IB and BK6OB bases as a complete turnkey unit. Although the BK700 is not mechanically latched to the BK6OB as it is with the BK7IB, provisions have been made to electrically connect the two systems. This includes a receptacle to supply 115 VAC, an I/O connector for communication, a counter connector, and a photocue connector. The BK6OB is also equipped with two preheater power receptacles (a preheater blower is still required when preheaters are used and can be easily added).

3.2 Cable Connections

To electrically integrate the BK700 controller to the BK6OB base, there are two options available. The recommended option is to install an I/O ribbon cable from the I/O connector on the BK6OB base to the I/O connector on the BK700 controller. Installing this cable will transmit the encoder, photocue, jam, cycle, stack, and stop signals from the base to the BK700 controller. The counter connector on the BK700 and the BK6OB must also be connected together.

In order to use this option, the six-pin cable shown in **Figure 3-1** must be disconnected from the power box. It is normally connected from the power box to the Field Connection Board (FCB) in order to power the board. Once this cable is disconnected, an equivalent six-pin cable (pre-installed and internally routed in the BK700 controller) must be plugged into the same connector on the power box previously used by the Field Connection Cable.

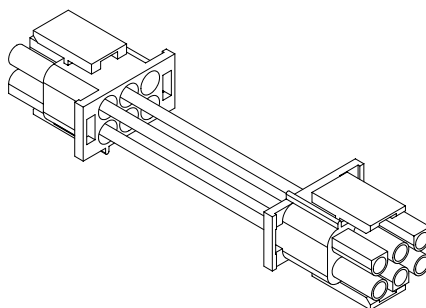


Figure 3-1: *Field Connection Cable*

The second option is to use the FCB inputs and outputs to integrate the controller to the base. This method involves connecting individual cables from the encoder, photocue, jam, and cycle connectors on the FCB interface to the corresponding sensors on the base. Special wiring must be completed to integrate the stack signal and the stop signal, which makes this option undesirable compared to the previous option.

Finally, the BK700 can be powered by connecting the controller power cable into the 115V outlets on the rear of the BK60B base.

The interconnect cables required to connect the BK700 to the BK60B are described in **Table 3-1**.

Table 3-1: *BK60B Interconnect Cables*

Connection	Interconnect Cable	Description
Counter	9102547A	Connect the system Life Counter.
Controller I/O	9102043A	Communication between the BK60B and the BK700.
Photocue	9100727A	Detect piece to print on.
Preheater #1	9102548A	Used to preheat paper before printing (Option for Elite).
Preheater #2	9102548A	Used to preheat paper before printing (Option for Elite).

Assembly Drawings

Appendix A

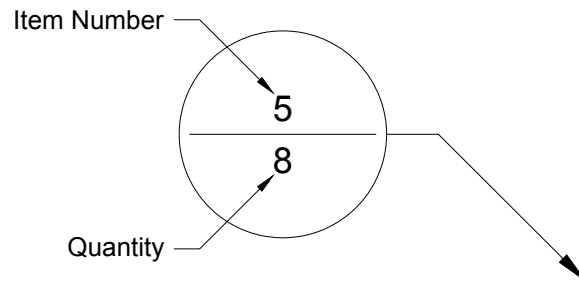
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Balloon Annotation and Parts Listing



Item	Part Number	Quantity	Description	Reference
1				
2				

The following is a description of how to interpret the information in this section:

Item:

This column indicates the item number used for each unique part in an assembly drawing. It is matched with the top number in the balloon pointing at the associated part.

Part Number:

This column represents the Buskro part number.

Quantity:

This represents the total number of a given part in an assembly. It is matched with the bottom number in the balloon pointing at the associated part.

Description:

This column contains a brief description of the part.

Reference:

This column indicates the page location for sub-assemblies.

Table A-1: *Buskro 6 Series Offline Base, R2 (BK6OB-2)*

Item	Part Number	Quantity	Description	Reference
1	300603A	1	Base Mechanical Assembly	Page A-12
2	325604A	1	Tabletop Assembly, BK60B	Page A-19
3	402510	4	Screw, BHCS, 6-32 UNC x 1/4"	
4	404040	4	Screw, FHCS, 10-32 UNF x 5/8"	
5	404510	31	Screw, BHCS, 10-32 UNF x 1/4"	
6	404530	6	Screw, BHCS, 10-32 UNF x 1/2"	
7	405275	6	Screw, SHCS, 1/4-20 UNC x 1 1/4"	
8	407275	4	Screw, SHCS, 3/8-16 UNC x 1 1/4"	
9	446000	2	Slide Latch – A3	
10	615102	1	Tie Mount	
11	615141	1	Lashing Tie	
12	615313	1	Cam Lock, 5/8"	
13	700607	1	Rear Door Assembly	
14	700609	1	Front Door	
15	700610	1	Cover, Instrument Panel	
16	700616	1	Rear Pulley Cover	
17	700617	1	Shuttle Feeder Cover	
18	700620	1	Right Rear Door	
19	9100240	1	Cover, Rear Top, BK60B	
20	9100322	1	Outfeed Roller Cover	
21	9102403A	1	Tabletop, Transport Assembly, BK60B	Page A-37
22	9102430A	1	Plate, Rear Connector Assembly, BK60B	Page A-39
23	9102445A	1	Base Cabinet Assembly	Page A-48

Figure A-1: *Buskro 6 Series Offline Base, R2 (BK6OB-2)*

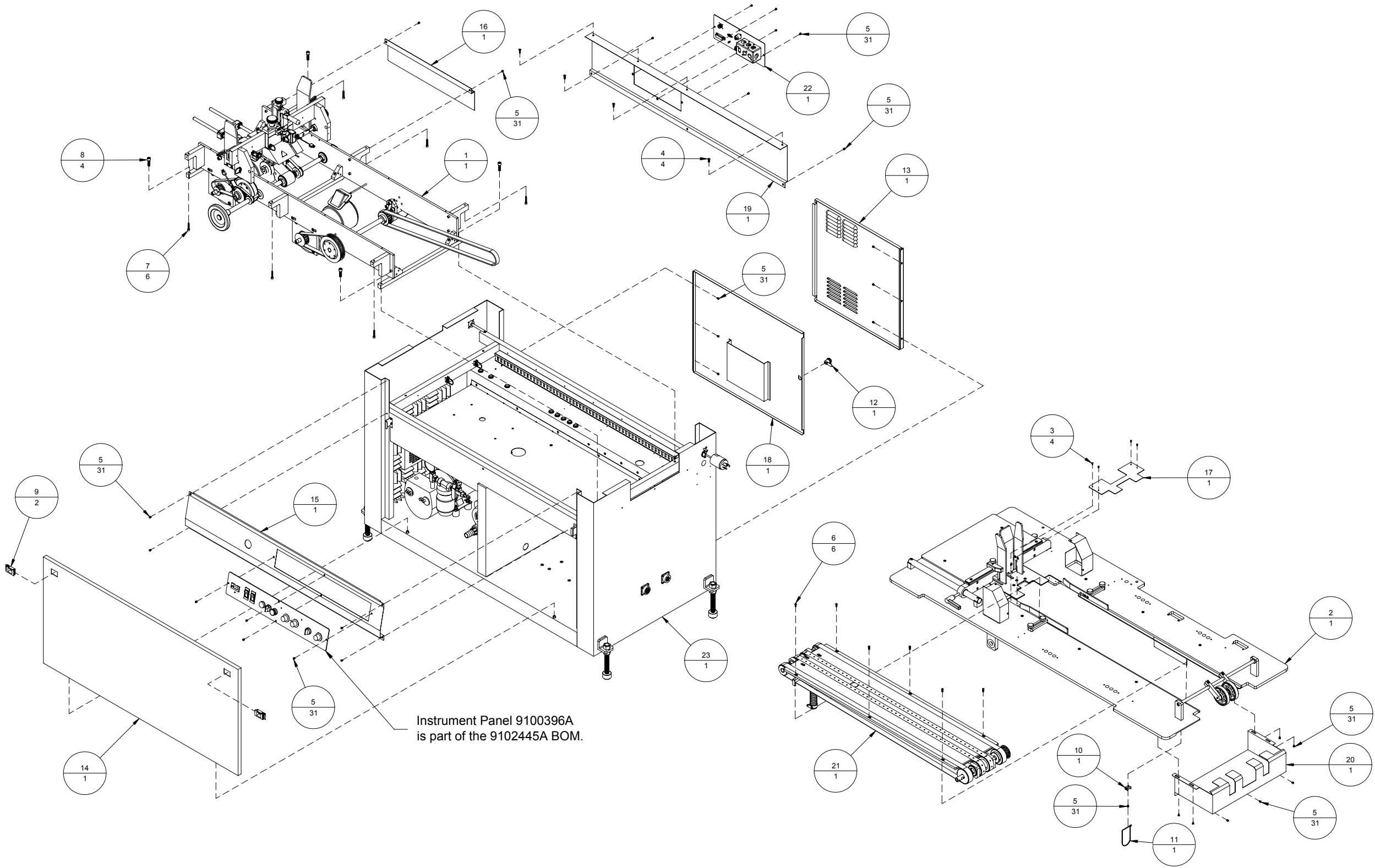


Table A-2: *Outfeed Roller Shaft Assembly (100314A)*

Item	Part Number	Quantity	Description	Reference
1	100314	1	Outfeed Roller Shaft	
2	106182	2	Pressure Roller	
3	203302	2	Outfeed Roller Arm	
4	330309	2	Outfeed Roller Bracket	
5	405250	2	Screw, SHCS, 1/4-20 UNC x 3/4"	
6	416170	2	Shoulder Bolt, 3/8" x 1", (5/16-18)	
7	500020	6	Bearing, 3/8" I.D.	

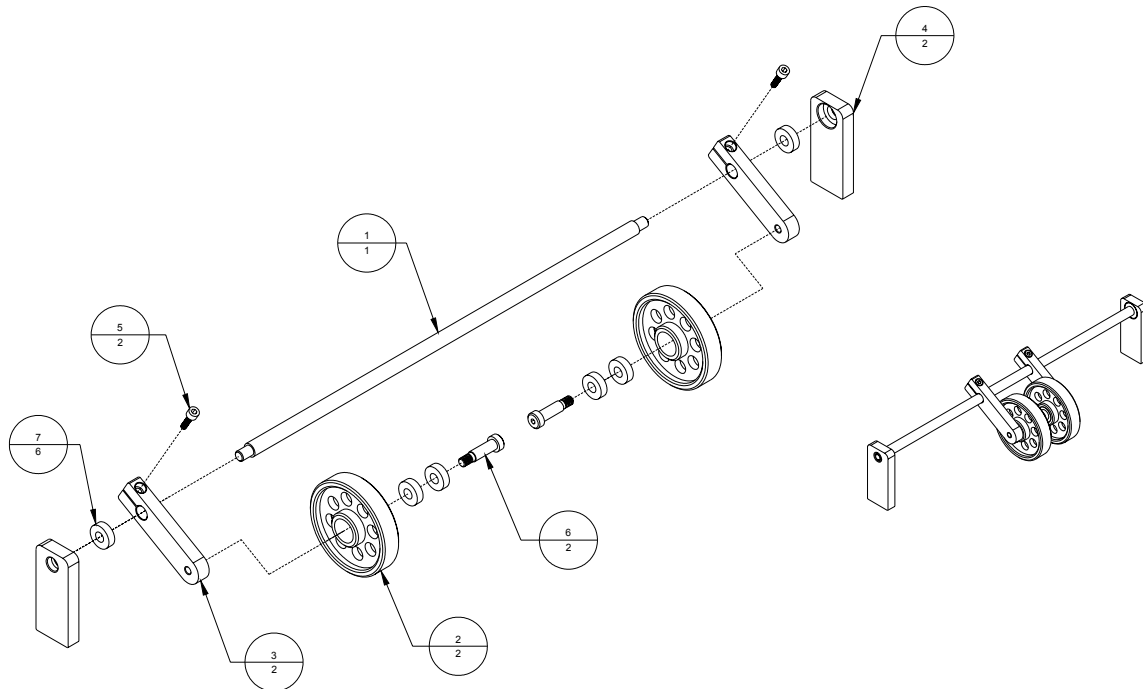
Figure A-2: *Outfeed Roller Shaft Assembly (100314A)*

Table A-3: *Transport Driveshaft Assembly (100601A)*

Item	Part Number	Quantity	Description	Reference
1	100601	1	Transport Driveshaft	
2	116301	1	Pulley, 18LB075 x $\frac{3}{4}$ "	
3	116538	1	Pulley, QD40LH075	
4	116600	1	Pulley, 24LB075 x $\frac{3}{4}$ "	
5	127600	1	Bushing, Split Taper, $\frac{3}{4}$ " ID	
6	404830	2	Screw, SHSS, 10-32 UNF x $\frac{1}{2}$ "	
7	405810	2	Screw, SHSS, $\frac{1}{4}$ -20 UNC x $\frac{1}{4}$ "	
8	407270	6	Screw, SHCS, 3/8-16 UNC x 1"	
9	430250	3	Woodruff Key, #606, $\frac{3}{16}$ " x $\frac{3}{4}$ "	
10	439020	6	Lockwasher, 3/8" ID	
11	500300	2	Bearing, UCFK204-12S, $\frac{3}{4}$ " ID	
12	802204	2	Grease Fitting, 90 Degree $\frac{1}{4}$ -28 UNF	

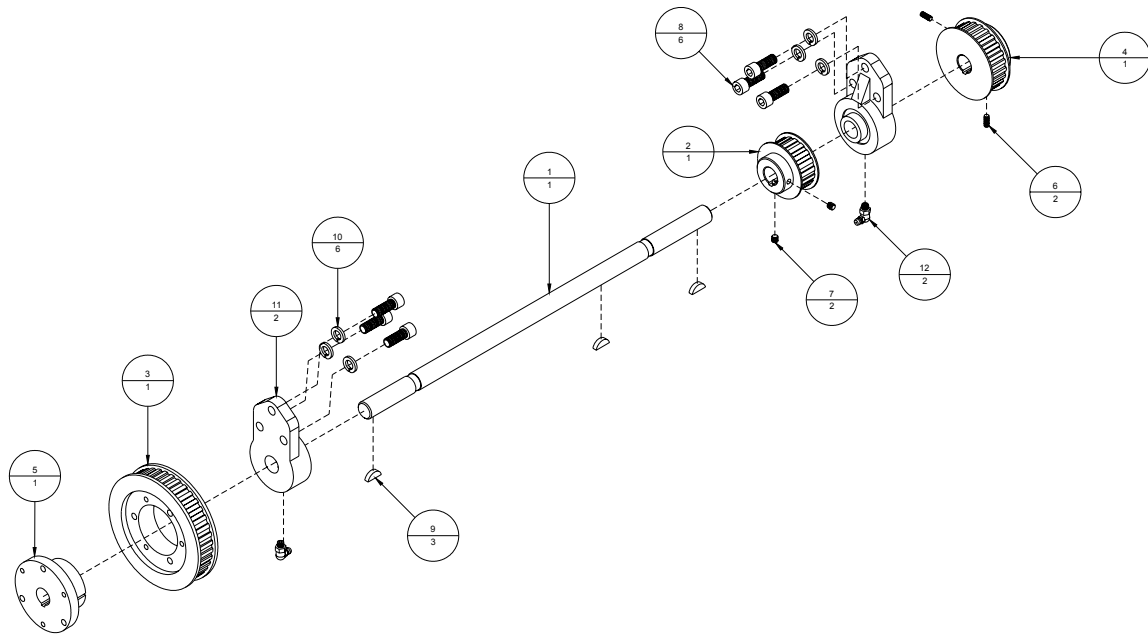
Figure A-3: *Transport Driveshaft Assembly (100601A)*

Table A-4: *Feed Roller Driveshaft Assembly (100603A)*

Item	Part Number	Quantity	Description	Reference
1	100603	1	Feed Roller Driveshaft	
2	100604	1	Lower Roller Shaft	
3	106602	2	Lower Feed Roller	
4	116603	1	Pulley, 14LF050 x 3/4"	
5	116604	1	Pulley, 14LF050 x 5/8"	
6	120311	1	Timing Belt, 124L050	
7	203600	1	Lower Feed Roller Block	
8	203601	1	Arm, Hopper Extension	
9	403230	2	Screw, SHCS, 8-32 UNC x 1/2"	
10	404805	4	Screw, SHSS, 10-32 UNF x 1/8"	
11	404810	4	Screw, SHSS, 10-32 UNF x 1/4"	
12	420009	1	Nut, 10-24 UNC	
13	430150	1	Woodruff Key, #406, 1/8" x 3/4"	
14	430250	4	Woodruff Key, #606, 3/16" x 3/4"	
15	439009	1	Lockwasher, No. 10	
16	446330	2	Spacer Washer, 5/8" ID x 0.031" Thick	
17	500040	2	Bearing, R10, 5/8" ID	
18	500055	2	Bearing, UBR-204-12S, 3/4" ID	
19	510040	1	Cam Follower, 1/2" OD	

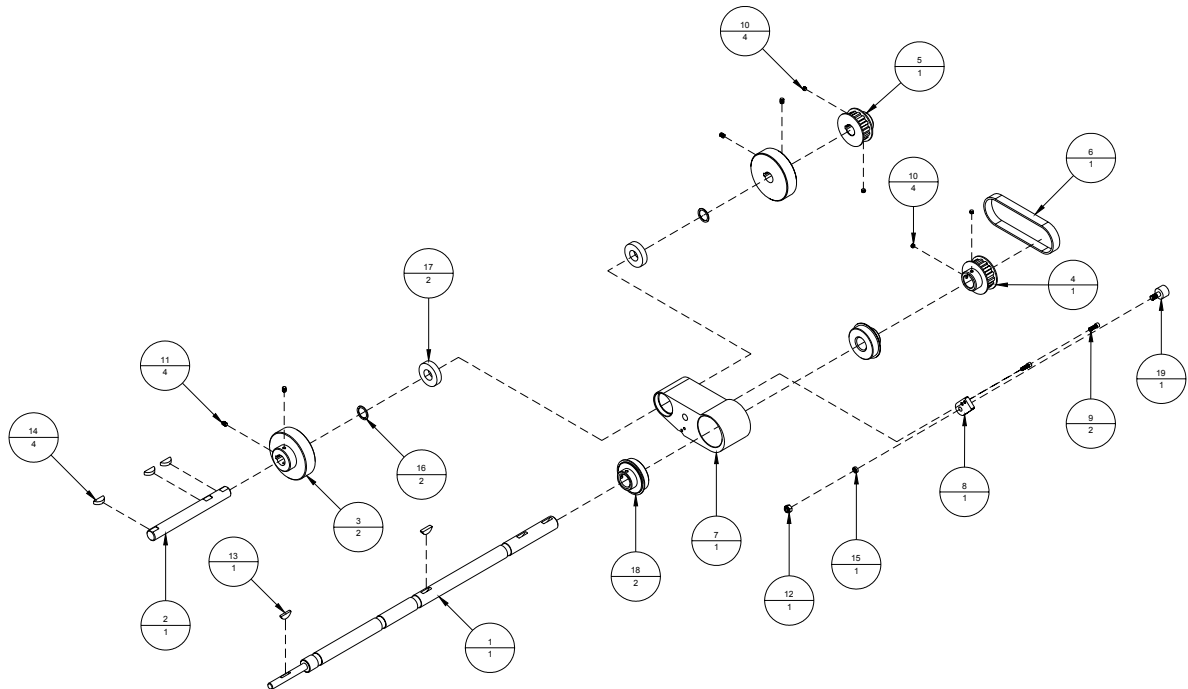
Figure A-4: *Feed Roller Driveshaft Assembly (100603A)*

Table A-5: *Transport Motor Assembly (116302A)*

Item	Part Number	Quantity	Description	Reference
1	116302	1	Pulley, 18LB075 x 5/8"	
2	325601	1	Motor Mount Plate	
3	405820	2	Screw, SHSS, 1/4-20 UNC x 3/8"	
4	407230	4	Screw, SHCS, 3/8-16 UNC x 1/2"	
5	606034	65"	Cable, #16-3, SJOW-A	
6	609101	2	Marette, Orange, 14-22	
7	609114	1	Ring Tongue Terminal, #10	
8	615131	1	Cable Clamp, 3/8", Metal	
9	800002	1	Motor, 1/2 H.P., 180 VDC	

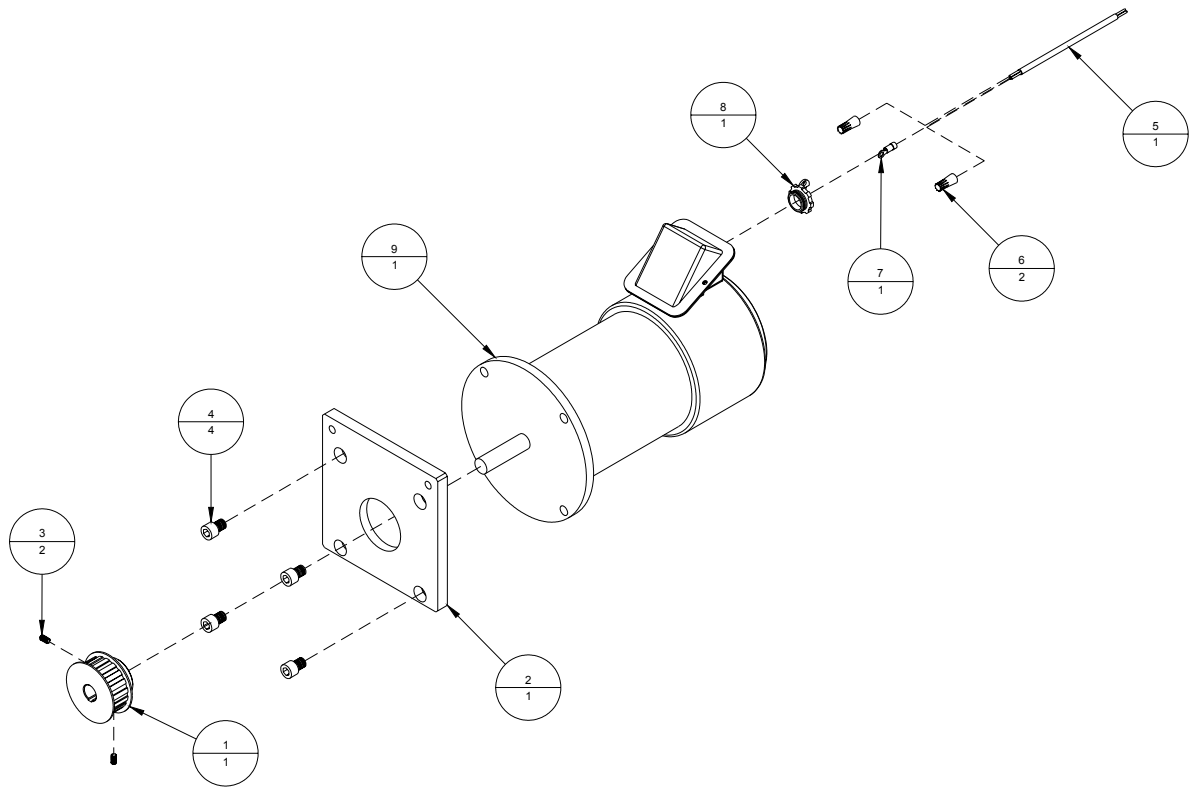
Figure A-5: *Transport Motor Assembly (116302A)*

Table A-6: *Left Material Guide Assembly (212300A)*

Item	Part Number	Quantity	Description	Reference
1	212300	1	Left Material Guide	
2	330321	1	Side Guide Bracket	
3	404030	2	Screw, FHCS, 10-32 UNF x ½"	

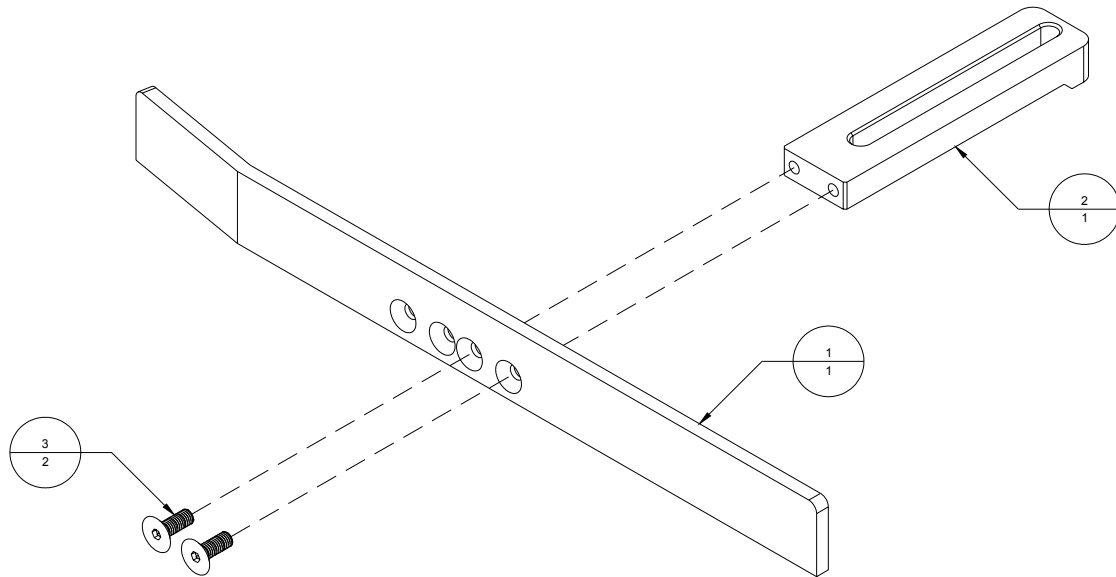
Figure A-6: *Left Material Guide Assembly (212300A)*

Table A-7: *Right Material Guide Assembly (212301A)*

Item	Part Number	Quantity	Description	Reference
1	212301	1	Right Material Guide	
2	330321	1	Side Guide Bracket	
3	404030	2	Screw, FHCS, 10-32 UNF x ½"	

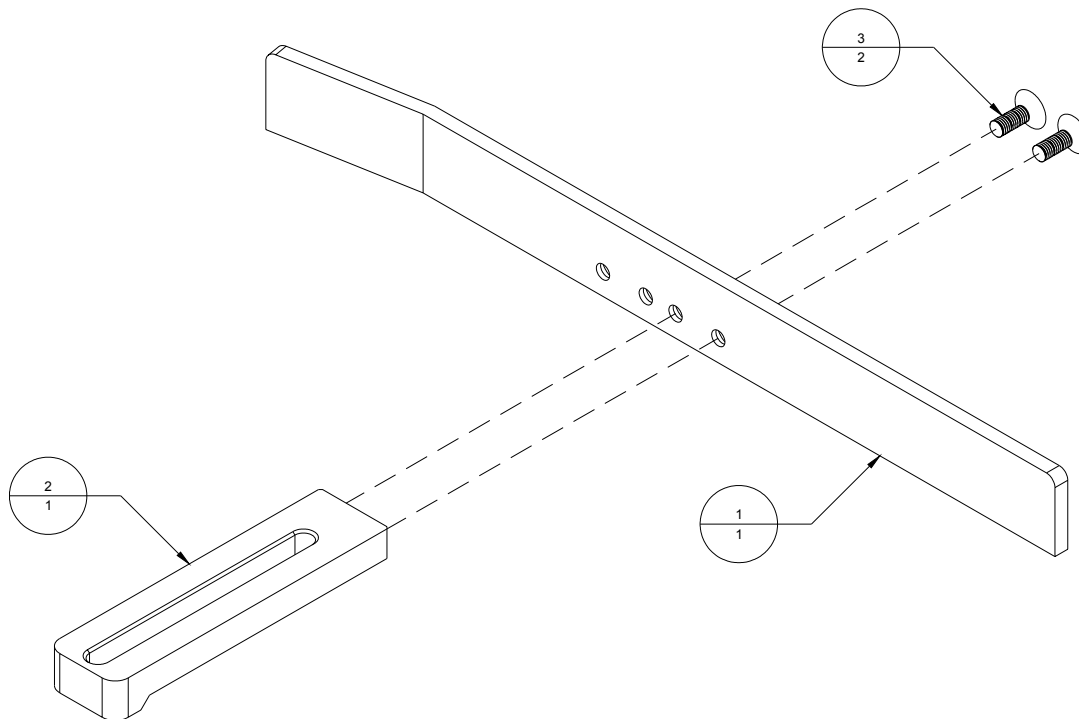
Figure A-7: *Right Material Guide Assembly (212301A)*

Table A-8: Feeder Bridge Assembly (300601A)

Item	Part Number	Quantity	Description	Reference
1	100018H	1	Upper Roller Driveshaft	
2	100019H	1	Right Upper Roller Shaft	
3	100020H	1	Left Upper Roller Shaft	
4	106007H	2	Upper Feed Roller	
5	116533	1	Pulley, 12LF050 x R6	
6	116607	1	Pulley, 12LF050 x 3/8"	
7	122006	1	Coupling Spider	
8	122007H	2	Coupling Collar	
9	122010HA	1	Universal Assembly	
10	123601	1	Shoulder Bolt Spacer	
11	131020	1	Collar, 3/8" ID	
12	206010	2	Side Guide Locking Lever	
13	206200	1	Release Lever	
14	209007	2	Upper Feed Roller Spring	
15	212006	2	Side Guide Clamp Lock	
16	212009H	2	Upper Roller Holder	
17	212011H	1	Material Gate	
18	212600	1	Bridge Slide Mount	
19	300601	1	Left Bridge Frame	
20	300606	1	Right Bridge Frame	
21	310600	1	Mounting Block, Feeder Bridge	
22	330007H	2	Upper Roller Adjuster	
23	330008H	1	Bridge Bearing Block	
24	330011H	1	Material Gate Block	
25	330604	1	Quick Release Bracket	
26	330610	1	Quick Release Anchor	
27	340006H	2	Material Gate Slide Spacer, 3/4" x 1/8"	
28	340007H	2	Side Guide Rail Spacer, 3/4" x 1/8"	
29	340008H	2	Side Guide Rail, 1" x 1/8"	
30	340009H	2	Material Gate Slide	
31	340600	1	Gate Adjuster Plate	
32	402220	2	Screw, SHCS, 6-32 UNC x 3/8"	
33	402310	4	Screw, PHMS, 6-32 UNC x 1/4"	
34	402370	2	Screw, PHMS, 6-32 UNC x 1"	
35	402510	5	Screw, BHCS, 6-32 UNC x 1/4"	
36	404030	14	Screw, FHCS, 10-32 UNF x 1/2"	
37	404240	3	Screw, SHCS, 10-32 UNF x 5/8"	
38	404810	5	Screw, SHSS, 10-32 UNF x 1/4"	
39	404820	4	Screw, SHSS, 10-32 UNF x 3/8"	
40	405250	4	Screw, SHCS, 1/4-20 UNF x 3/4"	
41	405270	9	Screw, SHCS, 1/4-20 UNC x 1"	
42	405295	2	Screw, SHCS, 1/4-20 UNC x 3 1/2"	
43	405805	1	Screw, SHSS, 1/4-20 UNC x 1/8"	
44	406280	1	Screw, SHCS, 5/16-18 UNC x 1 1/2"	
45	416180	1	Shoulder Bolt, 3/8" x 1 1/2" (5/16-18 UNC)	
46	429009H	1	Gate Adjustment Screw	
47	430150	1	Woodruff Key, #406, 1/8" x 3/4"	
48	436050	2	Spring Pin, 1/8" Dia. x 3/4"	
49	436315	3	Dowel Pin, 1/4" Dia. x 1 1/2"	
50	437038	1	Retaining Ring, 3/8" ID, External	

Item	Part Number	Quantity	Description	Reference
51	438007H	2	Upper Roller Knob	
52	438008	2	Upper Roller Locknut	
53	438010	1	Knob, Gate Adjustment	
54	438171	1	Thumbscrew, 10-32 UNF x 3/8"	
55	439015	1	Lockwasher, 5/16" ID	
56	440015	1	Washer, 5/16" ID	
57	440021	1	Brass Washer, 3/8" ID	
58	442530	2	Spacer Washer, 1/4" ID x 0.032" Thick	
59	443815	1	Spacer Washer, 3/8" ID x 0.015" Thick	
60	443830	3	Spacer Washer, 3/8" ID x 0.031" Thick	
61	500020	8	Bearing, R6, 3/8" ID	
62	603020	1	Jam Switch Assembly	
63	615005	1	Microswitch Bracket	
64	615101	4	Tie Mount	
65	615140	4	Lashing Tie	
66	707007H	1	Right Side Guide	
67	707008H	1	Left Side Guide	
68	707009	2	Side Guide Bottom Plate	
69	9100090	1	Feed Roller Cover	
70	9100869	1	Label, Hand Entanglement	

Figure A-8: *Feeder Bridge Assembly (300601A)*

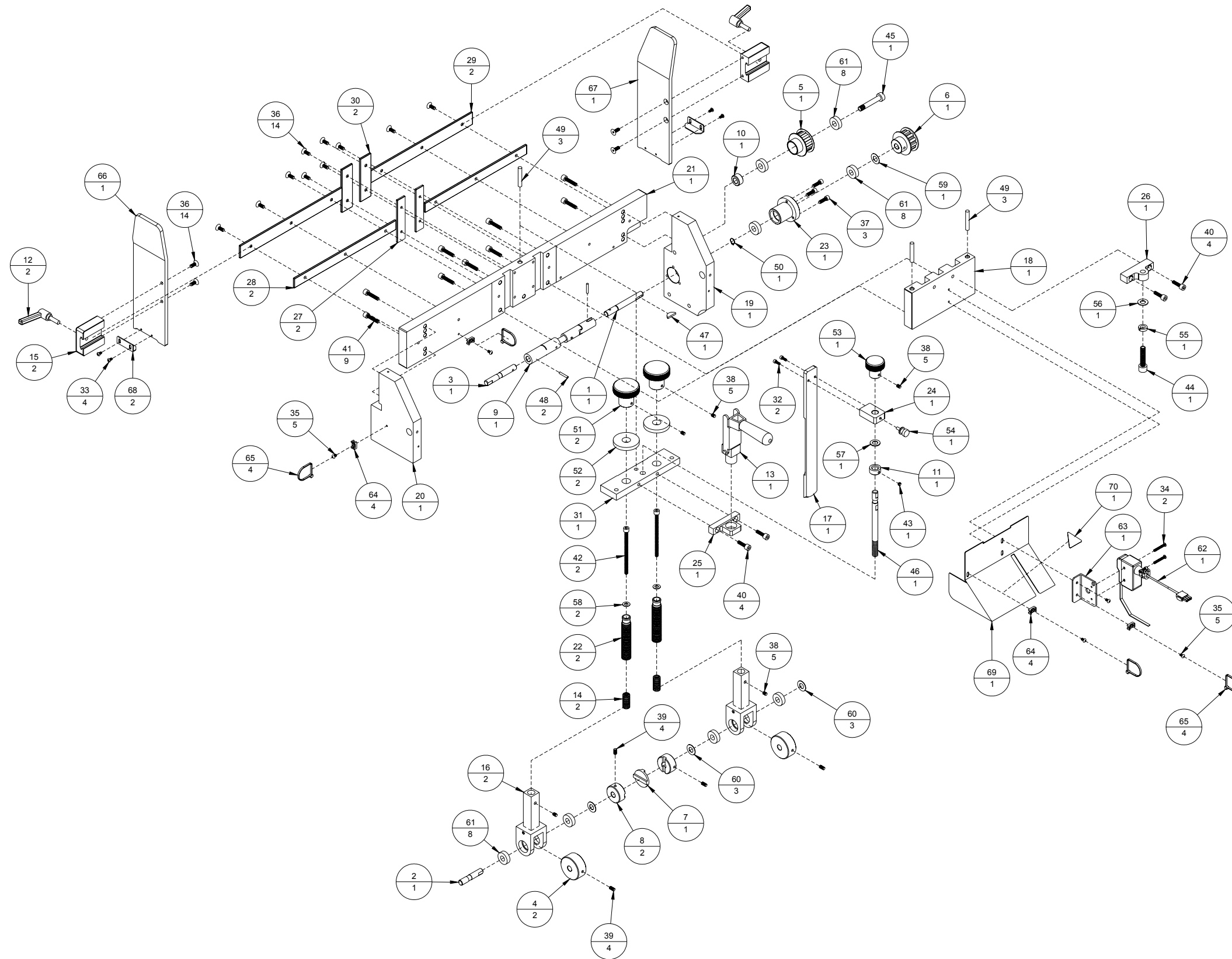


Table A-9: *Sideframe Assembly (300602A)*

Item	Part Number	Quantity	Description	Reference
1	300602	1	Base Left Side Frame	
2	300603	1	Base Right Side Frame	
3	300604	2	Frame Mount Bar	
4	300605	1	Middle Frame Spacer	
5	310322	6	Bracket, Angle	
6	310601	5	Tabletop Support	
7	310602	1	Middle Tabletop Support	
8	405250	16	Screw, SHCS, 1/4-20 UNC x 3/4"	
9	405270	14	Screw, SHCS, 1/4-20 UNC x 1"	
10	500055	2	Bearing, UBR-204-12S, 3/4" ID	

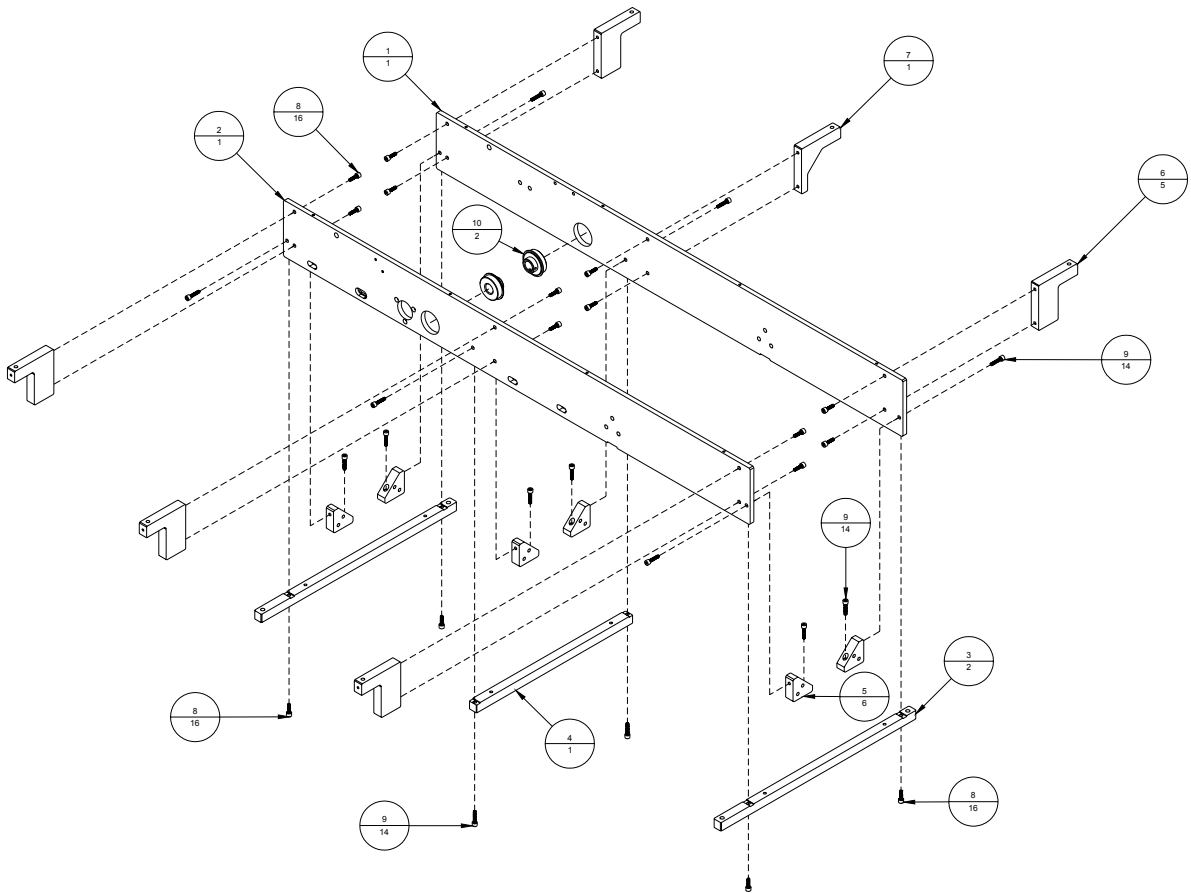
Figure A-9: *Sideframe Assembly (300602A)*

Table A-10: Base Mechanical Assembly (300603A)

Item	Part Number	Quantity	Description	Reference
1	100601A	1	Transport Driveshaft Assembly	Page A-4
2	100602	1	Shuttle Crankshaft	
3	100603A	1	Feed Roller Driveshaft Assembly	Page A-5
4	100605	1	Handwheel Coupling	
5	109050	1	Sensor Cam	
6	109600	1	Lower Roller Hopper Cam	
7	116008H	1	Pulley, 16XL037 x 3/8"	
8	116213	1	Pulley, 16LF075 x 3/4"	
9	116302A	1	Transport Motor Assembly	Page A-6
10	116533	1	Pulley, 12LF050 x R6	
11	116601	1	Pulley, 36LH075	
12	116602	1	Pulley, 48XLB036 x 3/4"	
13	116606	1	Pulley, 39LB050 x 3/4"	
14	120212	1	Timing Belt, 120XLB037	
15	120332	1	Timing Belt, 255L075	
16	120336	1	Timing Belt, 450L075	
17	120360	1	Timing Belt, 600L075	
18	120604	1	Double Gearbelt, D240L050	
19	120605	1	Timing Belt, 270L075	
20	123600	1	Crankshaft Spacer	
21	123601	1	Shoulder Bolt Spacer	
22	127004	1	Handwheel	
23	127302	1	Handwheel Shaft	
24	127304	1	Handwheel Shaft Collar	
25	127314	1	Pulley Hub	
26	300601A	1	Feeder Bridge Assembly	Page A-9
27	300602A	1	Sideframe Assembly, BK60B	Page A-11
28	325601A	1	Shuttle Motor Assembly	Page A-16
29	325603A	1	Shuttle Feeder Assembly	Page A-17
30	330004H	1	Crankshaft Housing	
31	330606	1	Idler Pulley Block	
32	403807	2	Screw, SHSS, 8-32 UNC x 3/16"	
33	404510	2	Screw, BHCS, 10-32 UNF x 1/4"	
34	404807	2	Screw, SHSS, 10-32 UNF x 3/16"	
35	404810	3	Screw, SHSS, 10-32 UNF x 1/4"	
36	404820	2	Screw, SHSS, 10-32 UNF x 3/8"	
37	405230	3	Screw, SHCS, 1/4-20 UNC x 1/2"	
38	405240	3	Screw, SHCS, 1/4-20 UNC x 5/8"	
39	405250	2	Screw, SHCS, 1/4-20 UNC x 3/4"	
40	405550	2	Screw, BHCS, 1/4-20 UNC x 3/4"	
41	405810	1	Screw, SHSS, 1/4-20 UNC x 1/4"	
42	405850	2	Screw, SHSS, 1/4-20 UNC x 3/4"	
43	407250	8	Screw, SHCS, 3/8-16 UNC x 3/4"	
44	407550	1	Screw, BHCS, 3/8-16 UNC x 3/4"	
45	416180	1	Shoulder Bolt, 3/8" x 1 1/2" (5/16-18 UNC)	
46	430250	4	Woodruff Key, #606, 3/16" x 3/4"	
47	437050	1	Retaining Ring, 1/2" ID, External	
48	439020	6	Lockwasher, 3/8" ID	
49	445015	1	Spacer Washer, 1/2" ID x 0.015" Thick	
50	446330	1	Spacer Washer, 5/8" ID x 0.031" Thick	

Item	Part Number	Quantity	Description	Reference
51	500020	2	Bearing, R6, 3/8" ID	
52	500040	2	Bearing, R10, 5/8" ID	
53	500213	1	Bearing, One Way, 3/4" ID x 1" OD	
54	500600	1	Bearing, One Way, 1/2" ID x 3/4" OD	
55	630004A	1	Cycle Proximity Switch Assembly	Page A-30
56	706611	1	Cycle Switch Bracket	

Figure A-10: Base Mechanical Assembly (300603A)

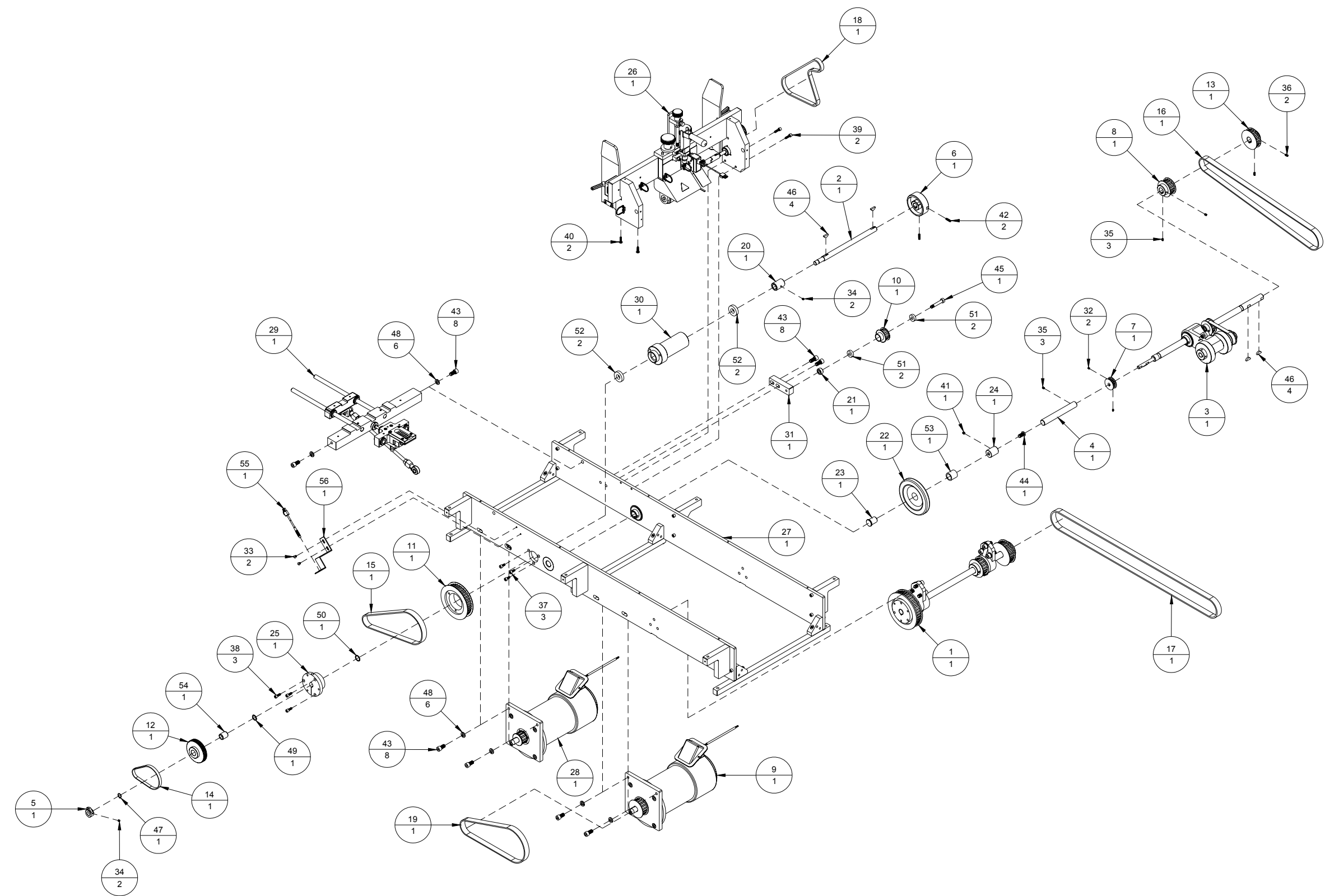


Table A-11: Rear Table Assembly (310340A)

Item	Part Number	Quantity	Description	Reference
1	100344	1	Rear Table Shaft	
2	100606	2	Material Lift Pin	
3	206011	1	Rear Table Locking Lever	
4	212606	1	Left Side Guide Block	
5	212607	1	Right Side Guide Box	
6	310340	1	Rear Table Crossmember	
7	325345	1	Rear Table	
8	330341	2	Rear Table Shaft Block	
9	330342	1	Rear Table Clamp Block	
10	330344	2	Rear Table Support	
11	404030	8	Screw, FHCS, 10-32 UNF x ½"	
12	404050	3	Screw, FHCS, 10-32 UNF x ¾"	
13	404230	2	Screw, SHCS, 10-32 UNF x ½"	
14	404530	2	Screw, BHCS, 10-32 UNF x ½"	
15	405270	4	Screw, SHCS, ¼-20 UNC x 1"	
16	405285	2	Screw, SHCS, ¼-20 UNC x 2"	
17	438110A	2	Side Guide Knob Assembly	Page A-21
18	442530	3	Spacer Washer, ¼ ID x 0.32" Thick	
19	505061	1	Bushing, 1" ID x 1 ¼" OD x 1" Long	
20	706342	1	Rear Table Rail	
21	706343	1	Rear Table Tail Spacer	
22	707011H	1	Rear Table Guide	
23	707341	1	Rear Table Material Guide	
24	707600	1	Right Rear Side Guide	
25	707601	1	Left Rear Side Guide	

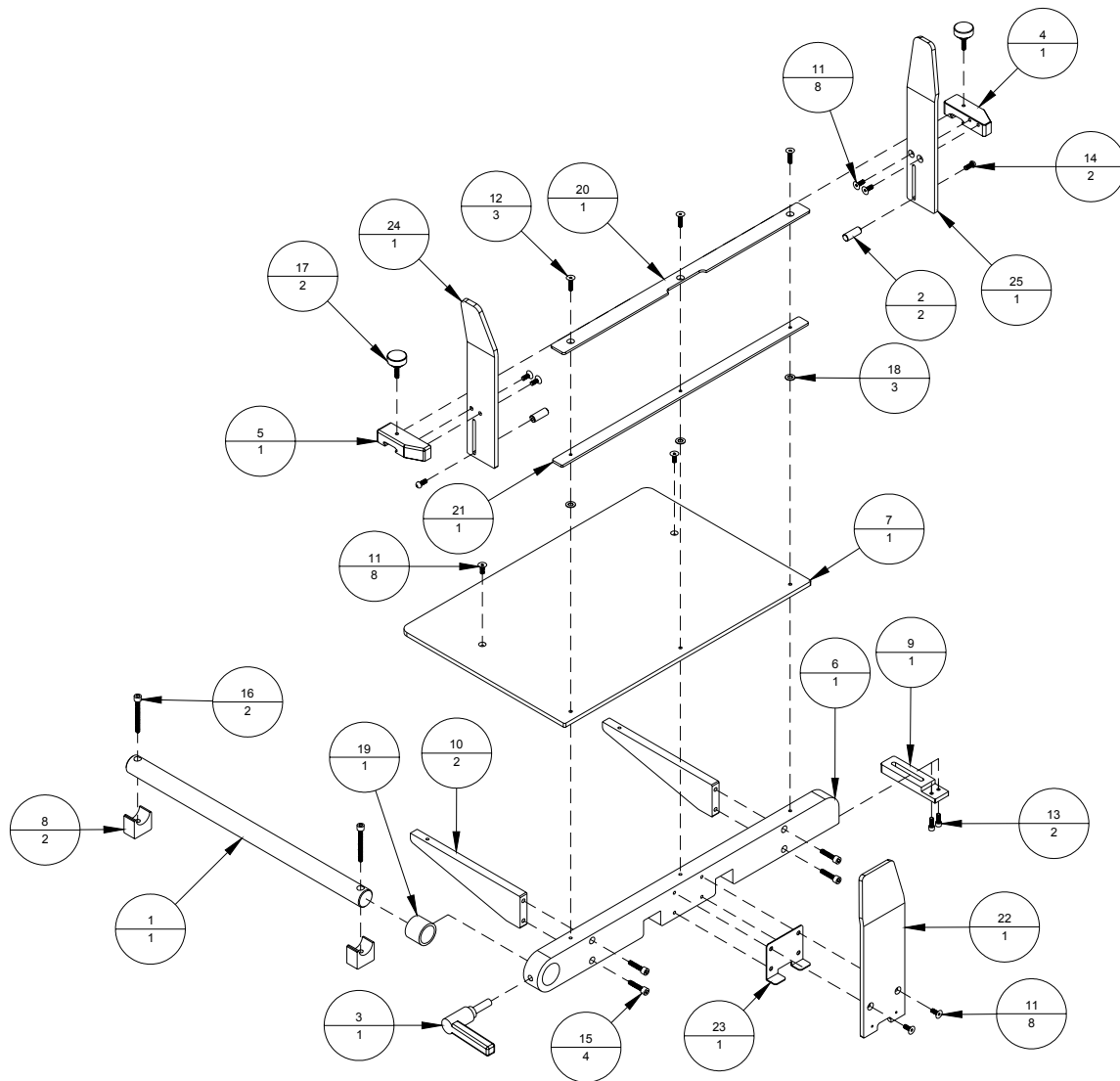
Figure A-11: Rear Table Assembly (310340A)

Table A-12: *Shuttle Motor Assembly (325601A)*

Item	Part Number	Quantity	Description	Reference
1	116537	1	Pulley, 14LF075 x 5/8"	
2	325601	1	Motor Mount Plate	
3	404805	1	Screw, SHSS, 10-32 UNF x 1/8"	
4	407230	4	Screw, SHCCS, 3/8-16 UNC 1/2"	
5	606034	65"	Cable, #16-3, SJOW-A	
6	609101	2	Marette, Orange, 14-22	
7	609114	1	Ring Tongue Terminal, #10	
8	615131	1	Cable Clamp, 3/8", Metal	
9	800002	1	Motor, 1/2 H.P., 180 VDC	

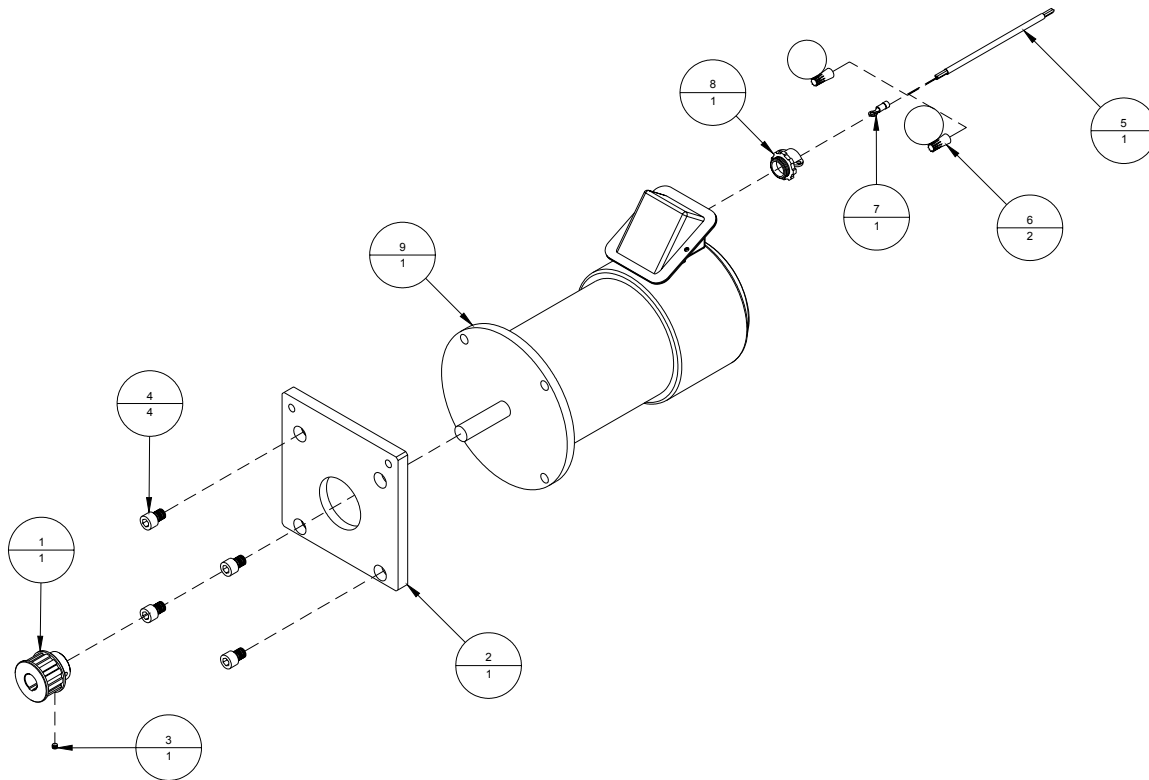
Figure A-12: *Shuttle Motor Assembly (325601A)*

Table A-13: *Shuttle Feeder Assembly (325603A)*

Item	Part Number	Quantity	Description	Reference
1	100007H	2	Shuttle Slide Shaft	
2	200009	2	Rod End, 3/8" ID, c/w Lubrication Fitting	
3	200600	1	Shuttle Crank Link	
4	212003H	1	Rear Shuttle Bracket	
5	212012	2	Shuttle Stopper	
6	212030	4	Linear Bearing	
7	212601	1	Shuttle Vacuum Body	
8	212602	1	Rear Shuttle Block	
9	310034H	1	Concave Feed Plate	
10	330605	1	Shuttle Slide Shaft Mount	
11	403050	4	Screw, FHCS, 8-32 UNC x 3/4"	
12	403210	2	Screw, SHCS, 8-32 UNC x 1/4"	
13	403220	2	Screw, SHCS, 8-32 UNC x 3/8"	
14	403230	4	Screw, SHCS, 8-32 UNC x 1/2"	
15	404530	2	Screw, SHCS, 10-32 UNF x 1/2"	
16	404815	2	Screw, SHSS, 10-32 UNF x 5/16"	
17	404820	2	Screw, SHSS, 10-32 UNF x 3/8"	
18	416140	1	Shoulder Bolt, 3/8" x 5/8" (5/16-18 UNC)	
19	420015	1	Nut, 5/16-18 UNC	
20	420025	2	Nut, 3/8-24 UNF	
21	437088	8	Retaining Ring, 7/8" ID, External	
22	439020	1	Lockwasher, 3/8" ID	
23	440510	2	Rubber Washer, 1/4" ID	
24	802004H	1	Vacuum Valve Body	
25	802005HA	1	Vacuum Valve Assembly	
26	802007H	1	Vacuum Fitting Block	
27	802058	1	Barb Vacuum Hose Fitting, 3/8" NPT x 1/2"	

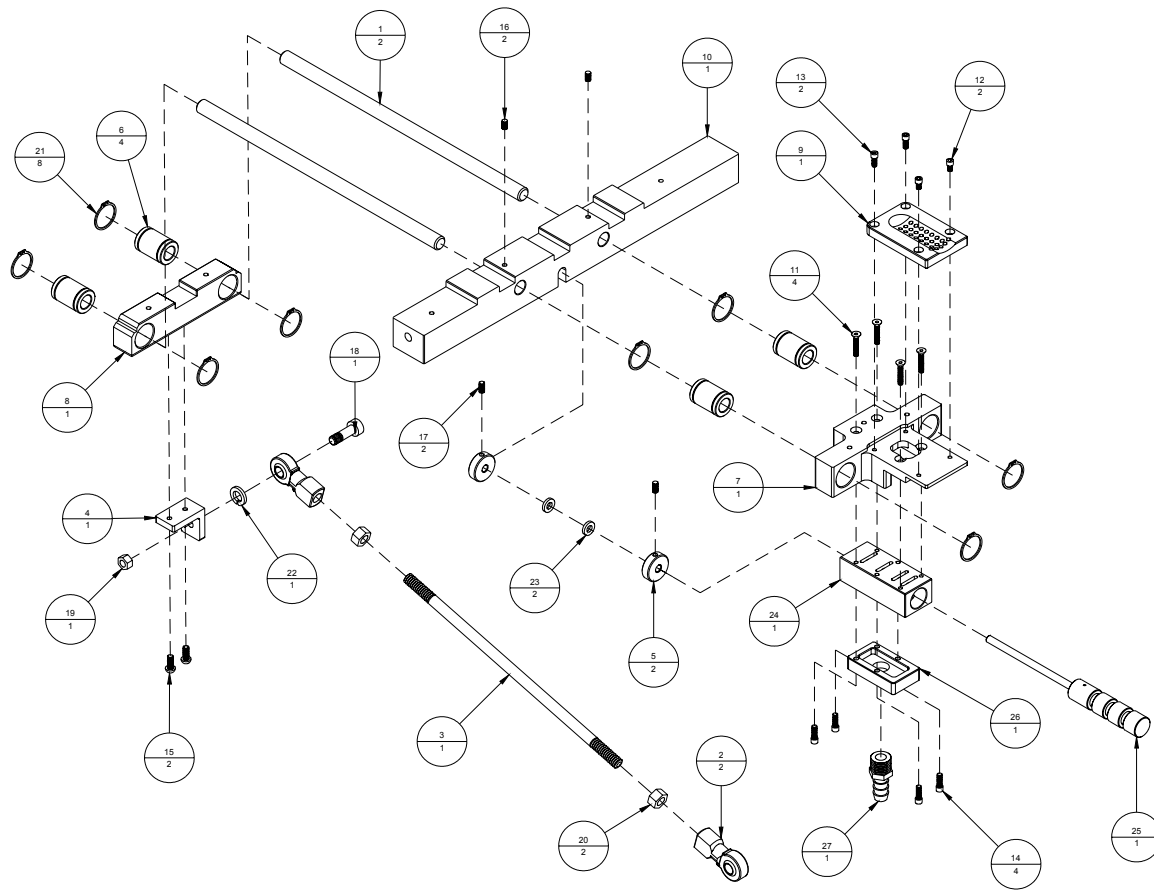
Figure A-13: *Shuttle Feeder Assembly (325603A)*

Table A-14: *Tabletop Assembly, BK6OB (325604A)*

Item	Part Number	Quantity	Description	Reference
1	100314A	1	Outfeed Roller Shaft Assembly	Page A-3
2	206005	2	Pusher Body	
3	206006	2	Plate, Pusher Screw	
4	206007	2	Adjustable Pusher	
5	212300A	1	Left Material Guide	Page A-7
6	212301A	1	Right Material Guide	Page A-8
7	310340A	1	Rear Table Assembly	
8	325603	1	Feeder Shuttle Plate	
9	325604	1	Tabletop, Rear, BK6OB	
10	325605	1	Tabletop, Front, BK6OB	
11	402510	4	Screw, BHCS, 6-32 UNC x 1/4"	
12	403030	2	Screw, FHCS, 8-32 UNC x 1/2"	
13	403520	2	Screw, BHCS, 8-32 UNC x 3/8"	
14	403530	2	Screw, BHCS, 8-32 UNC x 1/2"	
15	403030	5	Screw, FHCS, 10-32 UNF x 1/2"	
16	404050	14	Screw, FHCS, 10-32 UNF x 3/4"	
17	404550	2	Screw, BHCS, 10-32 UNF x 3/4"	
18	405550	2	Screw, BHCS, 1/4-20 UNC x 3/4"	
19	420008	2	Nut, 10-32 UNF	
20	438110A	5	Knob Assembly, 10-32 UNF x 1 1/4"	Page A-21
21	439009	2	Lockwasher, No. 10	
22	500050	1	Bearing, R12, 3/4 ID	
23	700009H	1	Right Bridge Cover	
24	700614	1	Left Bridge Cover	
25	700622	1	Cover, Ribbon Cable, BK60B	
26	9100003	1	Handwheel Support Block	

Figure A-14: Tabletop Assembly (325604A)

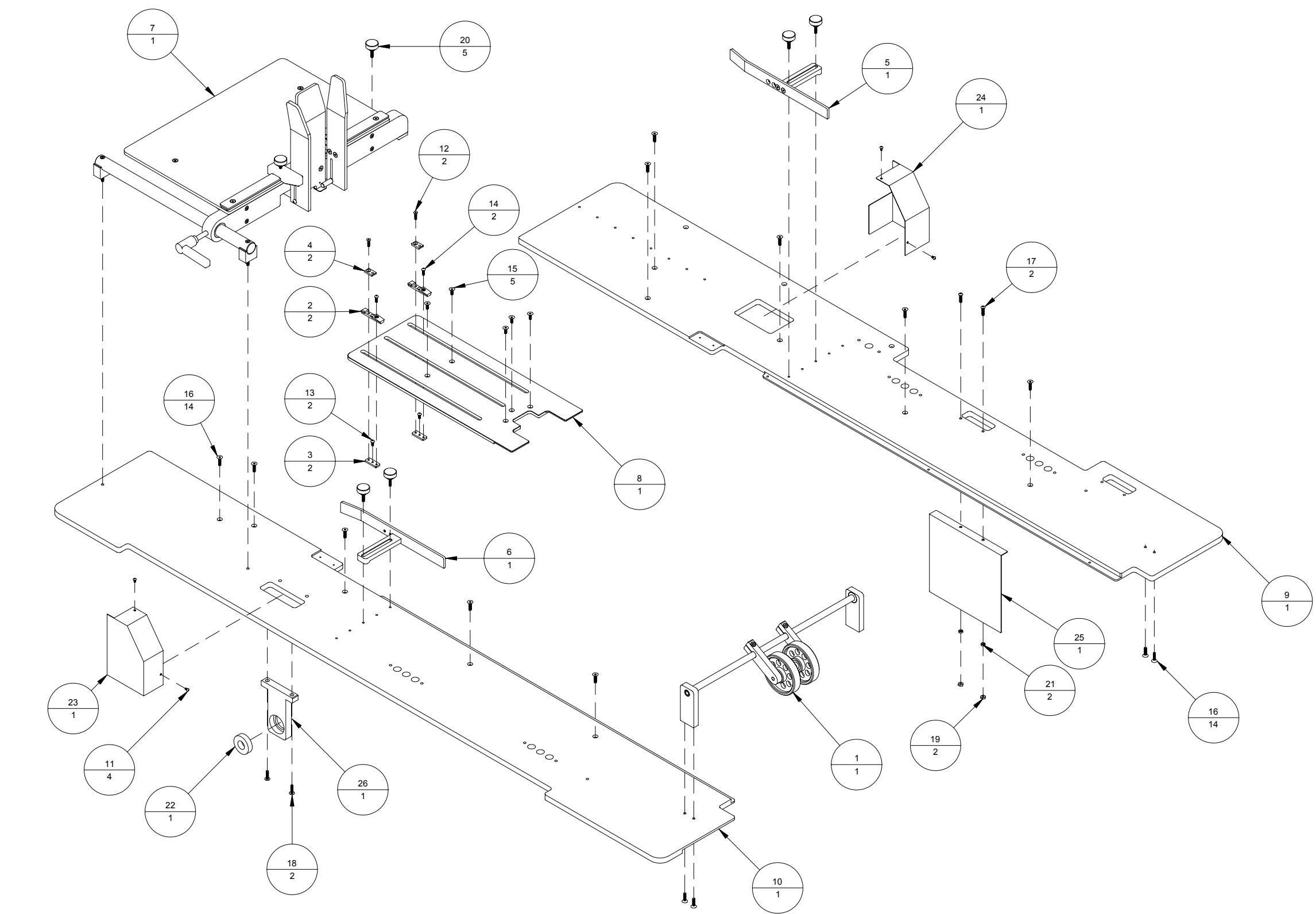


Table A-15: *Knob Assembly, 10-32 UNF x 1 1/4" (438110A)*

Item	Part Number	Quantity	Description	Reference
1	404875	1	Screw, SHSS, 10-32 UNF x 1 1/4"	
2	438110	1	Side Guide Knob	

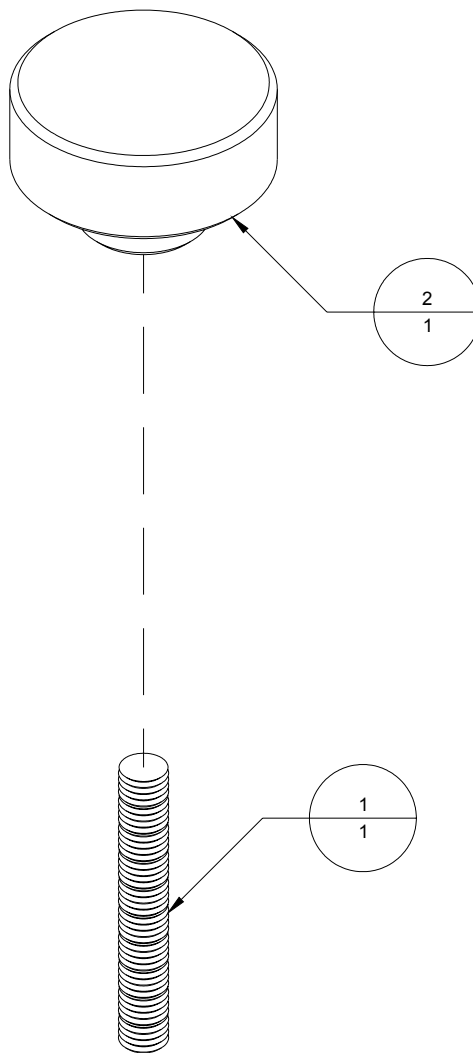
Figure A-15: *Knob Assembly, 10-32 UNF x 1 1/4" (438110A)*

Table A-16: *Jam Stop Switch Assembly (603020A)*

Item	Part Number	Quantity	Description	Reference
1	603020	1	Microswitch	
2	603021	1	Microswitch Cover	
3	606531	20"	Cable, #22-2	
4	609000	1"	Shrink Wrap, 3/16" I.D.	
5	609116	2	Ring Tongue Terminal #10, Red	
6	614000	2	Male Contact Pin	
7	614001	1	Plug, Cap Pin Housing	

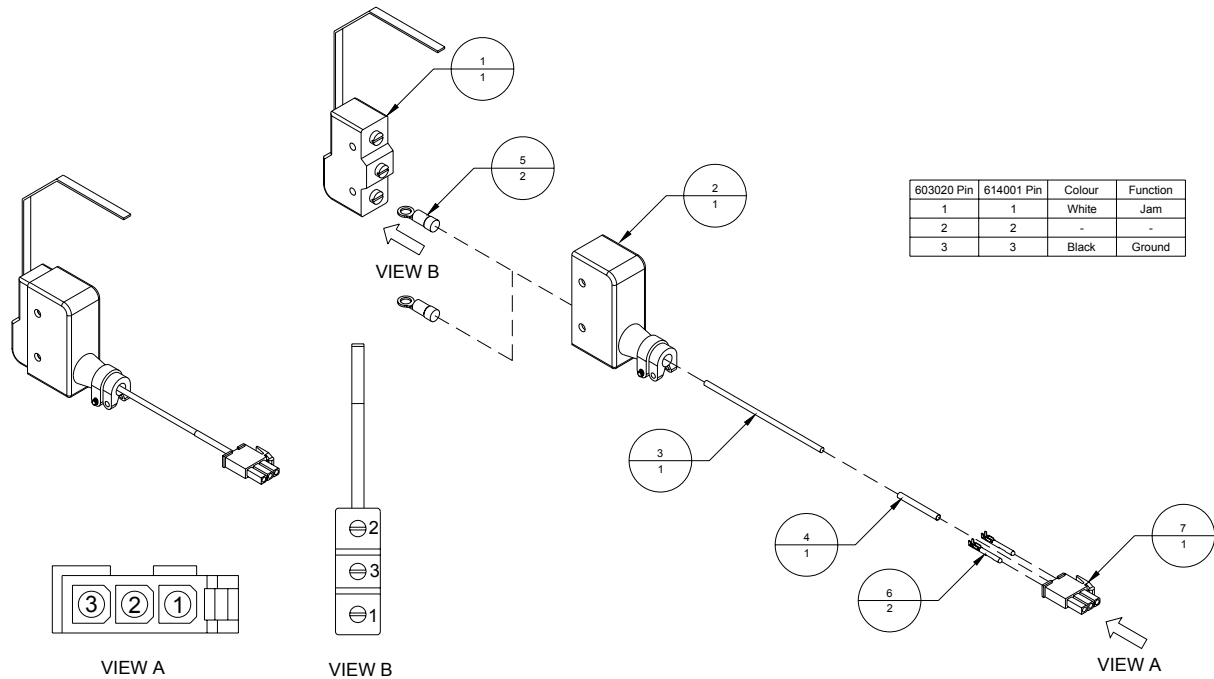
Figure A-16: *Jam Stop Switch Assembly (603020A)*

Table A-17: *Cable, Shaft Encoder Extension (606601A)*

Item	Part Number	Quantity	Description	Reference
1	606014	90"	Cable, #22-4, Unshielded	
2	609000	1	Shrink Wrap, 3/16"	
3	614006	4	Female Contact, Socket	
4	614007	1	Socket Housing	

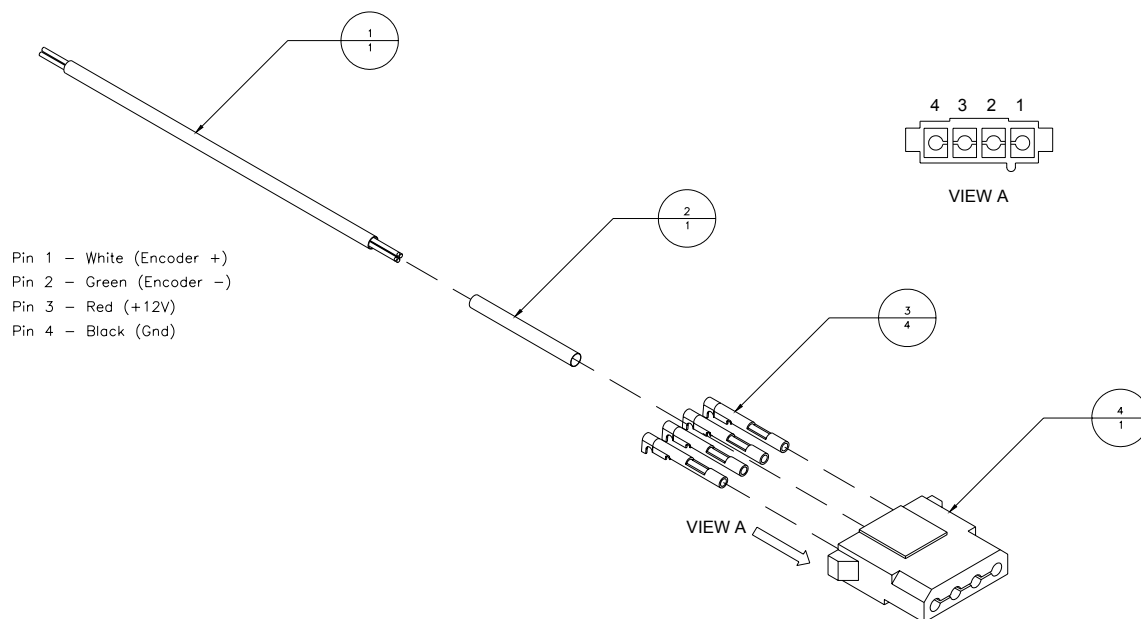
Figure A-17: *Cable, Shaft Encoder Extension (606601A)*

Table A-18: *Ribbon Cable Mount Assembly (609300A)*

Item	Part Number	Quantity	Description	Reference
1	330323	1	Ribbon Cable Mount	
2	402310	2	Screw, PHMS, 6-32 UNC x 1/4"	
3	609300	1	Ribbon Cable Tie Mount	

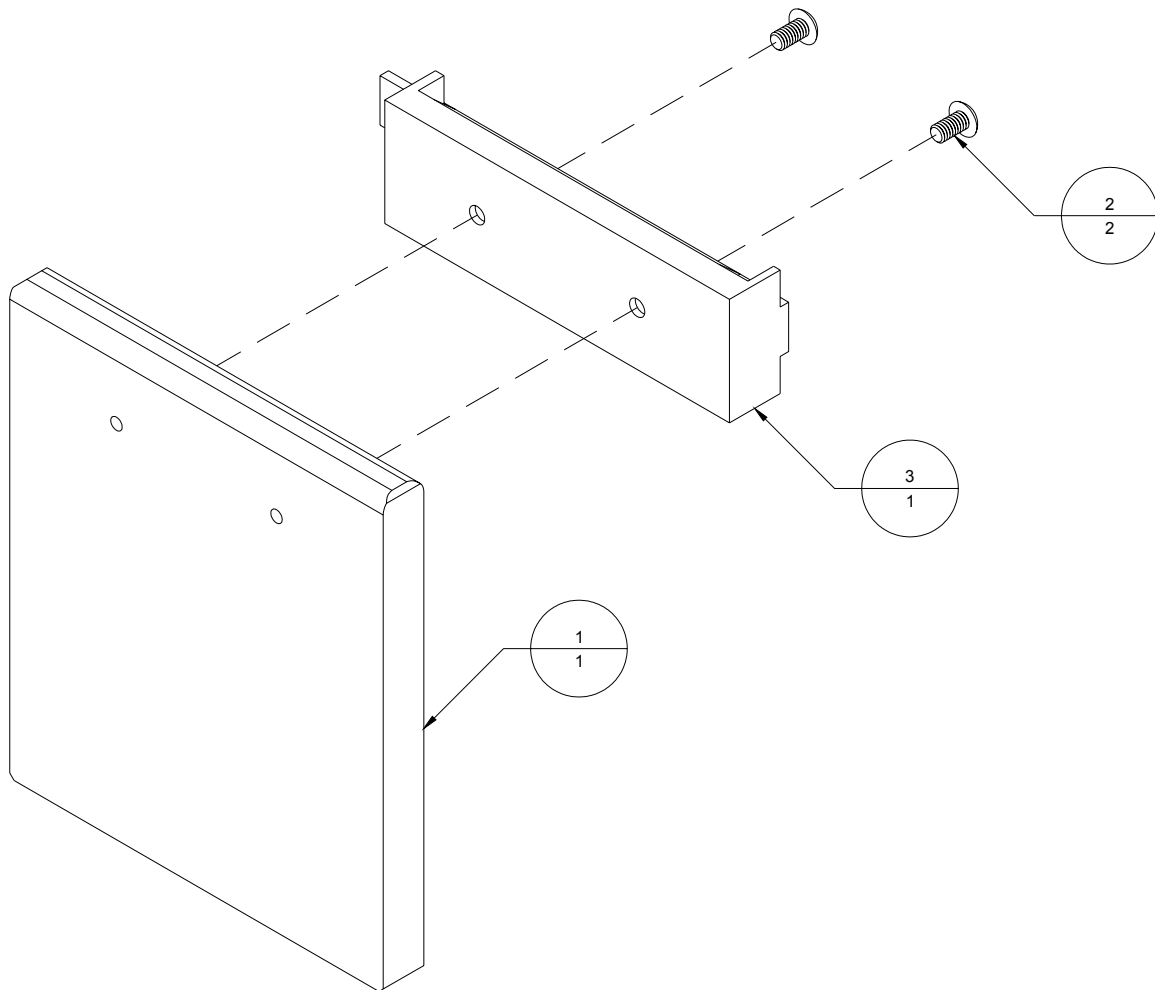
Figure A-18: *Ribbon Cable Mount Assembly (609300A)*

Table A-19: *Cable, Base Power Assembly, 230 VAC (614015A)*

Item	Part Number	Quantity	Description	Reference
1	606033	144"	Cable, #14-3, SJOW-A	
2	614015	1	Twist-Lock Plug, 20A, 250V	

Figure A-19: *Cable, Base Power Assembly, 230 VAC (614015A)*

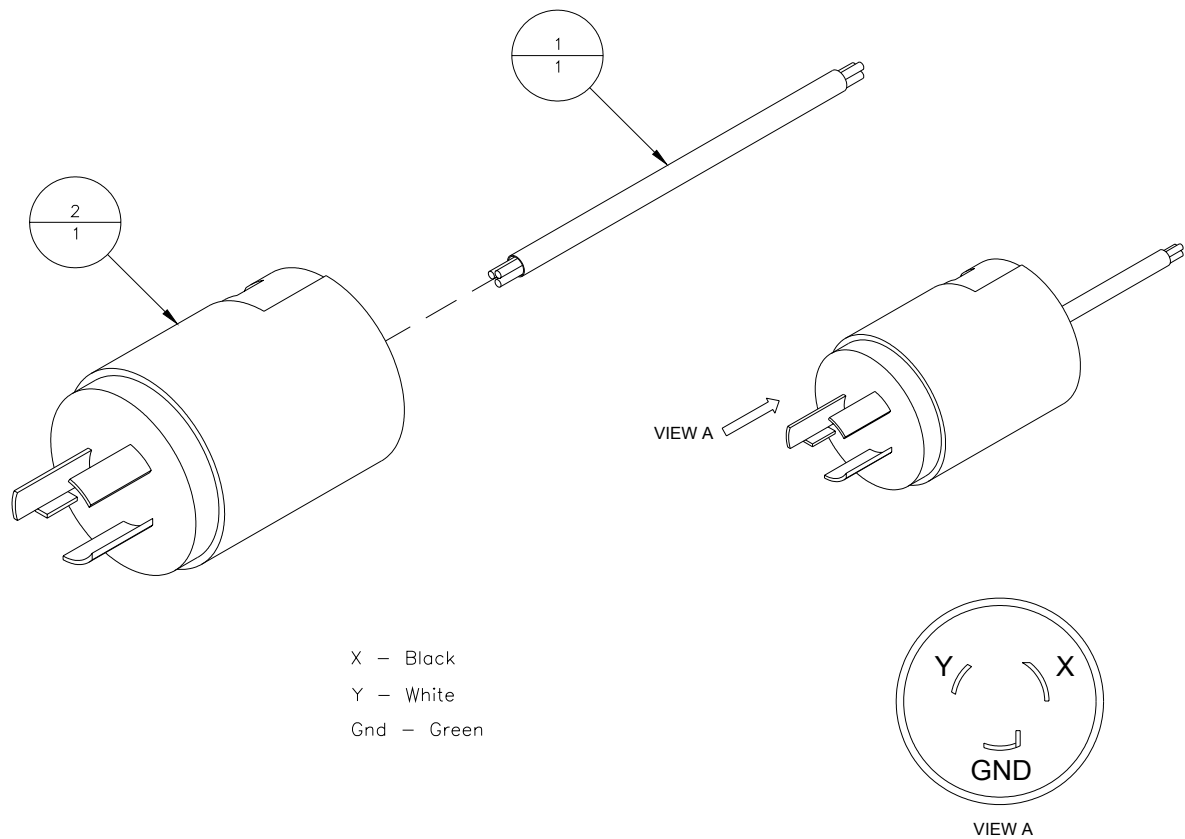


Table A-20: *Cable, Conveyor Receptacle (614057A)*

Item	Part Number	Quantity	Description	Reference
1	606001	3"	Wire, #16, Red, Hookup	
2	606052	90"	Cable, #14-7, Unshielded	
3	614106	1	Receptacle, Female, 23-7	
4	614110	7	Socket, Power Contact	

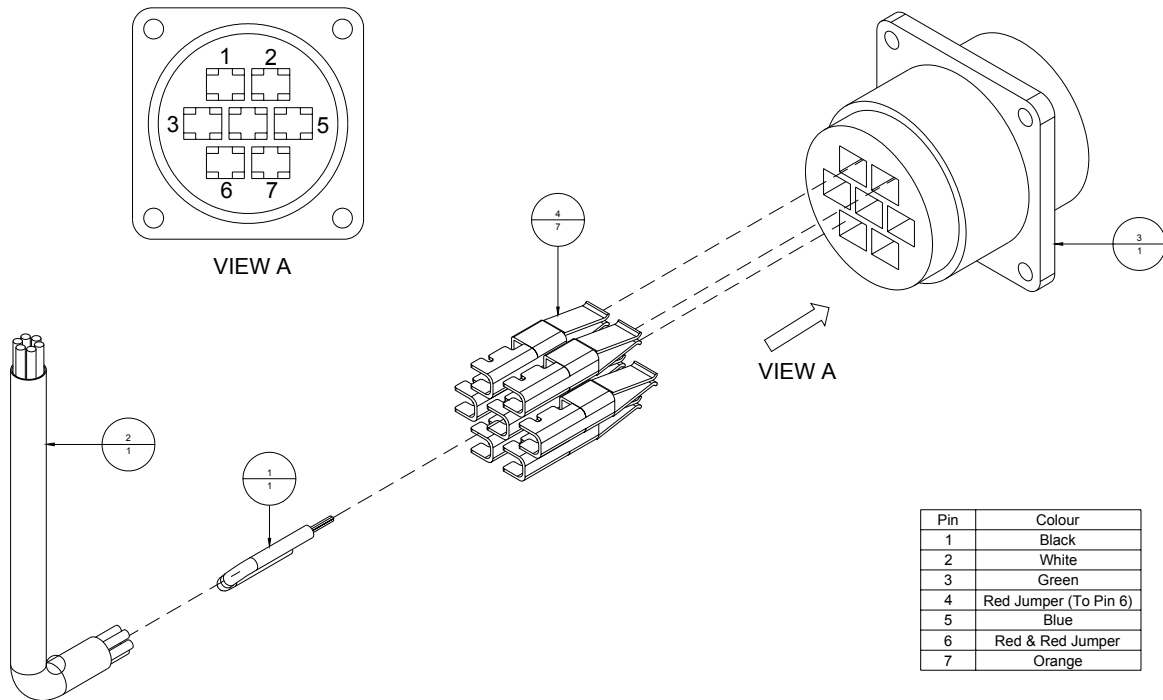
Figure A-20: *Cable, Conveyor Receptacle (614057A)*

Table A-21: *Cable, Jam/Proxi/Photocue (614061A)*

Item	Part Number	Quantity	Description	Reference
1	606013	60"	Cable, #22-3, Shielded	
2	609000	1	Shrink Wrap, 3/16" ID	
3	614002	3	Contact, Female	
4	614003	1	Cap Receptacle	

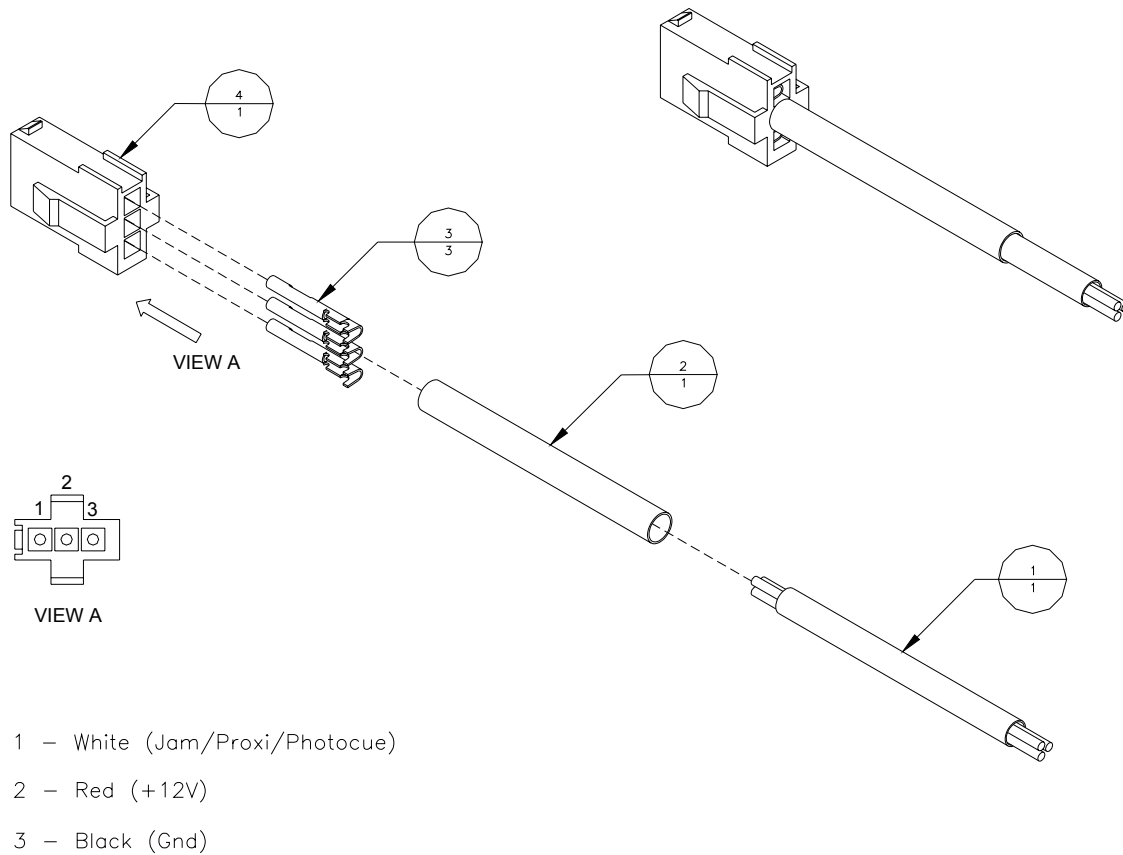
Figure A-21: *Cable, Jam/Proxi/Photocue (614061A)*

Table A-22: Cable, Auxiliary Feeder, BK6OB (614138A)

Item	Part Number	Quantity	Description	Reference
1	606014	52"	Cable, #22-4, Unshielded	
2	606037	2"	Wire, #22, Black	
3	606530	36"	Cable, #18-9, Unshielded	
4	609000	0.5"	Shrink Wrap, 3/16" I.D.	
5	609003	0.75"	Shrink Wrap, 3/8" I.D.	
6	614108	6	Contact, Female, 24-20 AWG, Yellow	
7	614123	5	Contact, Female, 18-16 AWG, Blue	
8	614138	1	Receptacle, 17-14, Female	

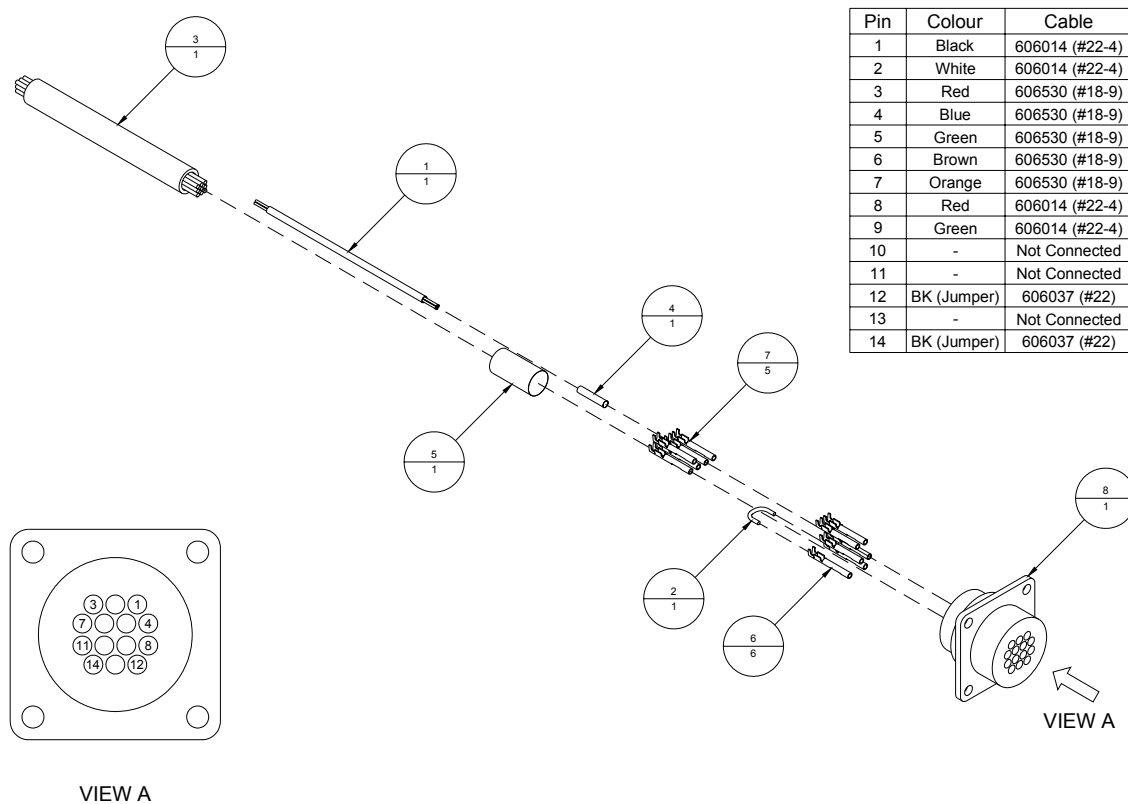
Figure A-22: Cable, Auxiliary Feeder, BK6OB (614138A)

Table A-23: *Cable, Ribbon, Gap Controller (614600A)*

Item	Part Number	Quantity	Description	Reference
1	606311	5"	Cable, Ribbon, #28-40, Grey	
2	614306	2	Connector, Female, 40-Pin, Ribbon	

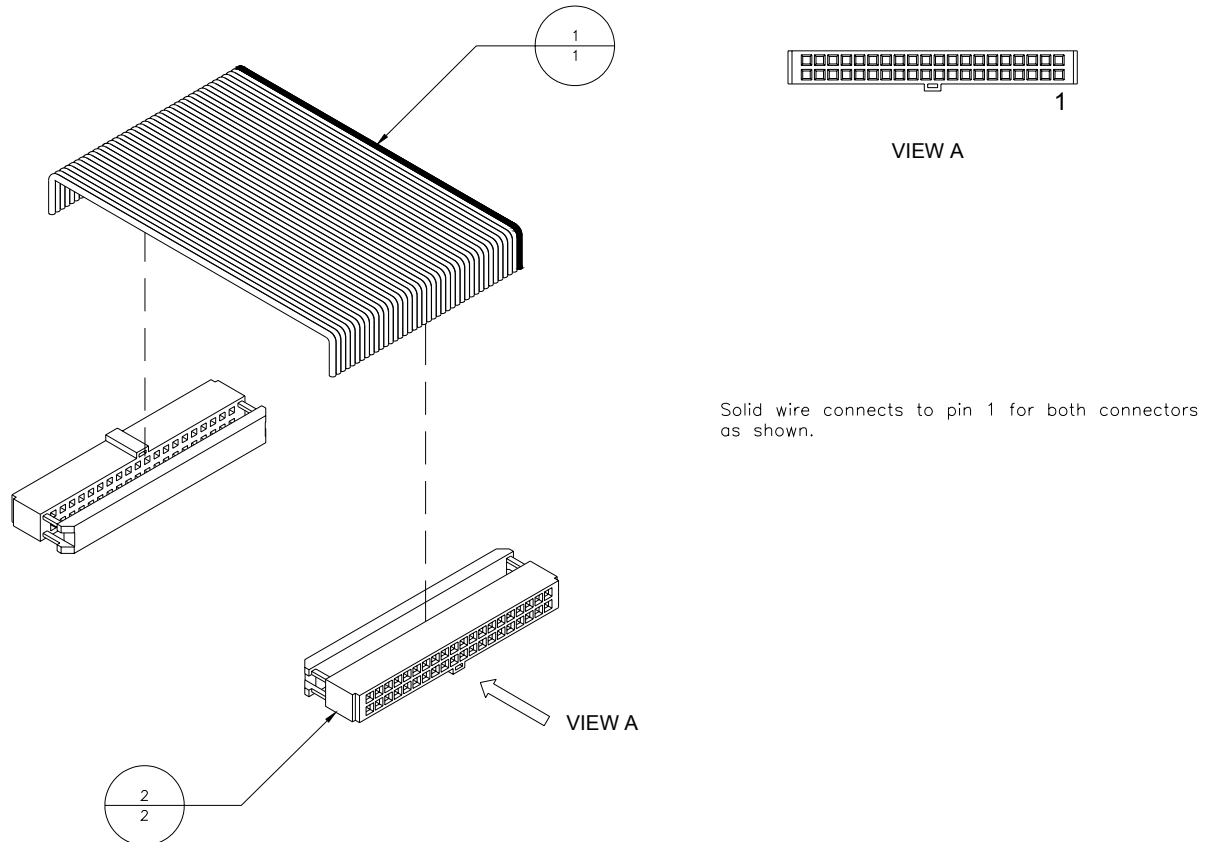
Figure A-23: *Cable, Ribbon, Gap Controller (614600A)*

Table A-24: *Cycle Proximity Switch Assembly (630004A)*

Item	Part Number	Quantity	Description	Reference
1	609000	0.75"	Shrink Wrap, 3/16" I.D.	
2	614000	3	Contact, Male	
3	614001	1	Plug, Cap Pin Housing	
4	630004	1	Proximity Switch	

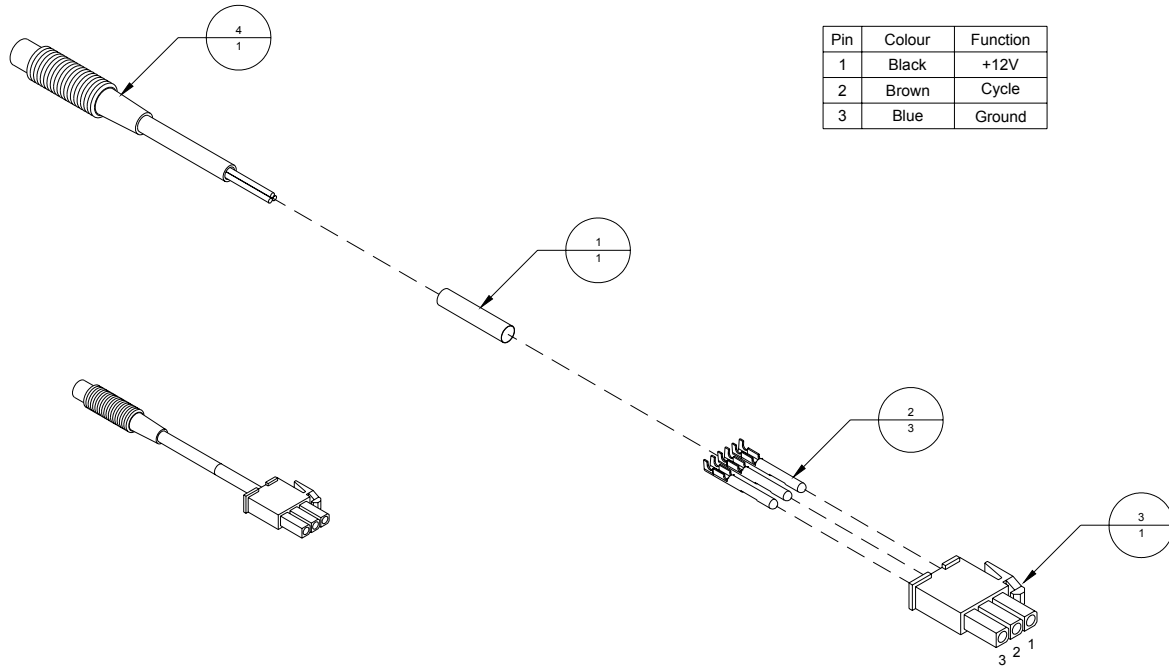
Figure A-24: *Cycle Proximity Switch Assembly (630004A)*

Table A-25: *Vacuum Assembly (801102A)*

Item	Part Number	Quantity	Description	Reference
1	606034	72"	Cable, #16-3, SJOW-A	
2	609110	2	Connector, Push-On, Blue	
3	609111	1	Terminal, Ring, #10, 14-16 AWG, Blue	
4	615131	1	Cable Clamp, 3/8", Metal	
5	801102	1	Vacuum Pump	
6	802010	3	Extension Pipe, 3/8" NPT x 1 1/2"	
7	802013	1	Extension Pipe, 3/8" NPT x 2 1/2"	
8	802030	1	Vacuum Gauge, 1/4" NPT	
9	802035	1	Vacuum Relief Valve, 3/8" NPT	
10	802036	1	Filter Assembly, AB 599	
11	802045	1	Shuttle Feeder Valve, 3/8" NPT	
12	802046	18.5"	Hose, Clearflex, 1/2" ID	
13	802058	1	Barb Vacuum Hose Fitting, 3/8" NPT x 1/2"	
14	802065	1	Reducing Bushing, 3/8" - 1/4" NPT	
15	802071	2	Pipe Tee, 3/8" NPT	

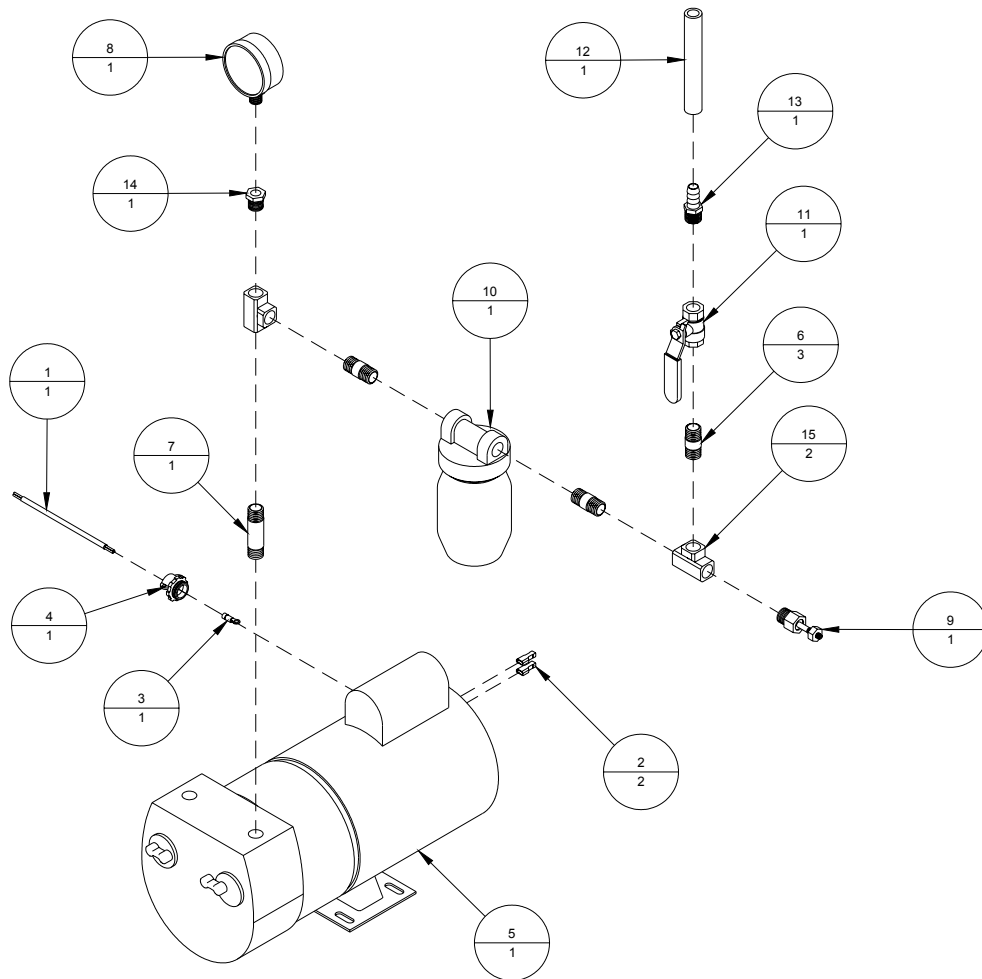
Figure A-25: *Vacuum Assembly (801102A)*

Table A-26: *Instrument Panel Assembly, BK6OB (9100396A)*

Item	Part Number	Quantity	Description	Reference
1	420007	3	Nut, 8-32 UNC	
2	420008	2	Nut, 10-32 UNF	
3	600011	3	Potentiometer, w/Dart 600005	
4	600100	1	Counter	
5	603120	1	Switch, Green Push Button	
6	603121	1	Switch, Red Mushroom Push Button	
7	603122	1	Switch, 2 Position Rotary Knob	
8	603123	1	Switch, 3 Position Rotary Knob	
9	603125	4	Switch Locking Collar	
10	603126	4	Block, N.O. Contact	
11	603127	1	Block, N.C. Contact	
12	603319	1	Circuit Breaker, 10A	
13	603415	1	Circuit Breaker Switch, 15A, 2 Pole	
14	606014	125"	Cable, #22-4, Unshielded	
15	606016	125"	Cable, #22-15, Shielded	
16	606036	5"	Wire, #22 Green Hook-Up	
17	606036	14"	Wire, #22 Green Hook-Up	
18	606052	125"	Cable, #14-7, Unshielded	
19	606360	24"	Wire, #10, Green/Yellow Hookup	
20	609110	6	Connector, Push-on, Blue	
21	609111	1	Terminal, Ring, #10, 14-16 AWG, Blue	
22	609113	2	Connector, Push-on, Yellow	
23	609114	2	Terminal, Ring, #10, 12-10 AWG, Non-Insulated	
24	613002	3	Knob, 36mm Skirted	
25	615140	10	Lashing Tie	
26	9100397	1	Instrument Panel	
27	9100728	3	Tie Anchor Mount, #8 Screw	

Figure A-26: Instrument Panel Assembly, BK6OB (9100396A)

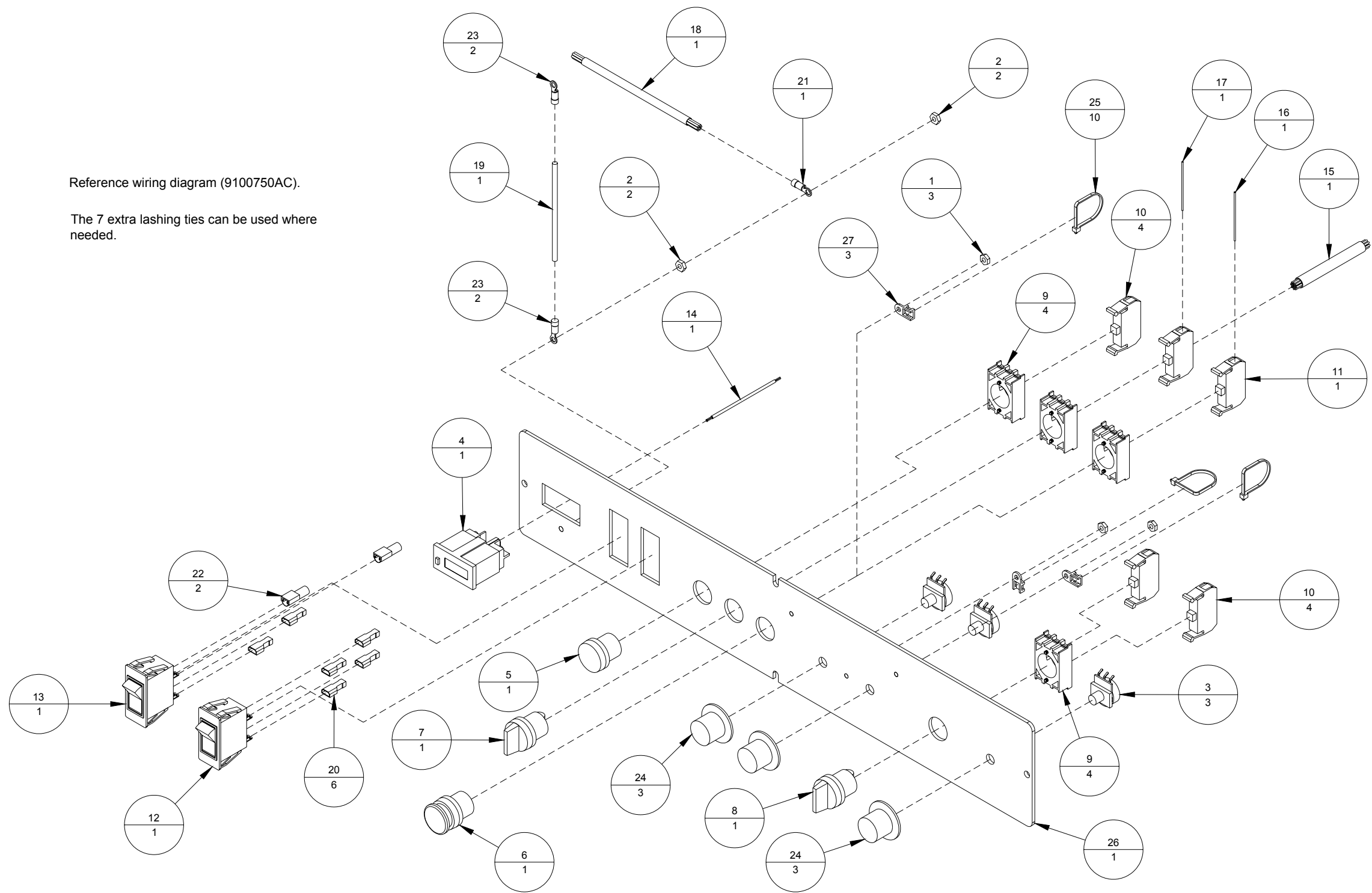


Table A-27: *Blower Assembly, 40 CFM (9100829A)*

Item	Part Number	Quantity	Description	Reference
1	407670	4	Screw, HHMS, 3/8-16 UNC x 1"	
2	439020	4	Lockwasher, 3/8" ID	
3	440020	4	Washer, 3/8" ID	
4	606034	65"	Cable, #16-3 SJOW-A	
5	609101	2	Marette, Orange, 14-22	
6	609111	1	Terminal, Ring, #10, 14-16 AWG	
7	615131	1	Cable Clamp, 3/8", Metal	
8	802111	1	Hose Barb, 1" x 1", Plastic	
9	9100749	4	Rubber Washer, 3/8" x 1" x 1/8"	
10	9100829	1	Regenerative Blower, 42 CFM	

Figure A-27: *Blower Assembly, 40 CFM (9100829A)*

Wiring #16-3 cable (606034) to the blower (9100829):

1. Marette black cable wire with blue blower wire.
2. Marette white cable wire with yellow blower wire.
3. Attach the ring tongue terminal to the green cable wire and screw it into the inside blower screw.

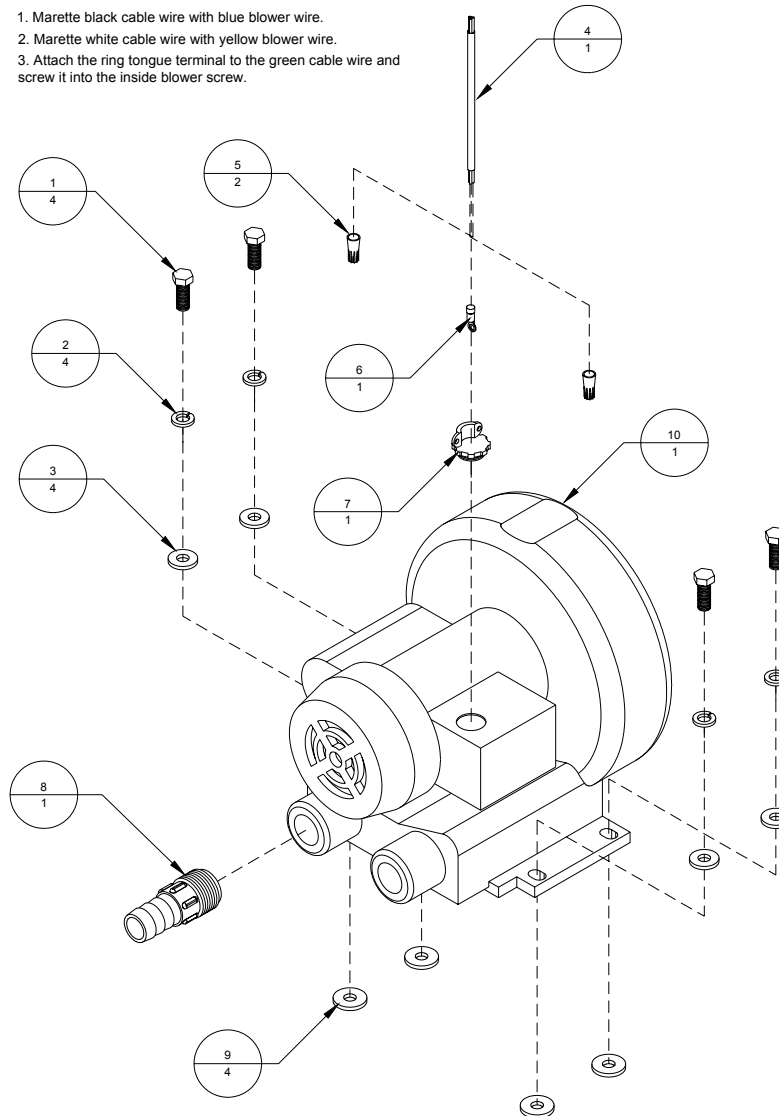


Table A-28: *Cable, Controller I/O, Interconnect (9102043A)*

Item	Part Number	Quantity	Description	Reference
1	614307	1	Connector, Female, 26-Pin, Ribbon	
2	614326	1	Receptacle, Female, 25-Pin, HDF-20	
3	9101704	30"	Cable, Ribbon, #28-25, Grey	

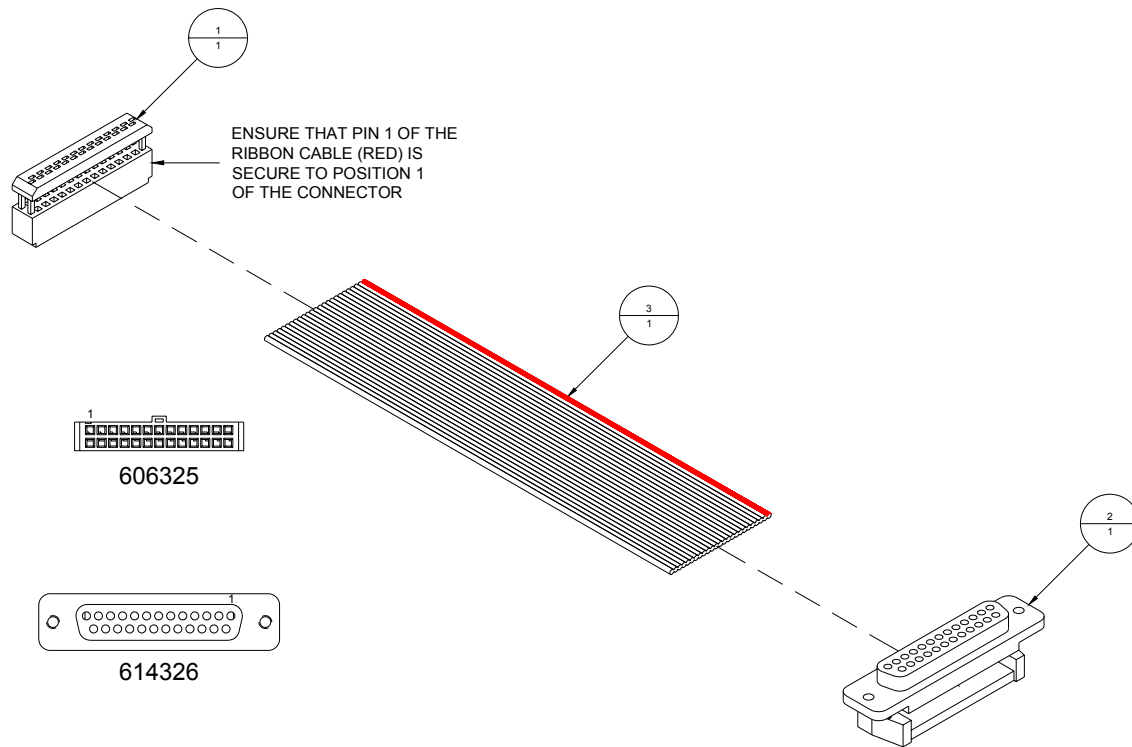
Figure A-28: *Cable, Controller I/O, Interconnect (9102043A)*

Table A-29: *Cable, Inline Remote, BK6OB (9102316A)*

Item	Part Number	Quantity	Description	Reference
1	606015	85"	Cable, #22-16, Unshielded	
2	606531	85"	Cable, #22-2, Shielded	
3	9100765	18	Socket Contact, Size 20 DF	
4	9102054	1	Receptacle, Female, 23-57	

Figure A-29: *Cable, Inline Remote, BK660 (9102316A)*

WIRING DETAILS:

- 1.GN/BK
- 2.OG/BK
- 3.-----
- 4.GN/WH
- 5.BU/WH
- 6.BK/RD
- 7.RD/BK
- 8.WH/BK
- 9.OG
- 10.BU
- 11.GN
- 12.RD
- 13.WH
- 14.BK
- 15.-----
- 16.BU/BK
- 17.BK/WH
- 18.RD/WH
- 29.BK, (FROM 22-2 CABLE)
- 30.WH, (FROM 22-2 CABLE)

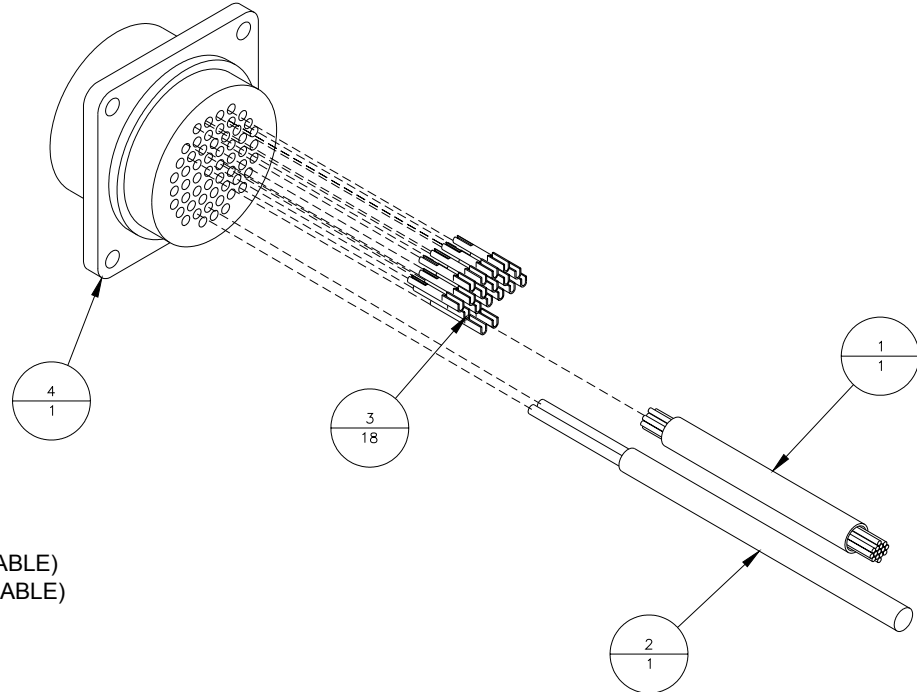


Table A-30: *Tabletop, Transport Assembly, BK60B (9102403A)*

Item	Part Number	Quantity	Description	Reference
1	100313	1	Shaft, 9.75 OD x 9.50" Long	
2	106306	1	Roller, 1.95" OD x 3.13", Dual Belt	
3	106307	2	Roller, 1.95" OD x 1.63", Single Belt	
4	116309	1	Pulley, 18LB075 x ¾" w/o Shoulder	
5	131050	2	Collar, ¾" ID	
6	325602	1	Tabletop, Transport Belt, BK60B	
7	330307	1	Mounting Block, Vacuum Belt, BK60B	
8	330608	1	Mounting Block, Blower Hose	
9	343600	1	Guide, Transport Belt, BK60B	
10	402350	4	Screw, PHMS, 6032 UNC x ¾"	
11	404050	4	Screw, FHCS, 10-32 UNF x ¾"	
12	404250	2	Screw, SHCS, 10-32 UNF x ¾"	
13	404510	8	Screw, BHCS, 10-32 UNF x ¼"	
14	404550	3	Screw, BHCS, 10-32 UNF x ¾"	
15	404820	3	Screw, SHSS, 10-32 UNF x 3/8"	
16	405810	2	Screw, SHSS, ¼-20 UNC x ¼"	
17	405830	3	Screw, SHSS, ¼-20 UNC x ½"	
18	436049	1	Pin, Spring, 3/16" OD x 1 7/8"	
19	439009	8	Lockwasher, No. 10	
20	444004	2	Clamp, Hose, Gear Type, 9/16 x 1 ¼"	
21	500050	2	Bearing, R12, ¾" ID	
22	500055	2	Bearing, UBR-204-12S, ¾" ID	
23	630003	1	Reflector, 35 mm OD	
24	700603	1	Column, Vacuum, BK60B	
25	802111	1	Hose Barb, 1" x 1", Plastic	
26	802601	1	Tubing, Vacuum, Grey PVC	
27	9100217	1	Shaft, 0.75" OD x 11.94" Long	
28	9102399	2	Belt, Flat, 1" x 95.75" Long, Perforated	9102400A
29	9102400	2	Belt, Flat, 1" x 95.75" Long	9102400A
30	9102401	1	Roller, 2.86 OD x 3/13", Dual Belt	
31	9102402	2	Roller, 2.86 OD x 1.50", Single Belt	
32	9102403	1	Mounting Block, Transport Belt	

Note: Belts 9102399 and 9102400 are ordered as a belt set (9102400A).

Figure A-30: Tabletop, Transport Assembly, BK6OB (9102403A)

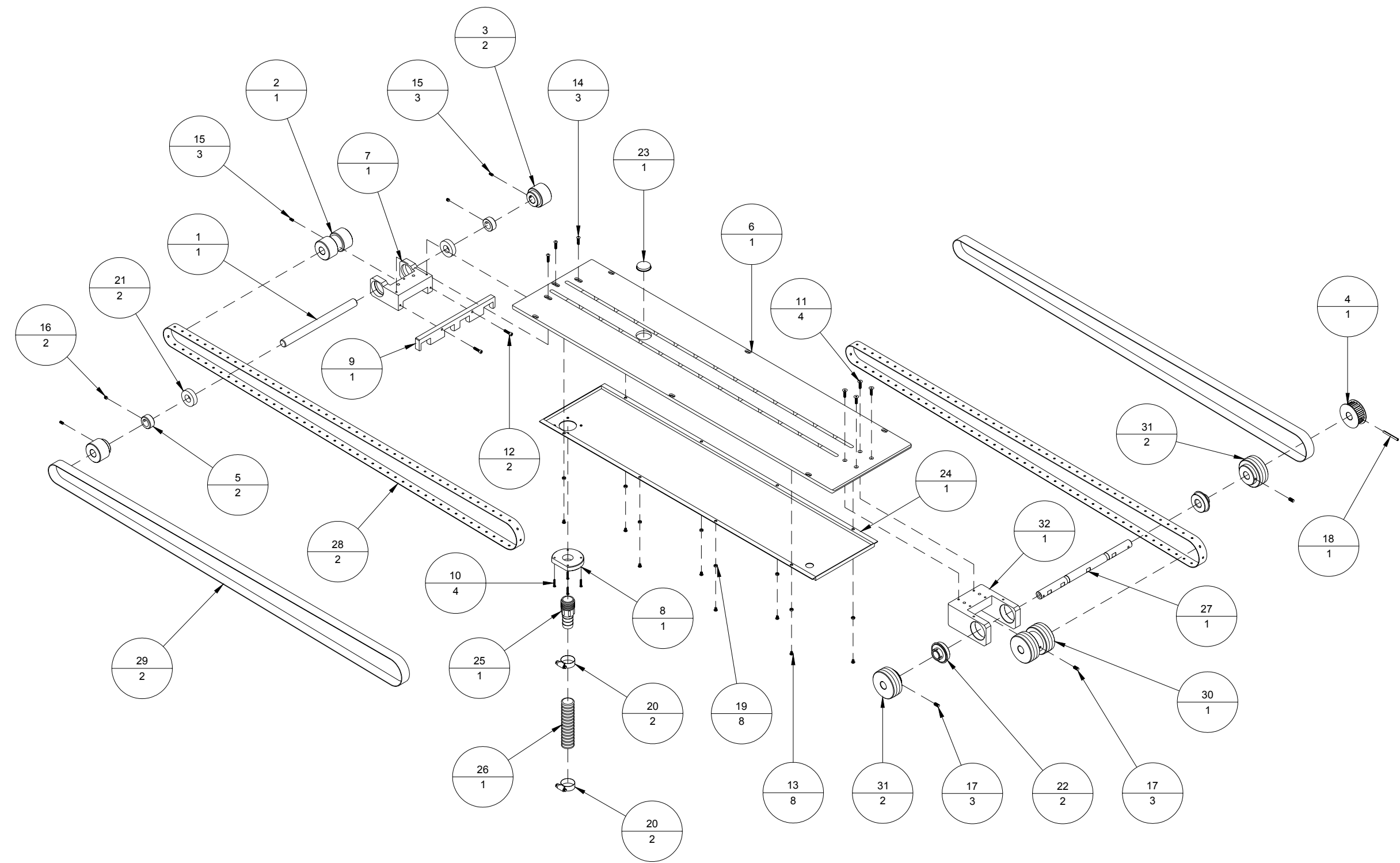


Table A-31: *Plate, Rear Connector Assembly, BK60B (9102430A)*

Item	Part Number	Quantity	Description	Reference
1	401010	4	Screw, FHCS, 4-40 UNC x 1/4"	
2	401310	6	Screw, PHMS, 4-40 UNC x 1/4"	
3	420008	1	Nut, 10-32 UNF	
4	439008	1	Lockwasher, #10, External Tooth	
5	439009	1	Lockwasher, No. 10	
6	606034	68"	Cable, #16-3, SJOW-A	
7	606360	25"	Wire, #10, Green/Yellow Hookup	
8	609114	1	Terminal, Ring, #10, 12-10 AWG, Non-Insulated	
9	614014	1	Receptacle, Duplex, 2 Pole, 3 Wire Ground	
10	615131	1	Cable Clamp, 3/8", Metal	
11	615150	1	Electrical Junction Box, 2" x 4"	
12	615155	1	Box Cover, Duplex Receptacle	
13	615322	2	Female Screwlock, 4-40 UNC	
14	9102430	1	Plate, Rear Connector, BK60B	
15	9102433A	1	Cable, Photocue Receptacle Assembly	Page A-40
16	9102434A	1	Cable, Controller I/O Receptacle Assembly	Page A-41
17	9102435A	1	Cable, Counter Receptacle Assembly	Page A-42
18	9102436A	2	Cable, Preheater Receptacle Assembly	Page A-43

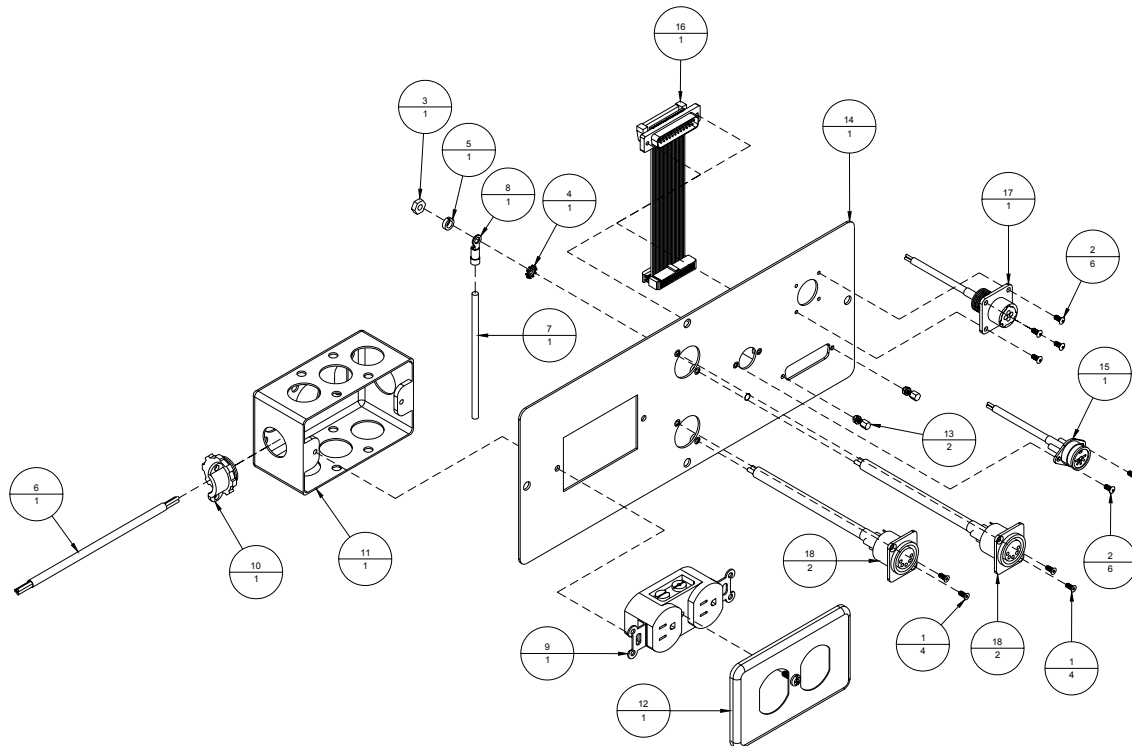
Figure A-31: *Plate, Rear Connector Assembly, BK60B (9102430A)*

Table A-32: Cable, Photocue Receptacle Assembly (9102433A)

Item	Part Number	Quantity	Description	Reference
1	606013	36"	Cable, #22-3, Shielded	
2	609000	0.75"	Shrink Wrap, 3/16"	
3	609004	0.5"	Shrink Wrap, 1/8"	
4	9100722	1	Receptacle, Preh, Locking, 3 Pin	

Figure A-32: Cable, Photocue Receptacle Assembly (9102433A)

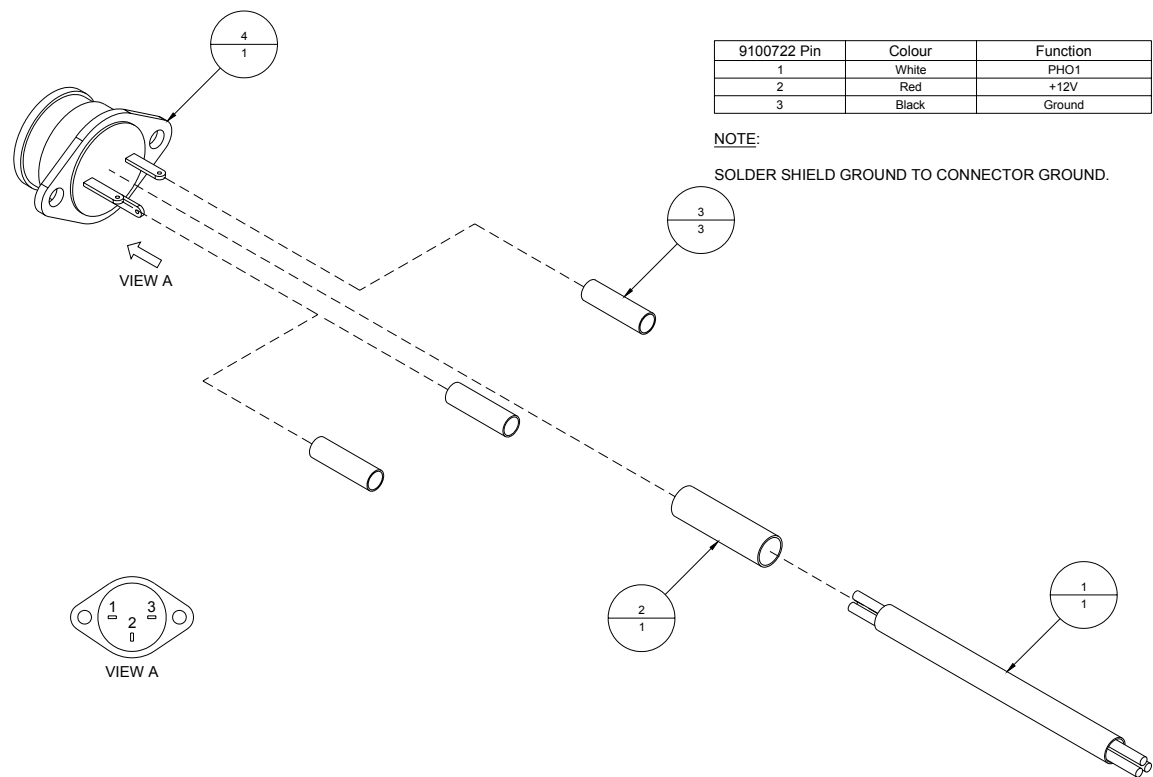


Table A-33: *Cable, Controller I/O Receptacle Assembly (9102434A)*

Item	Part Number	Quantity	Description	Reference
1	614307	1	Connector, 26-Pin, Ribbon	
2	614325	1	Connector, 25-Pin, Male, Ribbon, HDF-20	
3	9101704	32"	Ribbon Cable, #28-25, Grey, Unshielded	

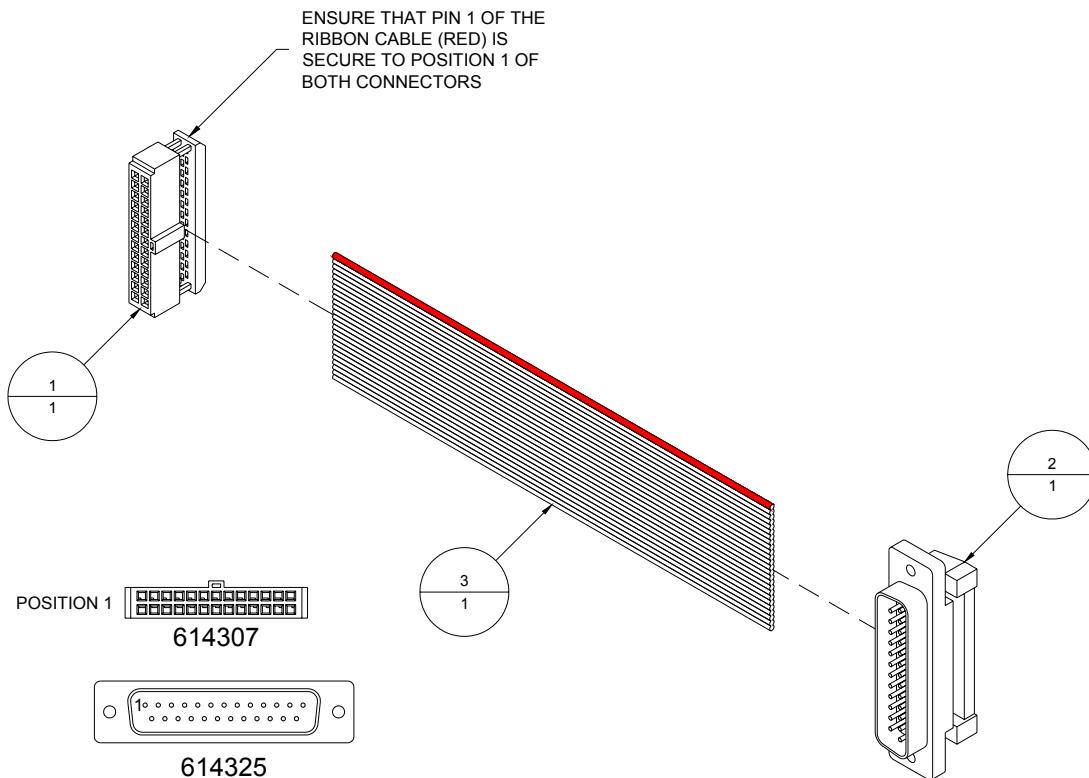
Figure A-33: *Cable, Controller I/O Receptacle Assembly (9102434A)*

Table A-34: *Cable, Counter Receptacle Assembly (9102435A)*

Item	Part Number	Quantity	Description	Reference
1	614119	1	Receptacle, 11-4, Female	
2	606013	40"	Cable, #22-3, Shielded	
3	614123	3	Contact, Female, 18-16 AWG, Blue	
4	609000	0.75"	Shrink Wrap, 3/16"	

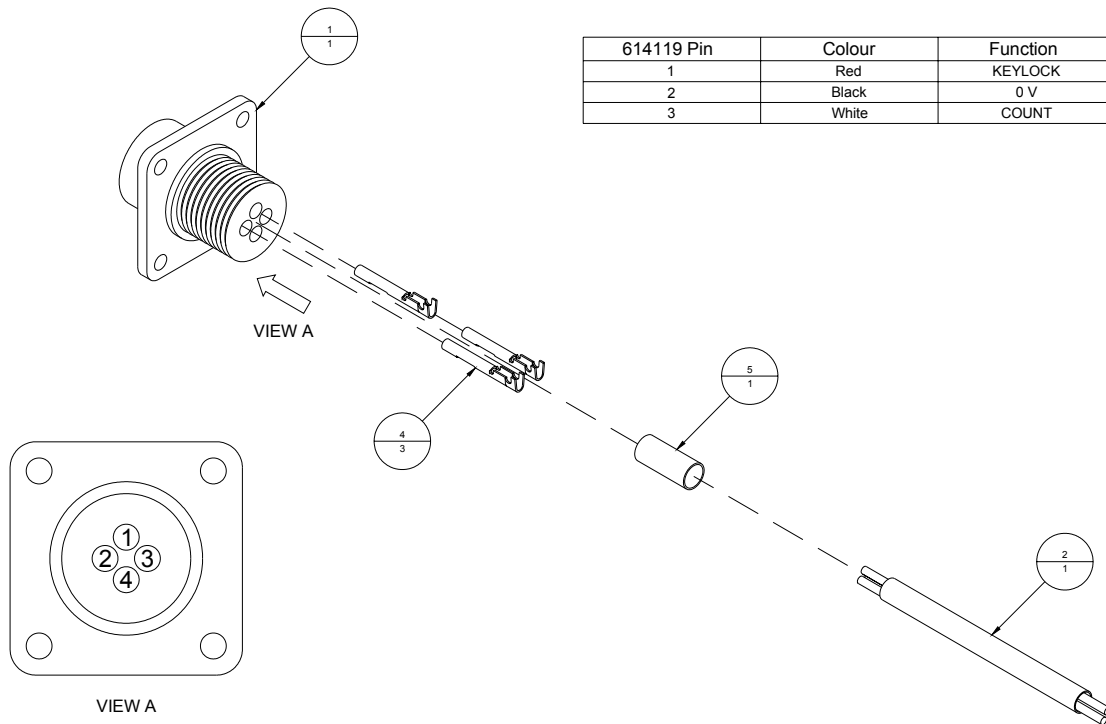
Figure A-34: *Cable, Counter Receptacle Assembly (9102435A)*

Table A-35: *Cable, Preheater Receptacle Assembly (9102436A)*

Item	Part Number	Quantity	Description	Reference
1	606035	35"	Cable, #18-2, SJOW-A	
2	609003	0.75"	Shrink Wrap, 3/8" ID	
3	609004	0.5"	Shrink Wrap 1/8" ID	
4	9102431	1	Receptacle, 5-Pin, Female, Neutrik	

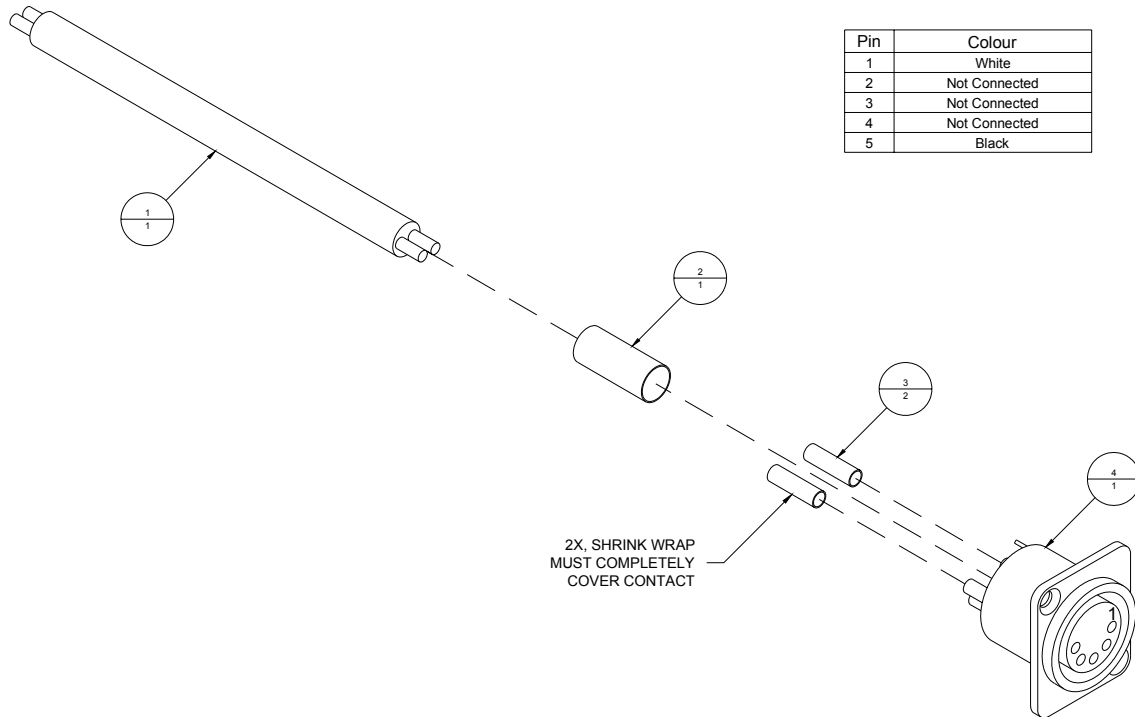
Figure A-35: *Cable, Preheater Receptacle Assembly (9102436A)*

Table A-36: *Terminal Block Assembly, 230 VAC, BK6OB (9102442A)*

Item	Part Number	Quantity	Description	Reference
1	615003	8	Terminal Block, M10/10, Grey, 10mm 7.5 A	
2	615004	1	Relay Base	
3	615006	2	Jumper Bar, BJM10	
4	615012	5	End Section, FEM6, Grey, 2.5mm	
5	615016	1	End Stop, BAM, 9.1mm	
6	615017	2	Terminal, EK2.5/35, Ground	
7	615018	2	Ground Block, M10/10.P, Green & Yellow	
8	615027	1	Label, High Voltage	
9	615028	2	Screw, Marker Card	
10	615031	4	Marker Card, L1, Vertical	
11	615032	4	Marker Card, L3, Vertical	
12	615037	2	Marker Card, 1, Vertical	
13	615038	2	Marker Card, 2, Vertical	
14	615039	2	Marker Card, 3, Vertical	
15	615041	2	Marker Card, 4, Vertical	
16	9100298	1	Relay, 240 VAC	

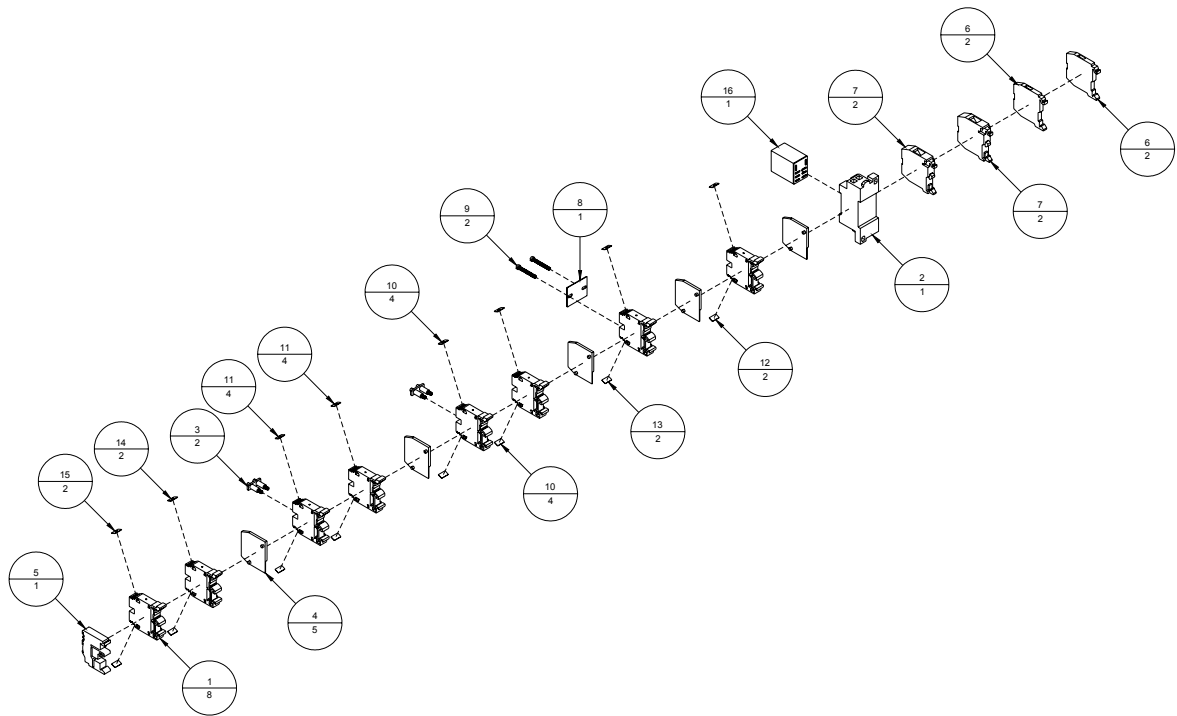
Figure A-36: *Terminal Block Assembly, 230 VAC, BK6OB (9102442A)*

Table A-37: *Terminal Block Assembly, 115 VAC, BK6OB (9102443A)*

Item	Part Number	Quantity	Description	Reference
1	615001	2	Fuse Holder, M4/8, SF2, Grey, 8mm, 6.3 A	
2	615003	2	Terminal Block, M10/10, Grey, 10mm 7.5 A	
3	615004	1	Relay Base	
4	615011	2	End Section, FEM8S, Grey, 1.5mm	
5	615012	2	End Section, FEM6, Grey, 2.5mm	
6	615016	1	End Stop, BAM, 9.1mm	
7	615018	1	Ground Block, M10/10.P, Green & Yellow	
8	615029	2	Marker Card, T1, Vertical	
9	615030	2	Marker Card, T2, Vertical	
10	646001	2	Fuse, 5A, 5 x 20 mm	
11	9100298	1	Relay, 240 VAC	

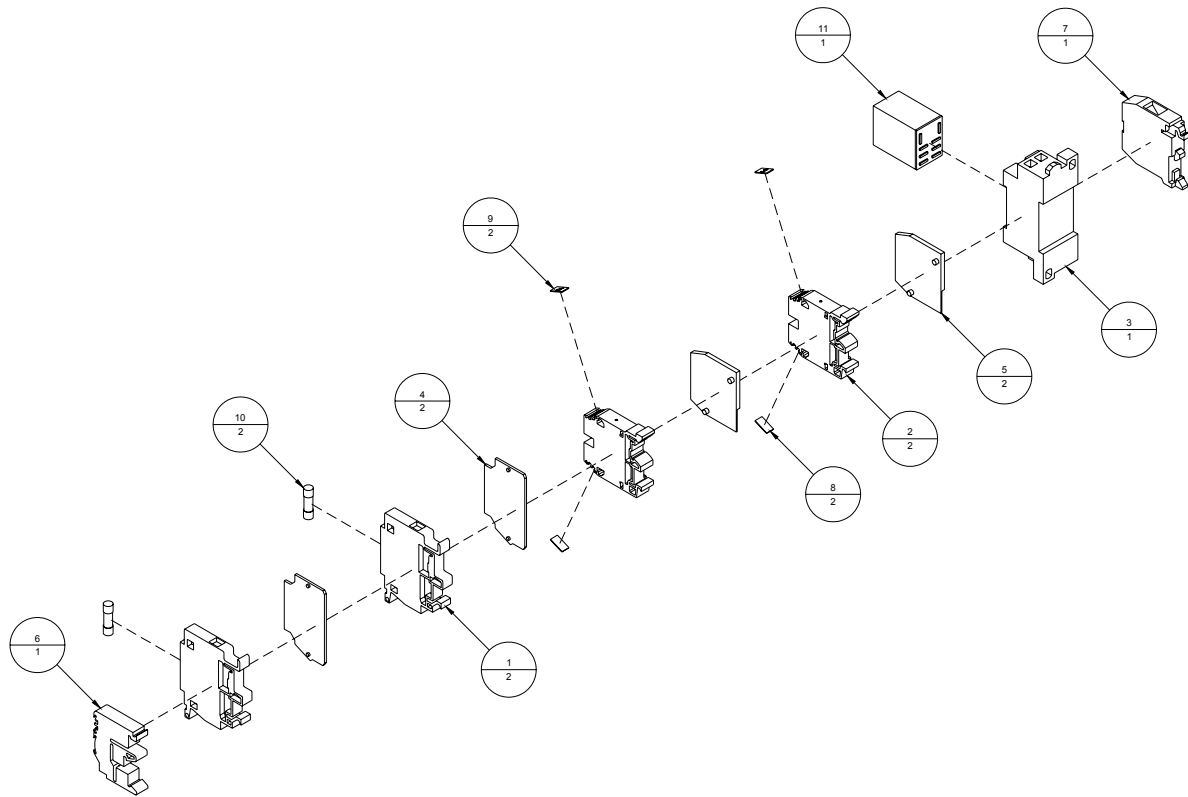
Figure A-37: *Terminal Block Assembly, 115 VAC, BK6OB (9102443A)*

Table A-38: Electrical Box Assembly, BK6OB (9102444A)

Item	Part Number	Quantity	Description	Reference
1	401310	14	Screw, PHMS, 4-40 UNC x 1/4"	
2	401350	1	Screw, PHMS, 4-40 UNC x 3/4"	
3	402310	12	Screw, PHMS, 6-32 UNC x 1/4"	
4	402320	6	Screw, PHMS, 6-32 UNC x 3/8"	
5	403320	12	Screw, PHMS, 8-32 UNC x 3/8"	
6	404510	36	Screw, BHCS, 10-32 UNF x 1/4"	
7	404530	1	Screw, BHCS, 10-32 UNF x 1/2'	
8	404550	2	Screw, BHCS, 10-32 UNF x 3/4"	
9	406250	4	Screw, SHCS, 5/16-18 UNC x 3/4"	
10	420006	6	Nut, 6-32 UNC	
11	420008	3	Nut, 10-32 UNF	
12	420010	2	Nut, 1/4-20 UNC	
13	439007	3	Lockwasher, 1/4", External Tooth	
14	439009	2	Lockwasher, No. 10	
15	439015	4	Lockwasher, 5/16 ID	
16	600005	3	DC Controller, 90 VDC	
17	600402	1	Board, Base Interface	
18	600600	1	Power Supply, 12 VDC	
19	600601	1	Board, Gap Controller	
20	606360	45"	Wire, #10, Green/Yellow	
21	606360	30"	Wire, #10, Green/Yellow	
22	606601A	1	Cable, Shaft Encoder Extension	Page A-23
23	609111	2	Terminal, Ring, #10, 14-16 AWG, Blue	
24	609112	4	Terminal, Fork, #10, Blue	
25	609115	1	Terminal, Ring, 1/4", 10-12 AWG, Non-Insulated	
26	609120	1	Terminal, Ring, 1/4", 16-14 AWG, Non-Insulated	
27	610013	4	Relay, 12 VDC	
28	614015A	1	Cable, Base Power Assembly (230 VAC)	Page A-25
29	614057A	1	Cable, Conveyor Receptacle	Page A-26
30	614061A	2	Cable, Jam/Proxi/Photocue Extension	Page A-27
31	614138A	1	Cable, Auxiliary Feeder Receptacle, BK60B	Page A-28
32	614141	1	Receptacle Cap, Shell Size 17	
33	614600A	1	Cable, Ribbon, Gap Controller	Page A-29
34	615020	1	Bracket, Power Supply	
35	615021	6.5"	T-Rail, DIN	
36	615021	4"	T-Rail, DIN	
37	615062	1	Connector, Female, 2-Pin, BLA2	
38	615063	1	Connector, Female, 3-Pin, BLA3	
39	615065	3	Connector, Female, 5-Pin, BLA5	
40	615066	1	Connector, Female, 4-Pin, BLA4	
41	615075	1	Connector, Female, 7-Pin, BLA7	
42	615079	1	Connector, Female, 16-Pin, BLA16	
43	615081	2	Connector, Female, 19-Pin, BLA19	
44	615131	12	Cable Clamp, 3/8", Metal	
45	615132	4	Cable Clamp, 90 Deg., Metal	
46	615210	11"	Wiring duct Cover, 1"	
47	615210	15"	Wiring Duct Cover, 1"	

Item	Part Number	Quantity	Description	Reference
48	615210	19"	Wiring Duct Cover, 1"	
49	615210	26"	Wiring Duct Cover, 1"	
50	615210	44"	Wiring Duct Cover, 1"	
51	615425	1	Hole Plug, 7/8"	
52	615600	11"	Wiring Duct, 1" x 1/5"	
53	615600	15"	Wiring Duct, 1" x 1/5"	
54	615600	19"	Wiring Duct, 1" x 1/5"	
55	615600	26"	Wiring Duct, 1" x 1/5"	
56	615600	44"	Wiring Duct, 1" x 1/5"	
57	640301	1	Diode, 1N4004	
58	700321	3	Cover, Dart Control	
59	700613	1	Cover, Power supply, 12 VDC	
60	700619	1	Cover, Fuse, Base Interface Board	
61	713607A	1	Base, BK60B	
62	9100300	1	Transformer, 1 kVA, 200/208/230: 115V, 50/60 Hz	
63	9100301	1	Cover, Transformer Terminal	
64	9100302	1	Cover, Transformer Fuse	
65	9102316A	1	Cable, Inline Remote, BK6OB	Page A-36
66	9102442A	1	Terminal Block Assembly, 230 VAC, BK60B	Page A-44
67	9102443A	1	Terminal Block Assembly, 115 VAC, BK60B	Page A-45
68	9102540	1	Fuse, 10 A, 13/32 x 1-3/8"	

Figure A-38: Electrical Box Assembly, BK6OB (9102444A)

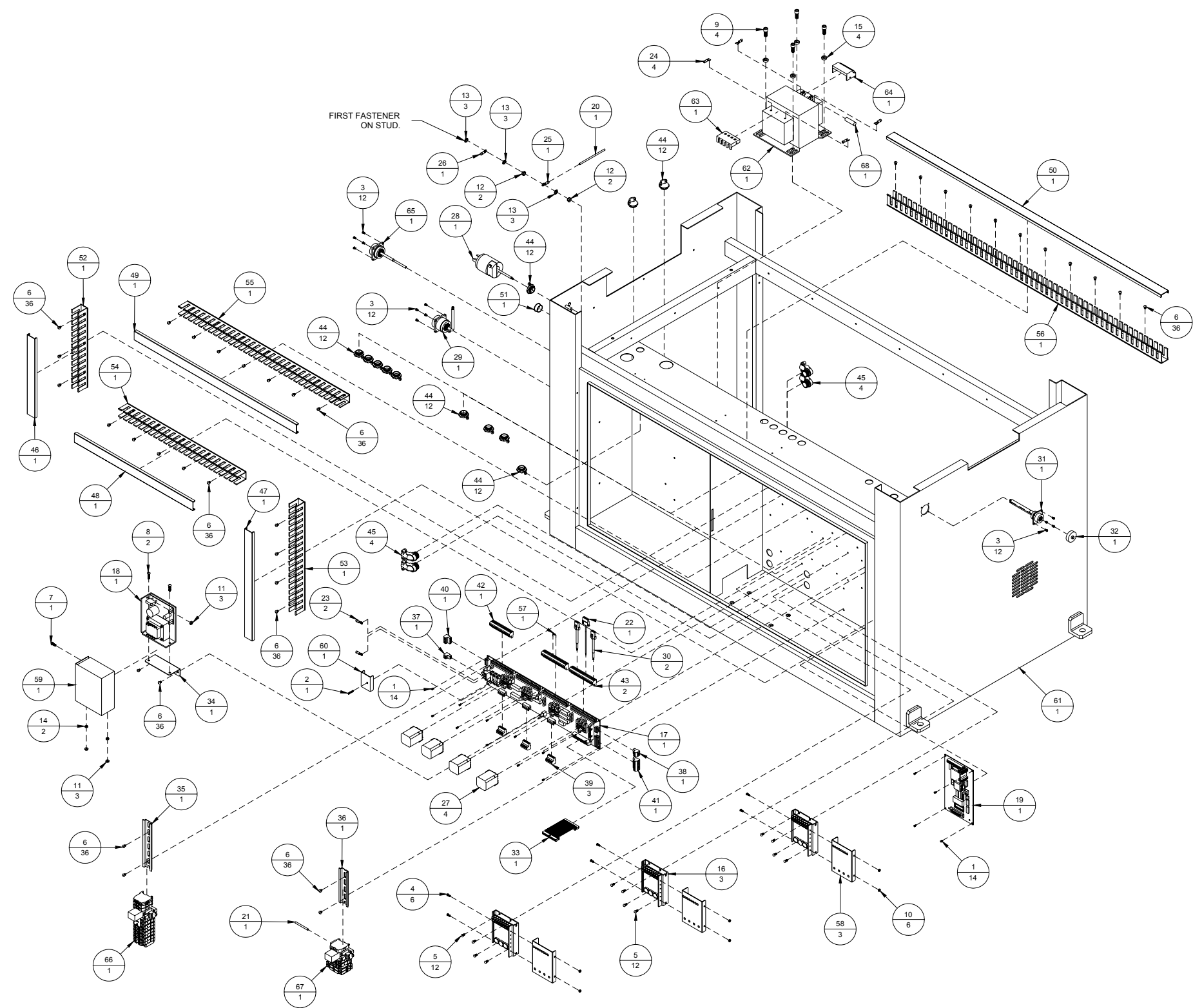


Table A-39: *Base Cabinet Assembly, BK60B (9102445A)*

Item	Part Number	Quantity	Description	Reference
1	343010	4	Base Mounting Foot	
2	343015	4	Base Mounting Leg	
3	343016	4	Jam Nut, 3/4-10 UNC	
4	402310	2	Screw, PHMS, 6-32 UNC x 1/4"	
5	404320	4	Screw, PHMS, 10-32 UNF x 3/8"	
6	404331	13	Screw, PHMS, 10-32 x 1/2" Rolling Thread	
7	404510	16	Screw, BHCS, 10-32 UNF x 1/4"	
8	405260	4	Screw, SHCS, 1/4-20 UNC x 7/8"	
9	420007	4	Nut, 8-32 UNC	
10	420008	4	Nut, 10-32 UNF	
11	420015	4	Nut, 5/16-18 UNC	
12	426302	4	Anti Vibration Mount, 5/16-18 x 13/16"	
13	439015	4	Lockwasher, 5/16" ID	
14	440015	4	Washer, 5/16" ID	
15	440510	2	Rubber Washer, 1/4" ID	
16	606035	82"	Cable, #18-2, SJOW-A	
17	609300	1	Ribbon Cable Tie Mount	
18	615102	13	Tie Mount	
19	615140	13	Lashing Tie	
20	615153	2	Box Cover, 4" x 4"	
21	713315	1	Muffin Fan Mount	
22	713613	1	Upper Pan	
23	713614	1	Sound Barrier Pan	
24	717530	2	Door Catch	
25	801102A	1	Vacuum Assembly	Page A-31
26	803306	1	Muffling Fan Filter	
27	902600	1	Sonex Sound Insulation	
28	902600	1	Sonex Sound Insulation	
29	902600	1	Sonex Sound Insulation	
30	902600	1	Sonex Sound Insulation	
31	9100193	1	Fan, Muffin, 220 VAC	
32	9100396A	1	Instrument Panel Assembly, BK60B	Page A-32
33	9100417	6	Panel Moulding Clip	
34	9100829A	1	Blower Assembly, 40 CFM	Page A-34
35	9102444A	1	Electrical Box Assembly, BK60B	Page A-46

Figure A-39: Base Cabinet Assembly, BK6OB (9102445A)

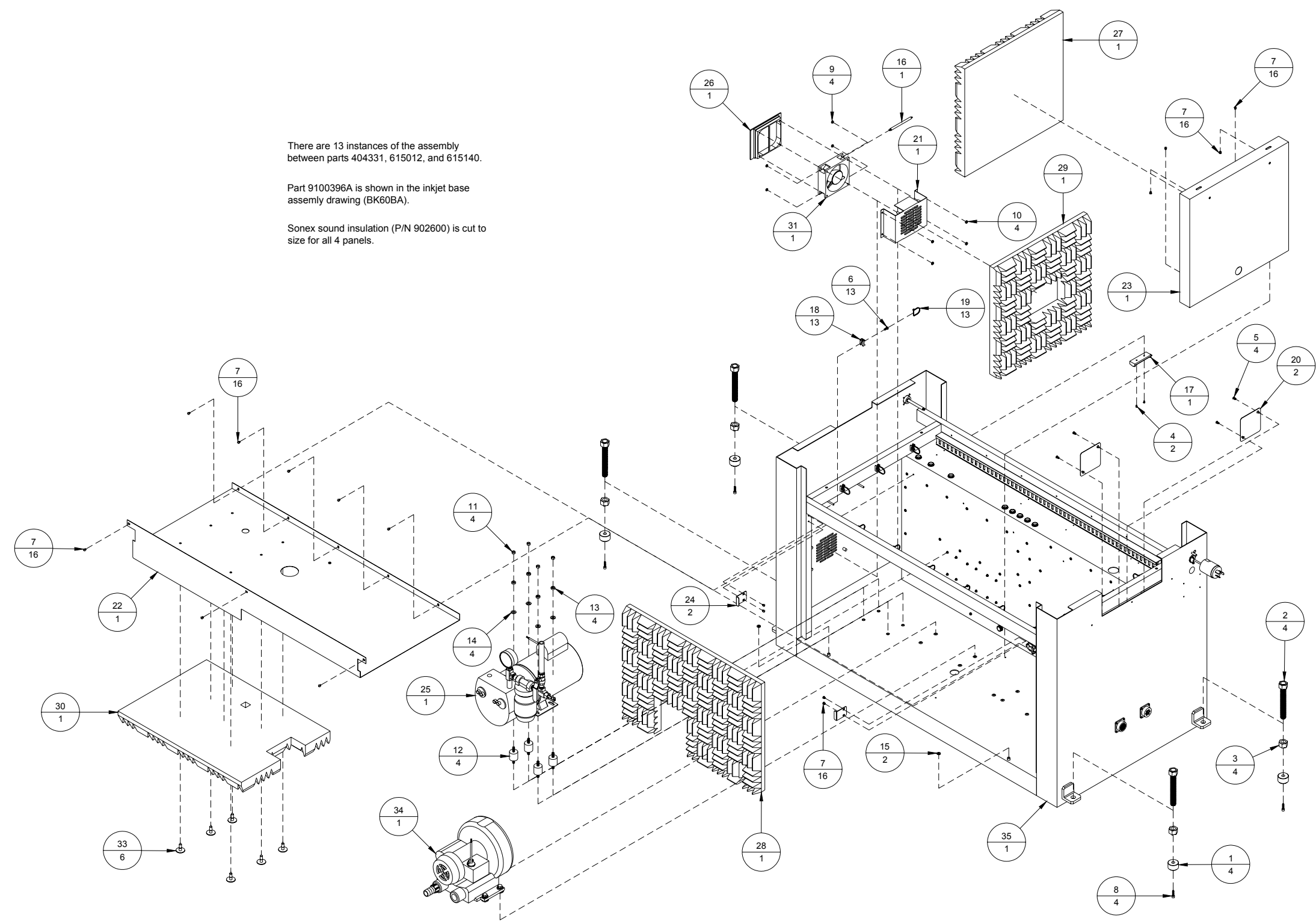


Table A-40: *Cable, Counter, Interconnect, BK665 (9102547A)*

Item	Part Number	Quantity	Description	Reference
1	606013	30"	Cable, #22-3, Unshielded	
2	614107	3	Contact, Male, 24-20 AWG, Yellow	
3	614108	3	Contact, Female, 24-20 AWG, Yellow	
4	614115	1	Plug, Female, 11-4	
5	614116	1	Plug, Male, 11-4	
6	9102122	2	Cable Clamp, Shell 11, CPC	

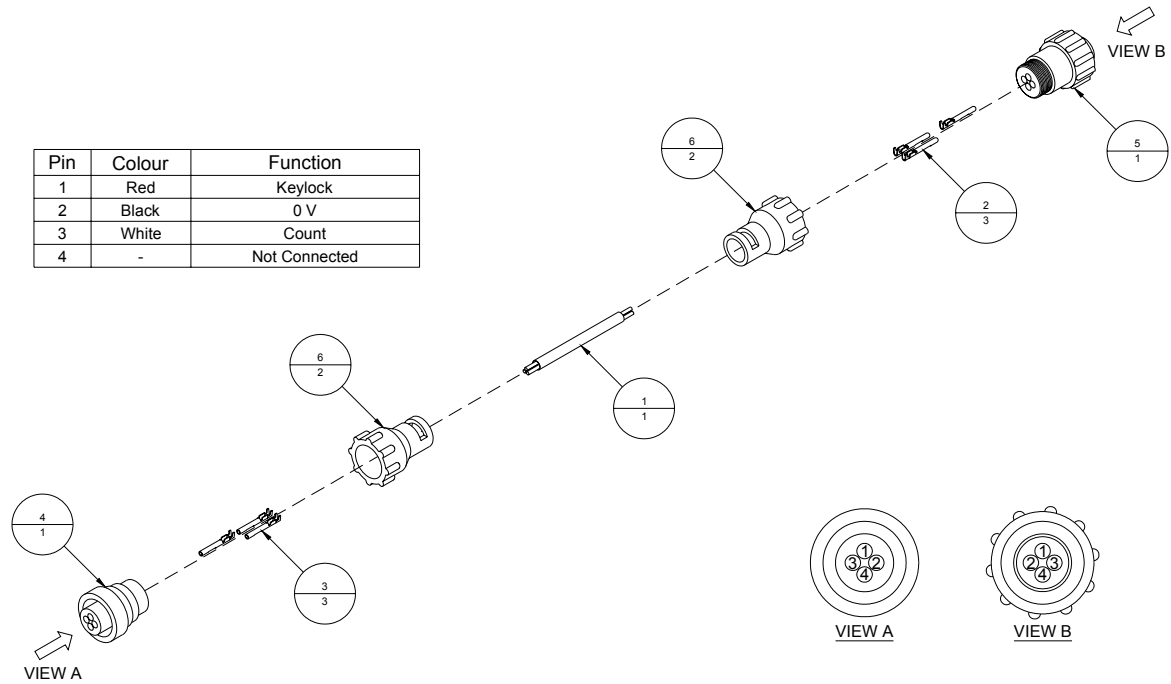
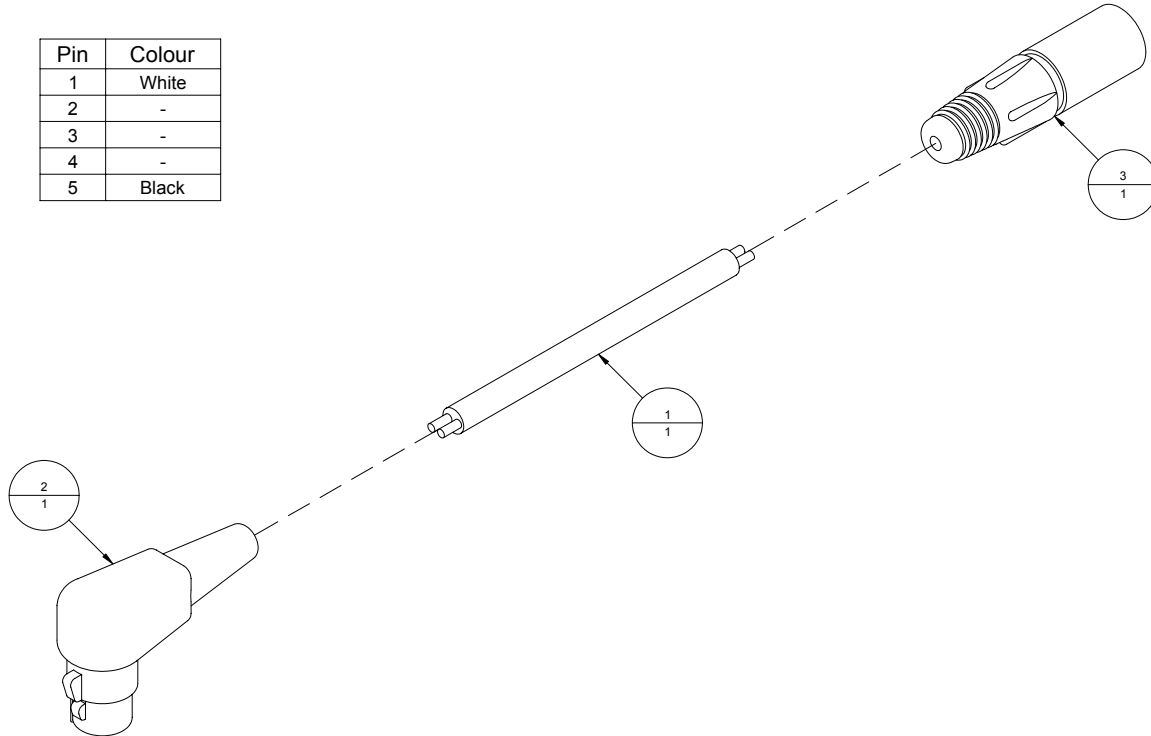
Figure A-40: *Cable, Counter, Interconnect, BK665 (9102547A)*

Table A-41: *Cable, Preheater, Interconnect, BK665 Elite (9102548A)*

Item	Part Number	Quantity	Description	Reference
1	606035	60"	Cable, #18-2, SJOW-A	
2	9101549	1	Plug, 5-Pin, Female, 90 Deg, Neutrik	
3	9102432	1	Plug, 5-Pin, Male, Neutrik	

Figure A-41: *Cable, Preheater, Interconnect, BK665 Elite (9102548A)*

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Figure B-1: *Terminal Block Assembly, 220VAC, TB-1 (9102442A)*

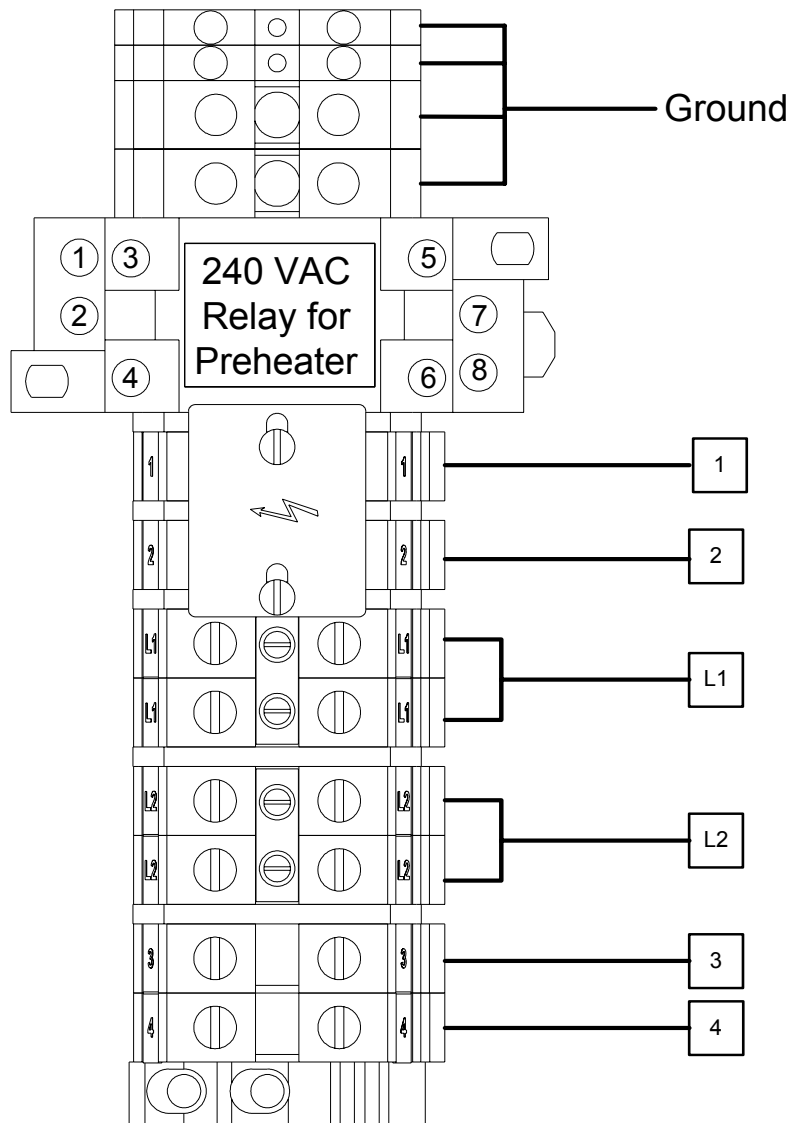
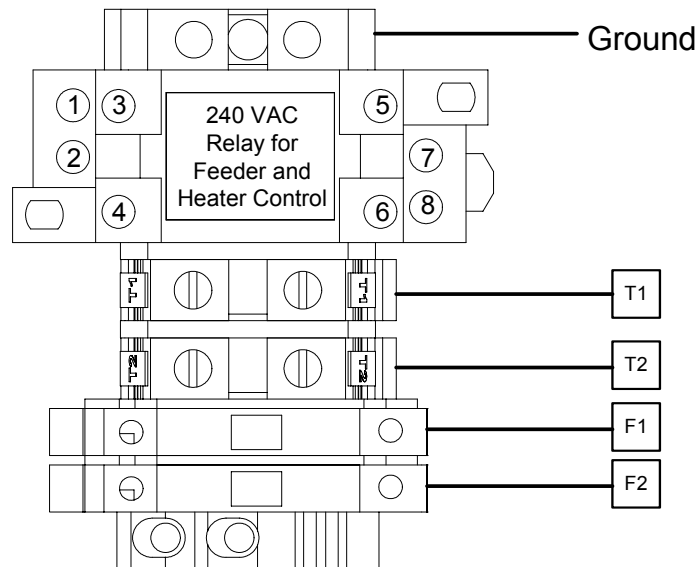


Table B-1: *Terminal Block Assembly, 220VAC (615016A)*

Symbol	Part Number	Function	Part Description
Ground	615017 (2) 615018 (2)	Earth Ground	Ground Terminal Block, 6 mm Ground Terminal Block, 10 mm
1	615003	220 VAC, Line Power	Terminal Block, Grey, 10 mm
2	615003	220 VAC, Line Power	Terminal Block, Grey, 10 mm
L1	615002 (2)	220 VAC Main Switched Power	Terminal Block, Grey, 10 mm
L2	615002 (2)	220 VAC Main Switched Power	Terminal Block, Grey, 10 mm
3	615002	220 VAC Pump Switched Power	Terminal Block, Grey, 10 mm
4	615002	220 VAC Pump Switched Power	Terminal Block, Grey, 10 mm

Figure B-2: *Terminal Block Assembly, 115VAC, TB-2 (9102443A)***Table B-2:** *Terminal Block Assembly, 115VAC (615012A)*

Symbol	Part Number	Function	Part Description
Ground	615018	Earth Ground	Ground Terminal Block, 10 mm
T1	615003	115 VAC, Line Power	Terminal Block, Grey, 10 mm
T2	615003	115 VAC, Line Power	Terminal Block, Grey, 10 mm
F1	615001 646001	Fuse, 5A	Fuse Holder, M418, SF2, Grey Fuse, 5A, 5 x 20mm
F2	615001 646001	Fuse, 5A	Fuse Holder, M418, SF2, Grey Fuse, 5A, 5 x 20mm

Figure B-3: BK6OB Overall Schematic Diagram

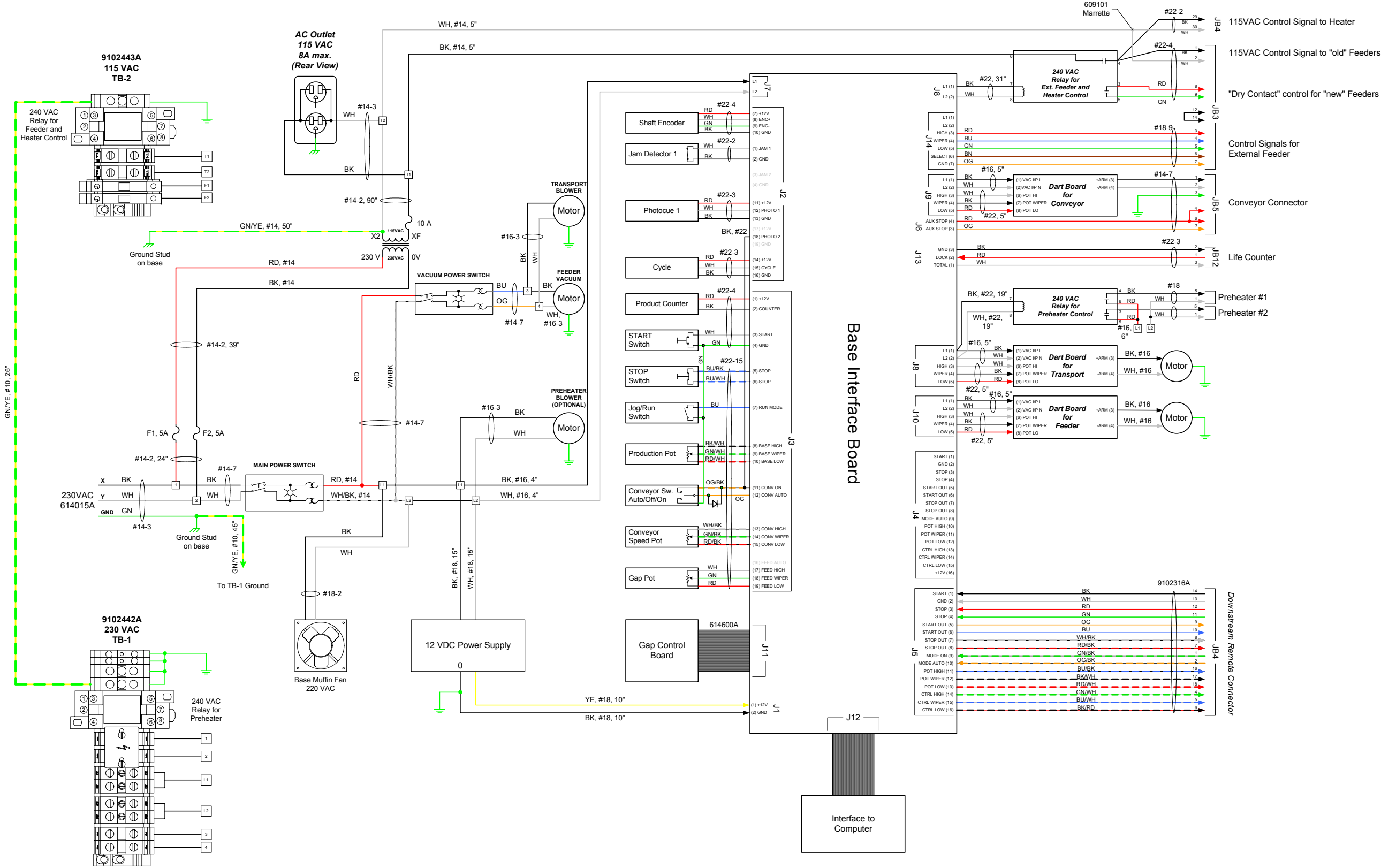


Figure B-4: Power and Sensor Connection Schematics

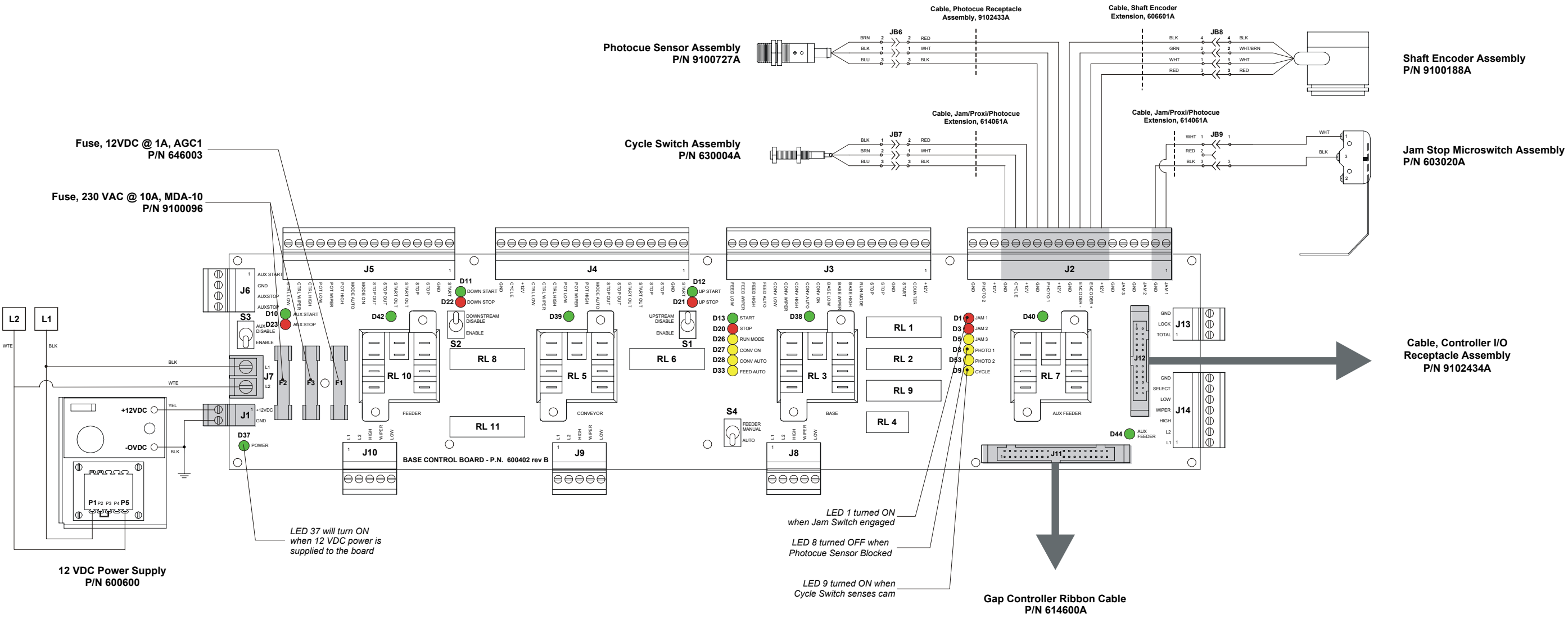


Figure B-5: Instrument Panel and Base Connections Schematic

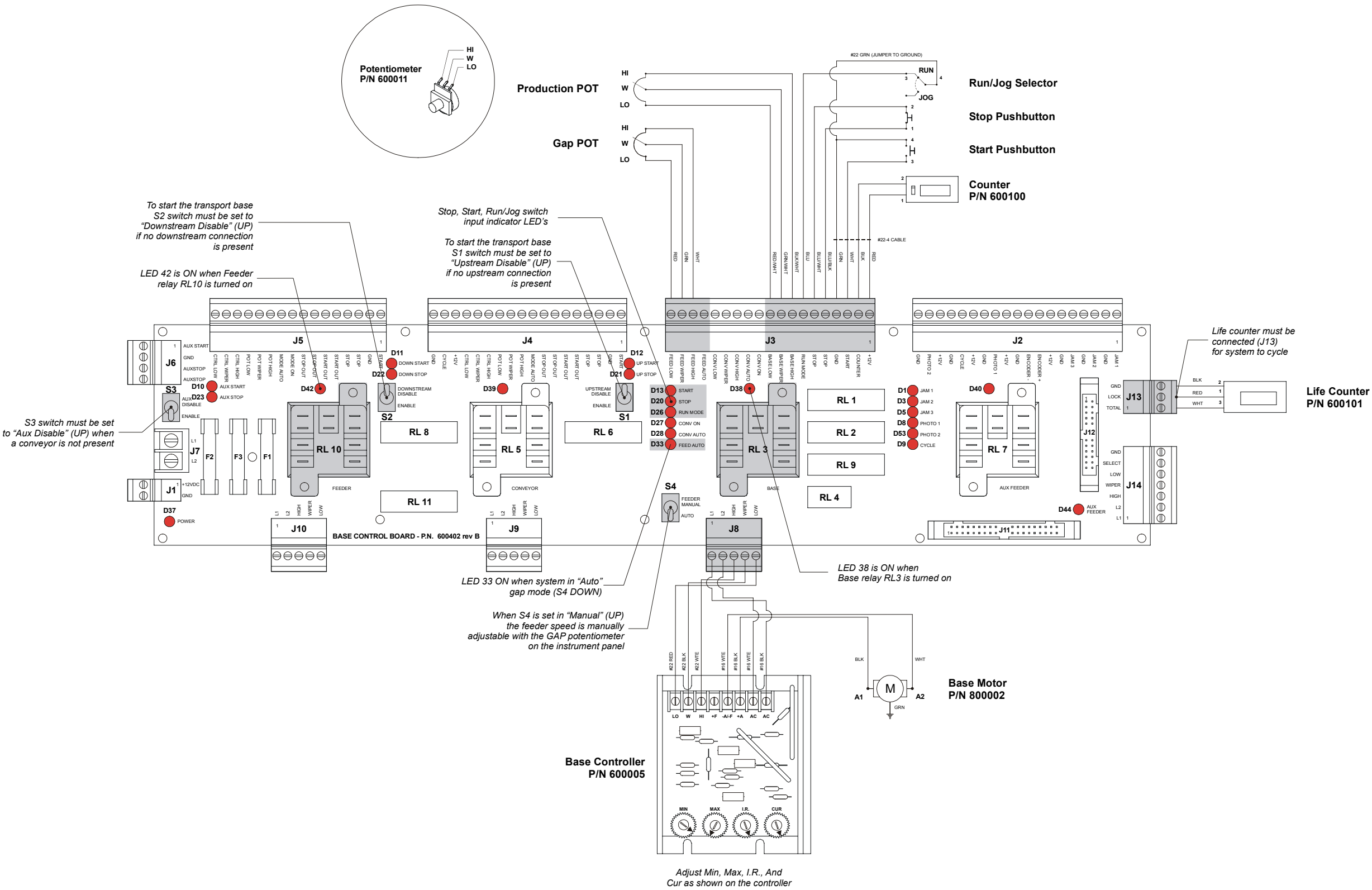


Figure B-6: Conveyor Connections Schematic

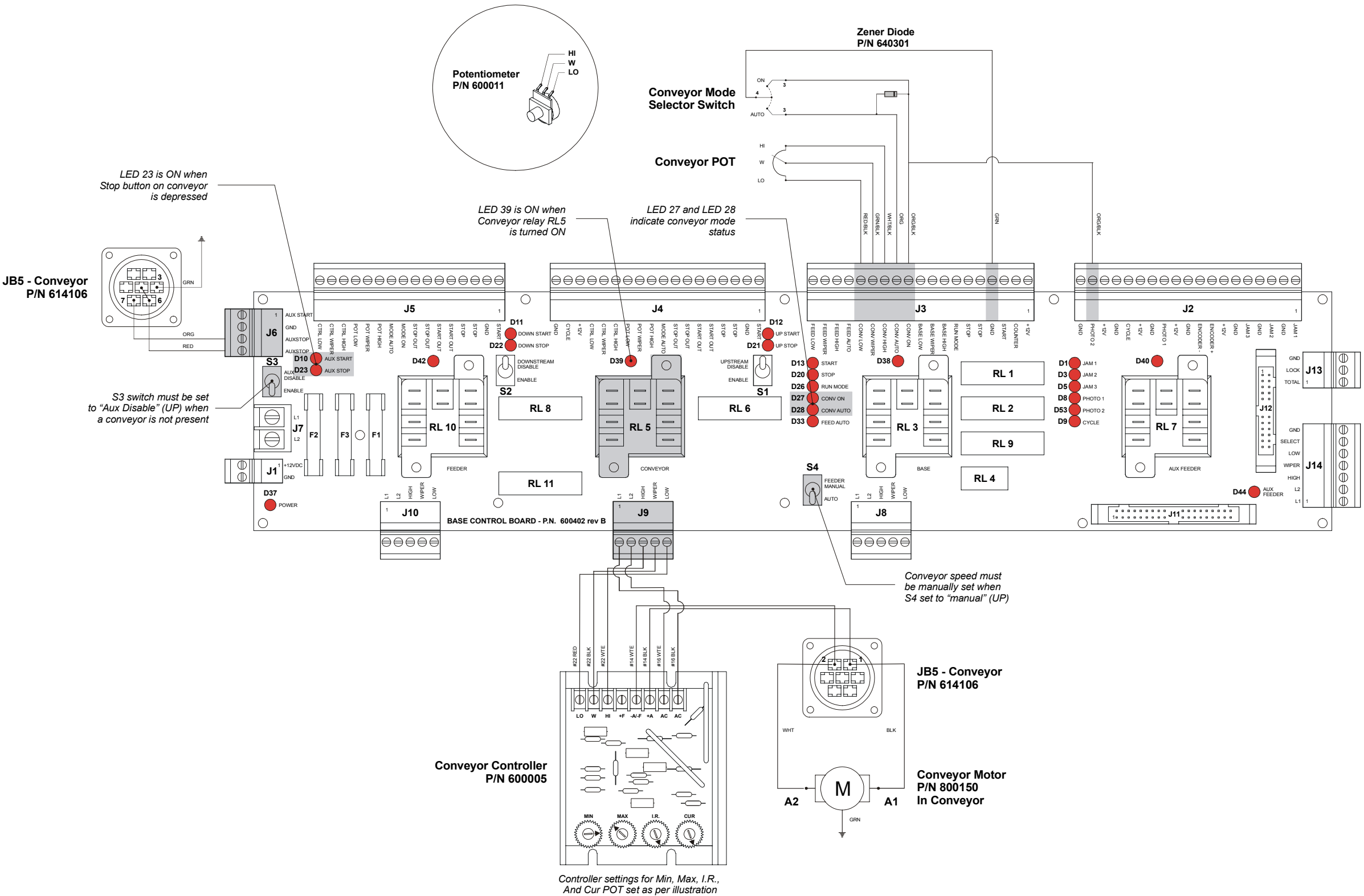


Figure B-7: Auxiliary Feeder Connections Schematic

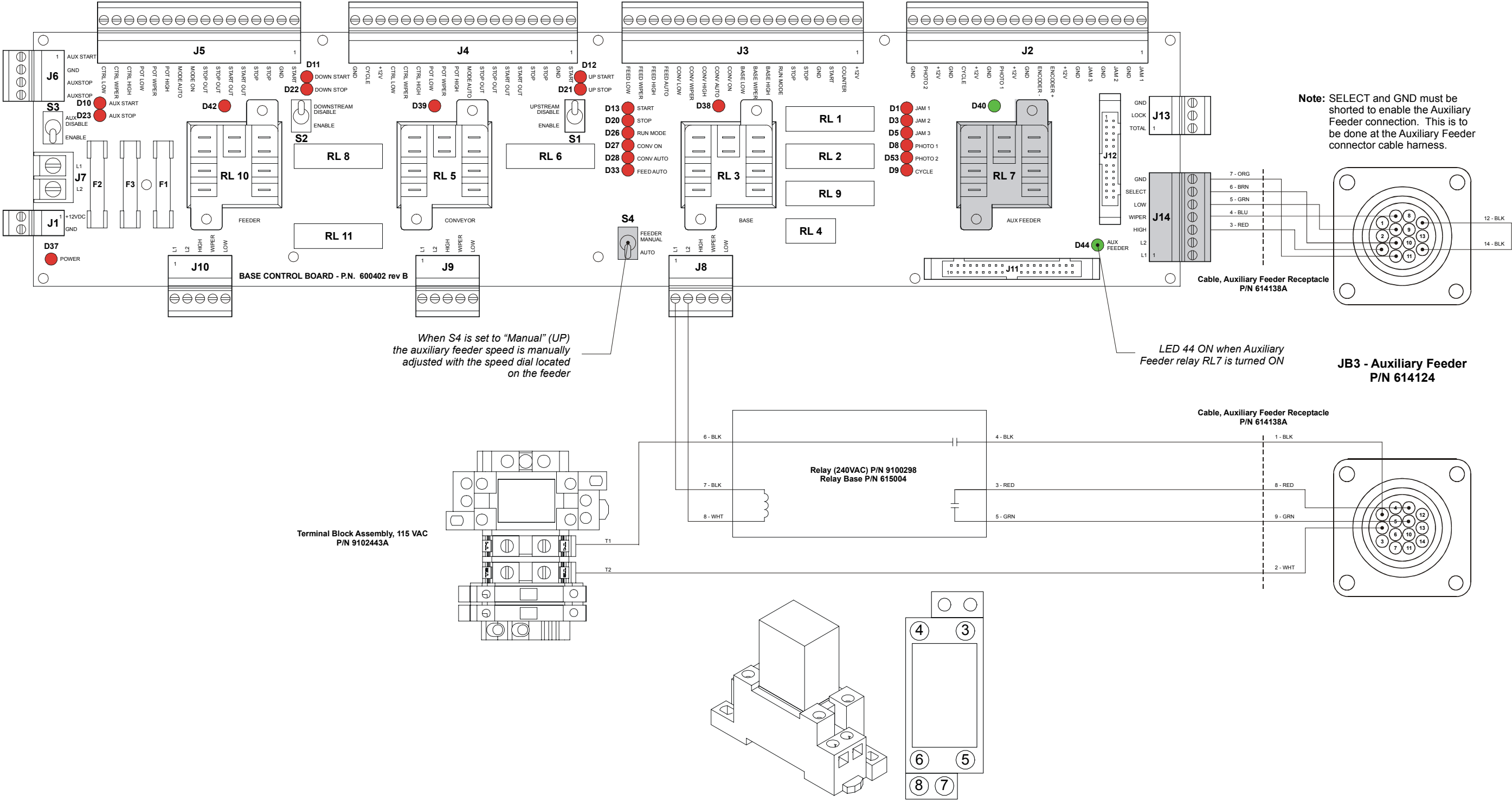


Figure B-8: *Downstream Remote Connections Schematic*

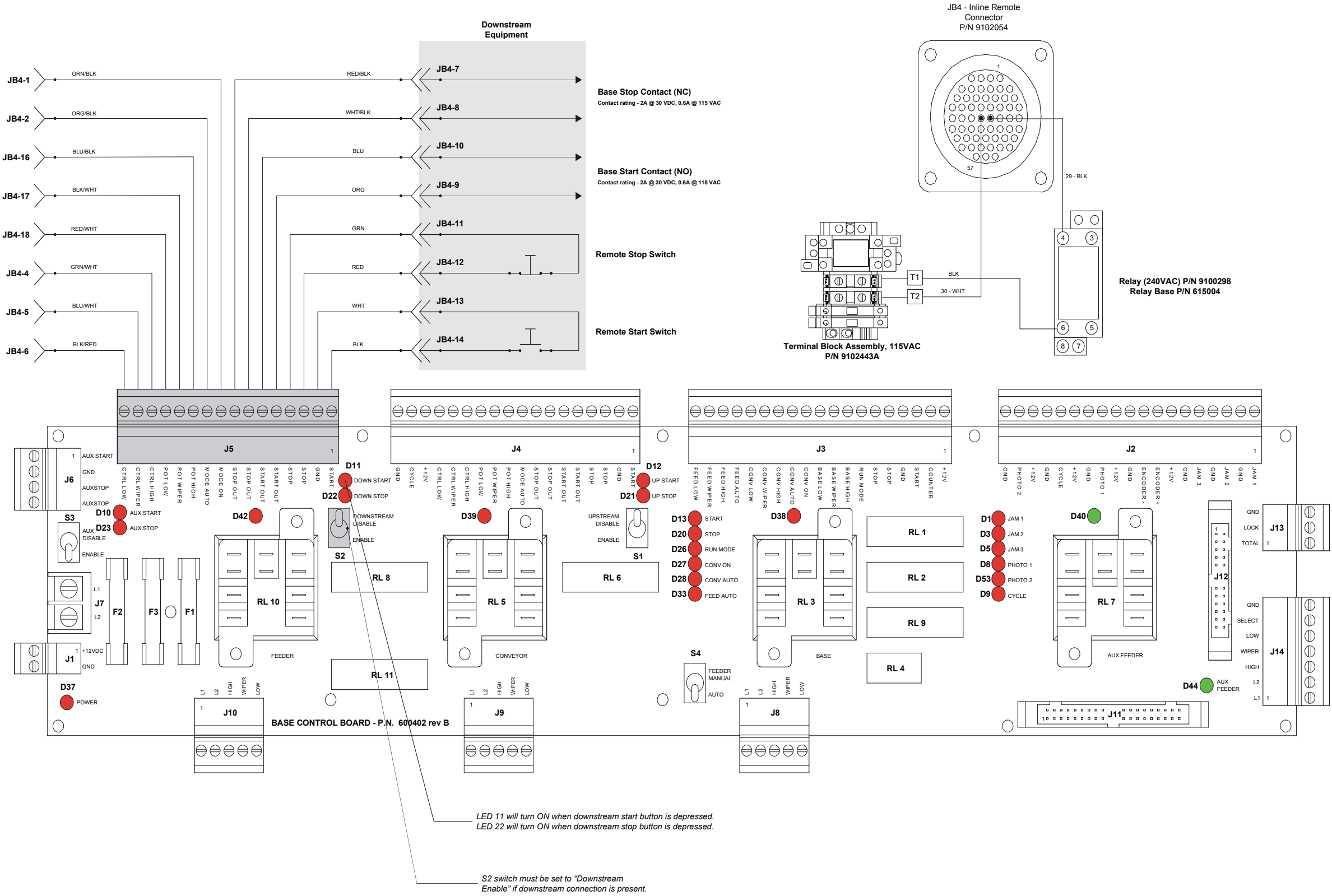


Figure B-9: Gap Control Board

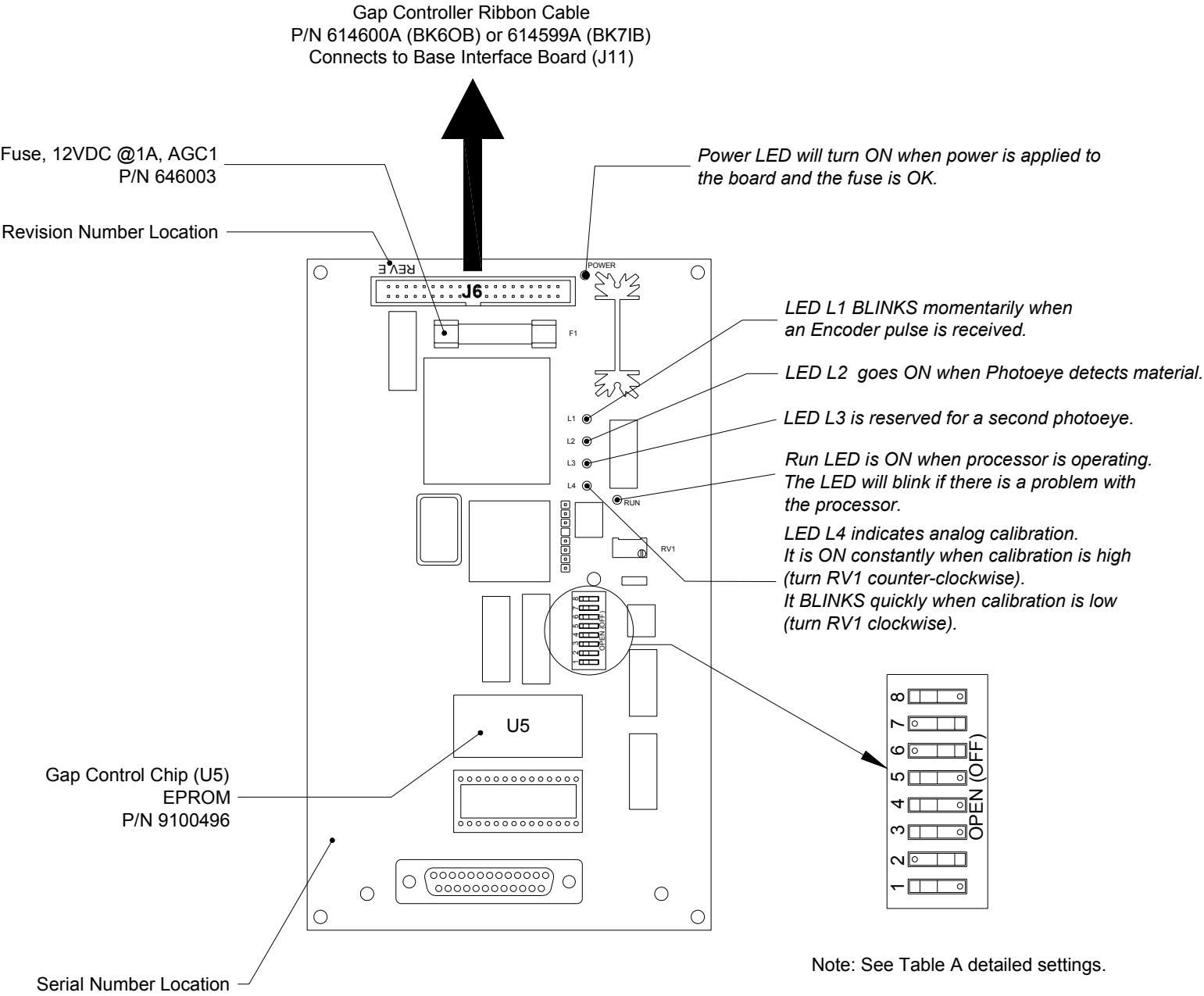


Table A - System Support Board CPU DIP Switch Assignments

DIP	Setting	Function		
8	On	Factory Reset (all other DIP switches must be Off)		
	Off	Reserved for Factory Reset		
7	On	For Rev E Board		
	Off	For Rev A-D Board		
6	On	Controller Gain Bit 1		
5	Off	Controller Gain Bit 0		
4 and 3		Pos 4	Pos 3	Stack Separation
		Off	Off	++ Stack separation (min).
		Off	On	++++ Stack separation
		On	Off	++++++ Stack separation
		On	On	+++++++ Stack separation (max).
2	On	High resolution encoder, 6000 ppr (used in HP Elite, and Atlas Inkjets)		
	Off	Standard encoder, 1600 ppr (used in Trident Inkjet)		
1	On	Set for normally closed photoeye		
	Off	Set for normally open photoeye (default)		

To reprogram the board:

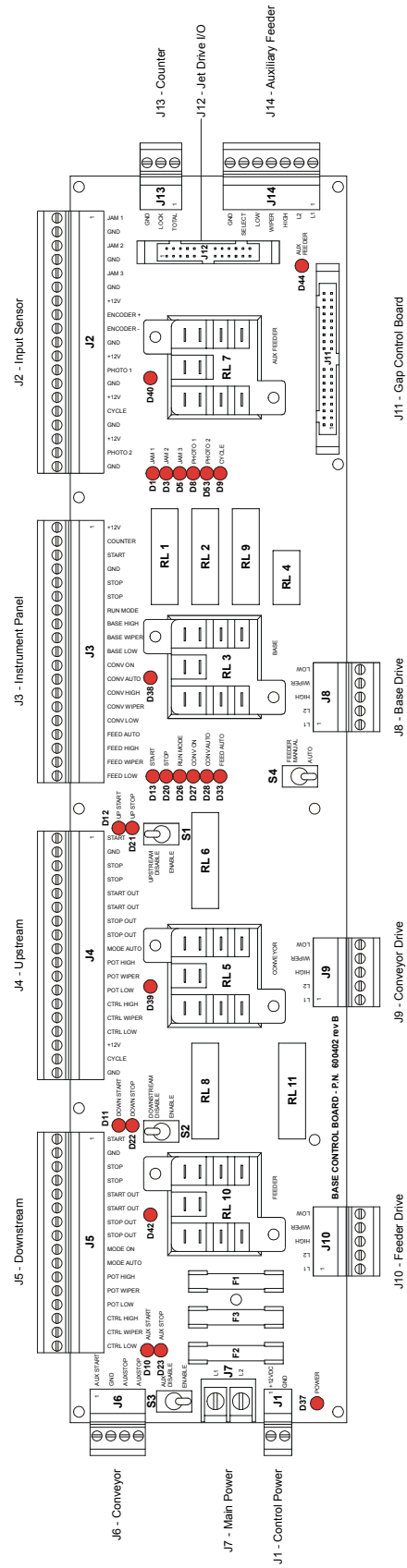
1. Turn the base power off.
2. Switch DIP 8 ON and all other DIP switches OFF.
3. Turn the base power on and wait at least 60 seconds.
4. Turn the base power off.
5. Return the DIP switch settings to normal (Reference Table A).

The board is now reprogrammed.

Note: See Table A detailed settings.

List of Connectors

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J3 Instrument Panel Connector..... C-4
J4 Upstream Connector..... C-5
J5 Downstream Connector..... C-6
J6 Conveyor Connector C-7
J7 Main Power Connector..... C-8
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J9 Conveyor Drive Connector C-10
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J12 Jet Driver Board Connector C-13
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J14 Auxiliary Feeder Connector C-15



J1 Control Power Connector

PART NUMBER: 615062

DESCRIPTION: Connector which provides 12 VDC power to the Base Interface Board providing power to all of the sensors.

TYPE: 2 pin Weidmuller connector, BLA2

REFERENCE: Weidmuller #12817.6

ORIGIN: Base Interface Board

DESTINATION: 12 VDC Power Supply



Pin	Function
1	+ 12 VDC
2	GND

Note: The LED labeled D37 will illuminate when the Control power is supplied to the Base Interface Board.

J2 Input Sensor Connector

PART NUMBER: 615081

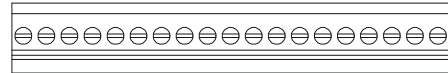
DESCRIPTION: Connector which interfaces the Base Interface Board with the jam stop switch, shaft encoder, photocue sensor, and the cycle switch.

TYPE: 19 pin Weidmuller connector, BLA19

REFERENCE: Weidmuller #12834.6

ORIGIN: Base Interface Board

DESTINATION: Various Sensor Connectors



Pin	Function
1	Jam 1
2	GND
3	Jam 2
4	GND
5	Jam 3
6	GND
7	+12 VDC, Shaft Encoder
8	Encoder +
9	Encoder -
10	GND
11	+ 12 VDC, Photocue
12	Photocue signal
13	GND
14	+ 12 VDC, Cycle Proximity Switch
15	Cycle Proximity Switch signal
16	GND
17	+ 12 VDC, Photcue 2
18	Photocue 2 signal
19	GND

Note: The LEDs labeled D1, D3, D5, D8, D53, and D9 will illuminate when the Base Interface Board receives a signal from the Jam 1, Jam 2, Jam 3, Photo 1, Photo 2, and Cycle, respectively.

J3 Instrument Panel Connector

PART NUMBER: 615081

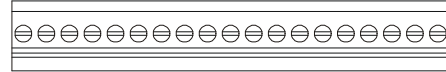
DESCRIPTION: Connector that interfaces the Base Interface Board with the instrument panel.

TYPE: 19 pin Weidmuller connector, BLA19

REFERENCE: Weidmuller #12834.6

ORIGIN: Base Interface Board

DESTINATION: Instrument Panel



Pin	Function
1	+ 12 VDC, Resetable Counter
2	Resetable Counter
3	Start pushbutton
4	GND, Start pushbutton
5	Stop pushbutton
6	Stop pushbutton
7	Run mode
8	Base/Production pot high
9	Base/Production pot wiper
10	Base/Production pot low
11	Conveyor on
12	Conveyor auto
13	Conveyor pot high
14	Conveyor pot wiper
15	Conveyor pot low
16	Spare
17	Gap/Feeder pot high
18	Gap/Feeder pot wiper
19	Gap/Feeder pot low

Note: The LEDs labeled D13, D20, D26, D27, D28, and D33 will illuminate when the Base Interface Board receives a signal from the Start pushbutton, Stop pushbutton, Run mode enabled, Conveyor On mode, Conveyor Auto mode, and Feeder Auto mode, respectively.

J4 Upstream Connector

PART NUMBER: 615080

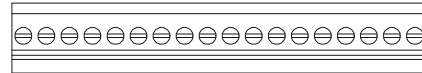
DESCRIPTION: Connector that interfaces the Base Interface Board with any upstream equipment.

TYPE: 18 pin Weidmuller connector, BLA18

REFERENCE: Weidmuller #12833.6

ORIGIN: Base Interface Board

DESTINATION: None



Pin	Function
1	Start
2	GND
3	Stop
4	Stop
5	Start Out
6	Start Out
7	Stop Out
8	Stop Out
9	Mode auto
10	Pot high
11	Pot wiper
12	Pot low
13	Control high
14	Control wiper
15	Control low
16	+ 12 VDC
17	Cycle Switch
18	GND

Note: The LEDs labeled D12 and D21 will illuminate when the Base Interface Board receives a signal from the Upstream Start and Upstream Stop, respectively.

J5 Downstream Connector

PART NUMBER: 615080

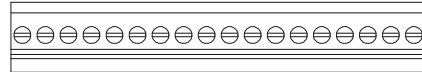
DESCRIPTION: Connector that interfaces the Base Interface Board with any downstream equipment. The default connection is preset to operate with the Buskro Tabber to allow starting and stopping from either machine.

TYPE: 18 pin Weidmuller connector, BLA18

REFERENCE: Weidmuller #12833.6

ORIGIN: Base Interface Board

DESTINATION: Inline Connector, JB4



Pin	Function
1	Start
2	GND
3	Stop
4	Stop
5	Start Out
6	Start Out
7	Stop Out
8	Stop Out
9	Mode on
10	Mode auto
11	Pot high
12	Pot wiper
13	Pot low
14	Control high
15	Control wiper
16	Control low

Note: The LEDs labeled D11 and D22 will illuminate when the Base Interface Board receives a signal from the Downstream Start and Downstream Stop, respectively.

J6 Conveyor Connector

PART NUMBER: 615066

DESCRIPTION: Connector that interfaces the Base Interface Board with the conveyor.

TYPE: 4 pin Weidmuller connector, BLA4

REFERENCE: Weidmuller #12819.6

ORIGIN: Base Interface Board

DESTINATION: Conveyor Connector, JB5



Pin	Function
1	Auxiliary Start
2	GND
3	Auxiliary Stop
4	Auxiliary Stop

Note: The LEDs labeled D10 and D23 will illuminate when the Base Interface Board receives a signal from the Conveyor Start and Conveyor Stop, respectively.

J7 Main Power Connector

PART NUMBER: Part of Base Interface Board.

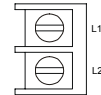
DESCRIPTION: Connector that provides the 220 VAC power to the Base Interface Board.

TYPE: Screw connector

REFERENCE: None

ORIGIN: Base Interface Board

DESTINATION: Terminal Blocks, L1 and L2



Pin	Function
1	L1, 220 VAC
2	L2, 220 VAC

J8 Base Drive Connector

PART NUMBER: 615056

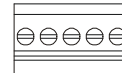
DESCRIPTION: Connector that interfaces the Base Interface Board base drive motor DC controller.

TYPE: 5 pin Weidmuller connector, BLA5

REFERENCE: Weidmuller #12820.6

ORIGIN: Base Interface Board

DESTINATION: Base Drive DC controller



Pin	Function
1	L1, 220 VAC
2	L2, 220 VAC
3	Base/Production pot high
4	Base/Production pot wiper
5	Base/Production pot low

J9 Conveyor Drive Connector

PART NUMBER: 615056

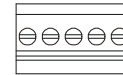
DESCRIPTION: Connector that interfaces the Base Interface Board conveyor drive motor DC controller.

TYPE: 5 pin Weidmuller connector, BLA5

REFERENCE: Weidmuller #12820.6

ORIGIN: Base Interface Board

DESTINATION: Conveyro Drive DC controller



Pin	Function
1	L1, 220 VAC
2	L2, 220 VAC
3	Conveyor pot high
4	Conveyor pot wiper
5	Conveyor pot low

J10 Feeder Drive Connector

PART NUMBER: 615056

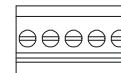
DESCRIPTION: Connector that interfaces the Base Interface Board feeder drive motor DC controller.

TYPE: 5 pin Weidmuller connector, BLA5

REFERENCE: Weidmuller #12820.6

ORIGIN: Base Interface Board

DESTINATION: Feeder Drive DC controller



Pin	Function
1	L1, 220 VAC
2	L2, 220 VAC
3	Feeder/Gap pot high
4	Feeder/Gap pot wiper
5	Feeder/Gap pot low

J11 Gap Control Board Connector

PART NUMBER: Part of Base Interface Board

DESCRIPTION: Connector that interfaces the Base Interface Board with the Gap Controller Board via the Gap Controller Ribbon Cable. Please refer to Appendix B for additional details on the Gap Controller Board.

TYPE: 40 pin Amp Connector

REFERENCE: None

ORIGIN: Base Interface Board

DESTINATION: Gap Controller Board



Pin	Function
1	Ground
2	Feeder Control PCM Input
3	Conveyor Control PCM Input
4 - 25	Not Connected
26	Stack Output to Gap Controller
27	Photoeye Output to Gap Controller
28	Not Connected
29	Encoder Output to Gap Controller
30	Feeder Rate Output to Gap Controller
31	Conveyor Output to Gap Controller
32 - 35	Not Connected
36	+ 5v from Gap Controller
37	+ 12 V to Gap Controller
38	+ 12 V to Gap Controller
39	Ground
40	Ground

J12 Jet Driver Board Connector

PART NUMBER: Part of Base Interface Board

DESCRIPTION: Connector that interfaces the base control with the Jet Driver Board via Jet Drive I/O Ribbon Cable

TYPE: 26 pin Amp Connector

REFERENCE: None

ORIGIN: Base Interface Board

DESTINATION: Jet Driver Board #1



Pin	Function
1	Ground
2	Spare Analog Input 1
3	Spare Analog Input 2
4	Spare Analog Input 3
5	Spare Analog Input 4
6	Spare Digital Input 1
7	Spare Digital Input 2
8	Stop Button Input
9	Machine Cycle-Proxi Switch Input
10	Jam Switch Input
11	Spare Output 1
12	Spare Output 2
13	Spare Output 3
14	Divert Relay Output
15	Stack Relay Output
16	Production Counter Output
17	Stop Relay Output
18	Power Supply Ground
19	Encoder Positive or Single Ended Input
20	Encoder Negative Input
21	Power Supply Ground
22	Photocue Input
23-26	Spare

J13 Counter Connector

PART NUMBER: 615063

DESCRIPTION: Connector that interfaces the Base Control with the non-resetable counter mounted on the Power Supply Board.

TYPE: 3 pin Weidmuller connector, BLA3

REFERENCE: Weidmuller #12818.6

ORIGIN: Base Interface Board

DESTINATION: Non-resetable counter



Pin		Function
1		Ground
2		Lock
3		Total

J14 Auxiliary Feeder Connector

PART NUMBER: 615075

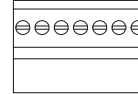
DESCRIPTION: Connector that interfaces the Base Control with an Auxiliary feeder. When connected, the inkjet base's feeder motor will automatically be disabled.

TYPE: 7 pin Weidmuller connector, BLA7

REFERENCE: Weidmuller #12822.6

ORIGIN: Base Interface Board

DESTINATION: Auxiliary Feeder Connector, JB3



Pin	Function
1	L1, 220 VAC
2	L2, 220 VAC
3	Auxiliary Feeder pot high
4	Auxiliary Feeder pot wiper
5	Auxiliary Feeder pot low
6	Auxiliary Feeder Select
7	Ground

Note : The Auxiliary Feeder Select must be jumpered to Ground to disable the inkjet base's feeder motor. The jumper should be installed on the Auxiliary Feeder's incoming connector.

The LED labeled D44 will illuminate when the Auxiliary Feeder is connected to the Base Interface Board.