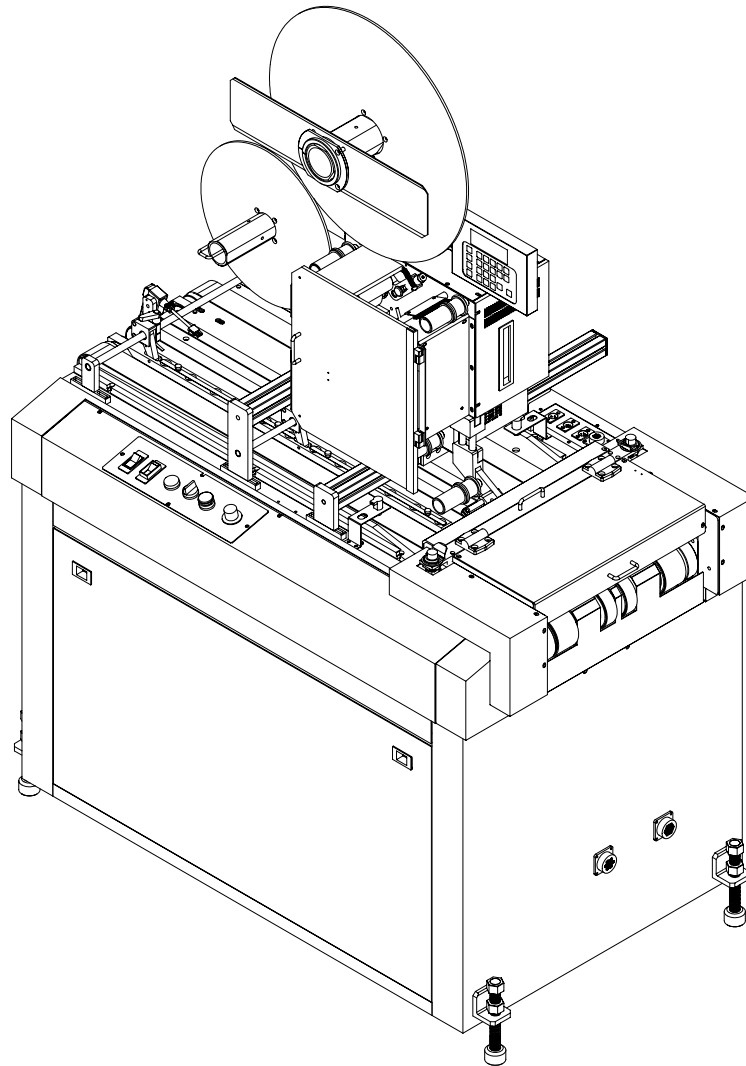


BUSKRO®

BK730 Tabber



BK730 Tabber User's Guide

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1.1 Description

The Buskro BK730 Tabber/Labeler is designed to apply pressure-sensitive tabs onto mail pieces and can be used as a wrap-around tabbing unit or as a flat tabbing device (labeler). The system consists of two major components, the transport base, which conveys the mail piece, and the tabbing head, which applies the individual tabs. The system offers full flexibility in its ability to apply a number of tabs on either edge of the mail piece. Simplified mechanical adjustments and software controlled tab placement functions offer unsurpassed ease of use permitting rapid job setups.

The mail piece, which is conveyed into the system by a feeder or inkjet system, is justified against a registration rail resulting in a tightly controlled tab-wrap. In addition, the presence of but a few mechanical adjustments for thickness and edge selection, gives the operator the tools to accurately and rapidly setup for any number of mail pieces.

In keeping with Buskro's philosophy of ease of use, the Tabber/Labeler head is designed with many innovative features. The Tabber/Labeler head is controlled through software via an operator keypad that permits rapid selection of the number of tabs dispensed and their placement positions. A unique tab-sensing feature lets the operator easily adjust the tab pitch at a touch of a button. The Tabber/Labeler head mechanism was designed with few mechanical part to allow easy tab threading and machine setup to improve productivity. The Tabber/Labeler head is mounted on two aluminum extrusion rails that allow the Tabber/Labeler head to be moved easily from side to side to allow tabbing of either edge of the mail piece and facilitate fine tune adjustment. In addition, the peel point assembly can be adjusted up and down and laterally for different material and tab thickness.

All these features, in addition to the manufacturing quality and innovative product design, add up to an extremely functional Tabbing/Labeling system capable of years of reliable and trouble free operation.

1.2 Features

1.2.1 High Speed Production

The BK730 is capable of high production speeds in excess of 35,000 PPH for single tab operations, 30,000 PPH for double tab operations, and 28,000 PPH for triple tab operations. The unit has been solidly constructed with electrical components capable of delivering reliable, full-day production.

1.2.2 BK660 & BK7IB Series Compatibility

The BK730 is fully compatible with the BK660 and BK7IB Inkjet Bases inkjet systems. Connection to either inkjet system is made through an upstream or downstream connector (located at the in-feed and out-feed of the base) providing all interface functions.

1.2.3 Simplified Mechanical Adjustments

Product size acceptance and compensation is performed on the base through simple mechanical knob controls; one for product thickness and the other for tab edge selection. In addition, some simple adjustments points are located in the tab forming area to fine-tune the tab-wrapping process for improved tab-wrap quality.

The Tabber/Labeler head is design for ease of use and portability. The operator keypad is easily accessible simply by sliding it in and out of view. The head is mounted on two aluminum extrusion rails that allow easy movement for left and right tabbing and fine adjustment of tab on the product. The peel point can also be adjusted up and down and laterally for different product thickness. The peel point lateral adjustment allows adjustment for different tab width. The peel point lateral adjustment help the operator in reducing setup time since only the peel point needs to be adjusted as it is independent of other mechanical parts. Tab threading is easy since the system has few rollers and a large tab bin. In addition, the despool roller is not controlled by a motor but a simple adjustment knob thus reducing the cost of repair. The head is fully portable as all the electronics are located on the back of the unit and can be used on other bases.

1.2.4 Software Controlled Tabber/Labeler Head Functions

All Tabber/Labeler head functions are controlled through software and use an operator keypad interface for command entry. A unique feature is the automatic tab pitch setting, which allows the operator to set the distance between each tab on the backing paper at a touch of a button. Other features include type of tabs, position of tabs, full Tabber/Labeler head diagnostics, product sensor selection, peel point sensor sensitivity adjustment and production and life counters.

1.2.5 Construction, Safety Features, and Maintenance

All mechanical and electrical system components in the transport base have been designed for long-lasting and extensive use. Included is a full safety package with feedback through the operator display, monitored by a series of interlocking sensors. The system has been designed to facilitate maintenance, should it be required. The transport assembly including conveying belts and the tabletops are all easily removable for complete mechanical component access. The Tabber/Labeler operator interface is easily accessible by simple slide rail system on the Tabber/Labeler head.

1.2.6 Tabbing Quality Considerations

The tabber base has been specifically designed for the tabbing process and as such incorporates a number of unique features to optimize tabbing quality. Particular attention was paid to the transport belts for accurate edge positioning, the tab wrap section for the production of consistently tight tab-wraps, and the addition and optimization of the tabbing head software controls for ease of use and superior production speeds. The table belts, which transport the mailpieces past the inkjet imaging region, are equipped with vacuum to provide positive adhesion to the base. This helps to ensure accurate placement of the image on the mailpiece.

1.3 Tabber/Labeler Base Specifications

Table 1-1: *Tabber/Labeler Base System Specifications*

Product handling		
Minimum	3.0" x 5.0"	76mm x 127 mm
Maximum	16.0" x 17.0"	405 mm x 432 mm
Thickness	Single Sheet to 5/8"	Up to 38 mm
Physical		
Overall Length	47.5"	1203 mm
Overall Height (w/Head)	72"	1829 mm
Height	34.3" to 36.5"	869 mm to 927 mm
Overall Width	29.5"	747 mm
Weight (Crated)	550 lbs	251 kg
Production Rate		
Belt Speed	0 to 600 ft/min	0 to 3.00 m/s
Cycle Speed	0 to 35,000 pph	
Single tabs (up to 1")		
Cycle Speed	0 to 30,000 pph	
Double tabs (up to 1")		
Cycle Speed	0 to 28,000 pph	
Triple tabs (up to 1")		
Electrical Requirements		
Line Voltage	115 ± 15% VAC	230 ± 15% VAC
Line Current	6 Amps	3 Amps
Power	690 W	690 W
Machine Motor	1/3 H.P. DC controller	1/3 H.P. DC controller
Mechanical Controls		
Product Thickness	Rotary adjuster for product thickness	
Edge Selection	Rotary adjuster for lateral table movement	
Skidbar	Pressure control for product conveyance	

1.4 Tabber/Labeler Head Specifications

Table 1-2: *Tabber/Labeler Head system specifications*

Tab Specifications		
Number of Tabs	1, 2 or 3	
Tab Roll Size	Up to 50,000 – 3/4” (paper)	
Tab Core Diameter	3.00”	76.2 mm
Tab Spool Size	19.75”	502 mm
Tab Length	1/2” to 7.0”	12.7 to 178 mm
Tab Width	Up to 3”	76mm
Tab Style	Circle, square, rectangle, stamps	
Tab Type	Clear (c/w engineered backer), Paper, Translucent	
Tab Placement	Front, back or flat tab (gate fold)	
Physical		
Length	32.2”	818 mm
c/w Unwind & rewind spools		
Height	37.3”	947 mm
c/w Unwind & rewind spools		
Overall Width	14.1”	330 mm
Weight (Head)	72 lbs	32.6 kg
Software Controls		
Product Sensor Selection	Selection of Front or Back Product Sensor	
Tab Sensor Positioning	Set distance between product and peel point sensor	
Product Counter Resetting	Reset product counter	
Software Version	Display software version	
Factory Reset	Reset all setting to factory default	
Life Count Display	Display the total production to date (can not be reset)	
System Test	Test all system components for malfunction	
Tab Spacing	Selection of automatic or manual tab spacing	
Number of Tabs	Select amount of tab per product	
Tab Position Entries	Set the distance between tabs on a product	
Tab Pitch setting	Set tab pitch automatically or manually	
Type of Tab setting	Set opaque or clear type tab	
Peel Point Sensor Sensitivity	Adjust the peel point sensor gain	
Mechanical Controls		
Head Position	Slide head on extrusion rail c/w locking lever	
Peel Point ⬆️⬆️⬆️ Adjustment	Adjustable for materials up to 1 ½” thick	
Peel Point Lateral Adjustment	Adjustment for different tab width up to 3”	
Despool Brake Adjust	Adjustable for different production speed	

1.5 System Drawings

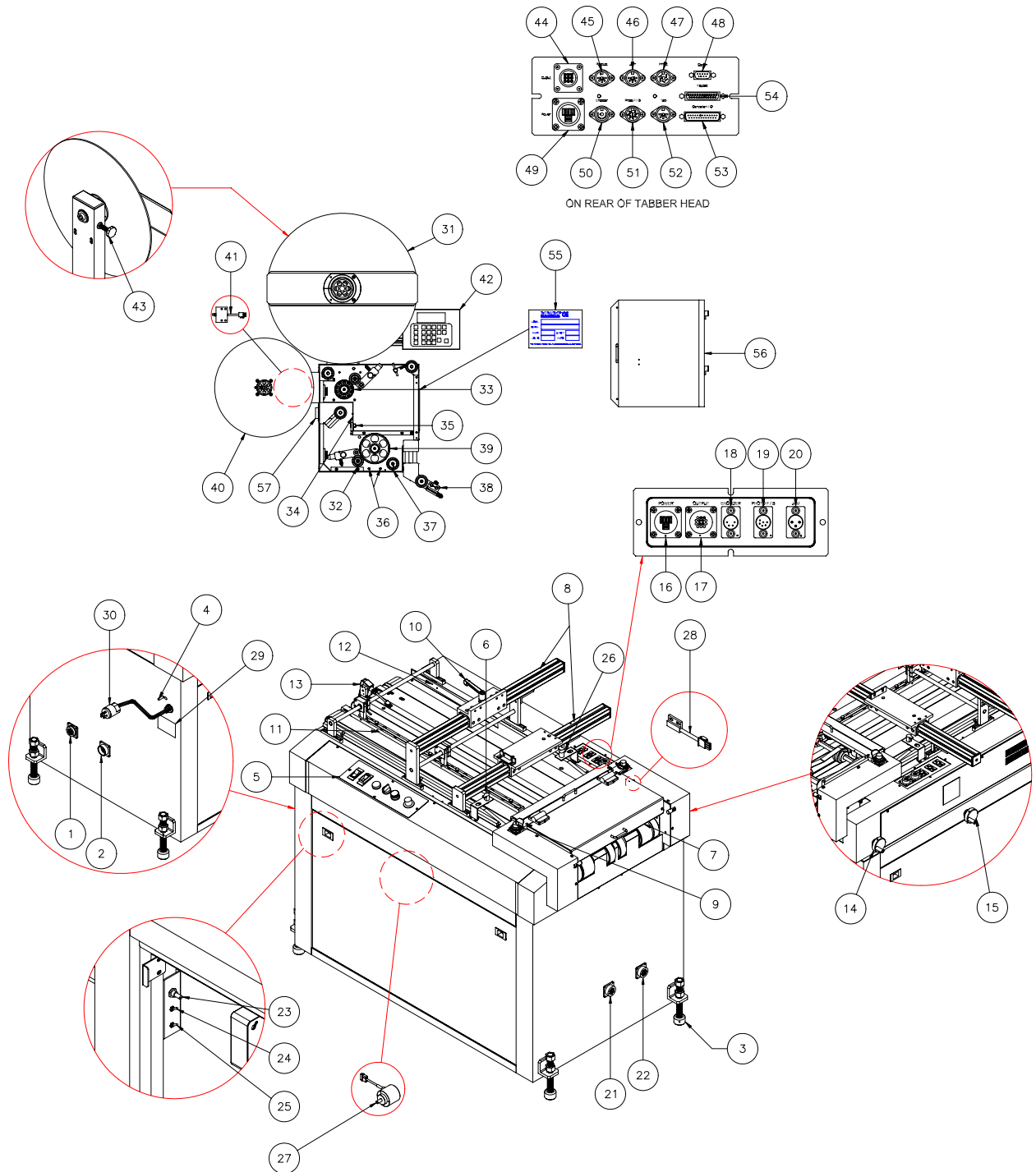


Table 1-3: *Tabber/Labeler base system components*

Item	Description	Reference
1	Upstream Receptacle	
2	Conveyor Receptacle (Power Input)	
3	Base Mounting Foot	
4	Ground Screw	
5	Tabber/Labeler Base Control Panel	
6	Front Product Sensor	
7	Upper Transport Assembly	
8	Tabber/Labeler Head Positioning Rail	
9	Upper Transport Release Push Knob	
10	Tabber/Labeler Head Lock Knob	
11	Skidbar	
12	Registration Rail	
13	Product Jam Lever	
14	Product Thickness Handwheel	
15	Edge Selection Handwheel	
16	Power Receptacle	
17	Output Receptacle	
18	Encoder Receptacle	
19	Front/Back Product Sensor Receptacle	
20	Jam Switch Receptacle	
21	Conveyor Receptacle (Power Output)	
22	Downstream Receptacle	
23	Jog Speed Control Knob	
24	Upstream Toggle Switch	
25	Downstream Toggle Switch	
26	Back Product Sensor	
27	Encoder Assembly	
28	Upper Transport Safety Sensor	
29	Tabber Base Serial Label	
30	Base Power Plug	
31	Despool Roll	
32	Pressure Roller	
33	Despool Drive Roller	
34	Tab Bin	
35	Bin Sensor	
36	Tabber Head Mount Holes	
37	Idler Roller c/w Tab Guides (5X)	
38	Tabber Peel Point	
39	Tab Drive Roller	
40	Take-Up Spool	
41	Take-Up Sensor	
42	Tabber Keypad	
43	Despool Brake Adjust Knob	
44	Output Connector	
45	Product Connector	
46	Jam Connector	
47	Inhibit Connector	
48	Comm Connector	
49	Power Connector	
50	Encoder Connector	
51	Photo F/B connector	
52	Tab Connector	
53	Controller I/O Connector	
54	Keypad Connector	
55	Tabber Head Serial Label	
56	Front Safety Cover	
57	Tabber Head Power Switch	

1.5.1 Tabber/Labeler Base and Head Dimensions

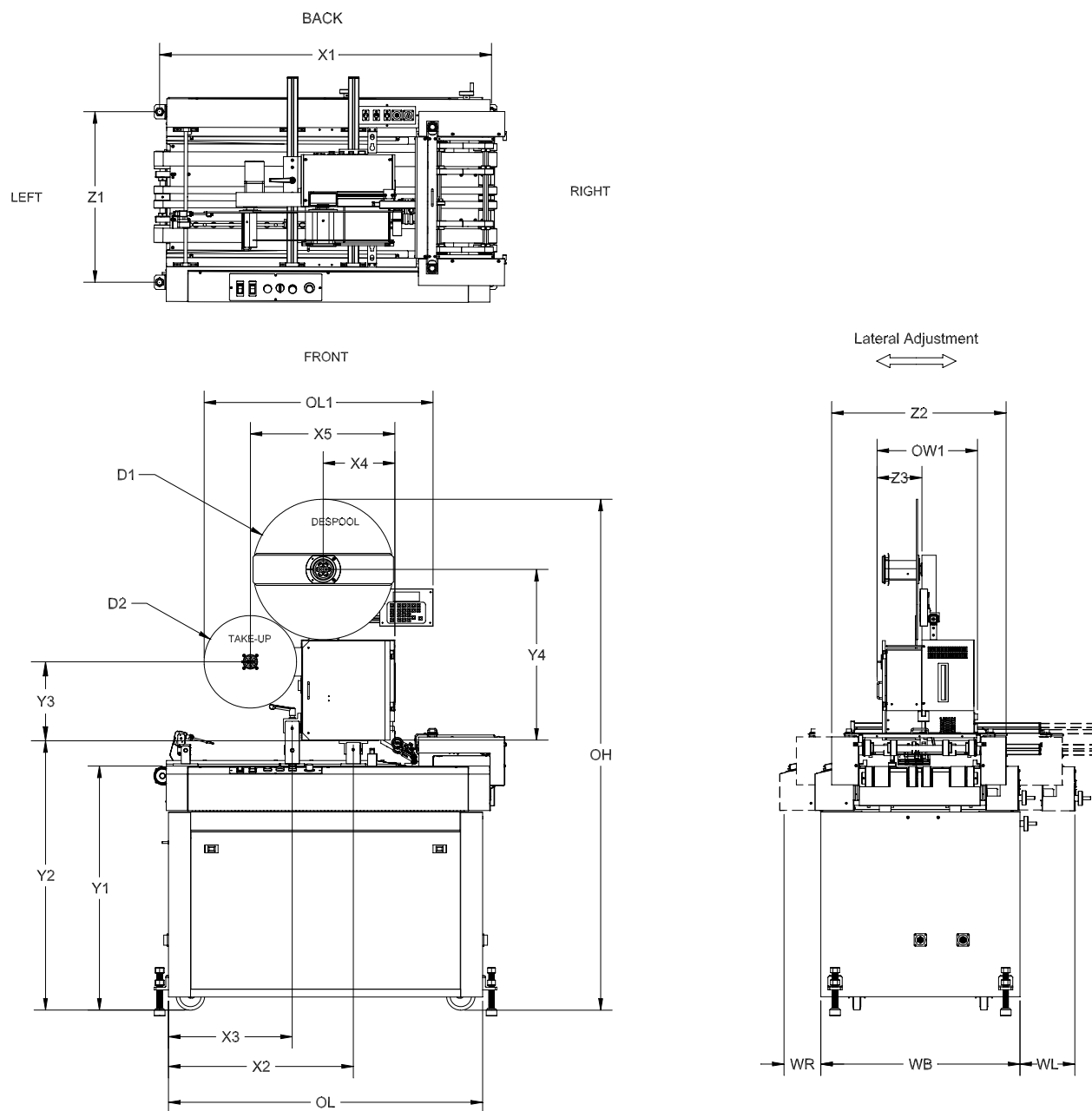


Figure 1-1: *Tabber/Labeler Base and Head dimensions.*

Table 1-4: *Tabber/Labeler Base and Head Dimensions*

Symbol	Description	Dimensions	
WB	Overall Base Width	28.00"	710 mm
WR	Front Lateral Extension	6.00"	152 mm
WL	Back Lateral Extension	6.50"	165 mm
OL	Overall Length	44.18"	1122 mm
OH	Overall Height	71.90"	1826 mm
OW1	Overall Tabber Head Width	14.11"	358 mm
OL1	Overall Tabber Head Length	32.15"	816 mm
X1	Leveling Foot Length	46.69"	1185 mm
X2	Right Head Mount	26.00"	660 mm
X3	Left Head Mount	17.39"	711 mm
X4	Despool Center Distance	9.39"	238 mm
X5	Take-up Spool Center Distance	19.64"	499 mm
Y1	Tabletop Height	34.30" - 36.50"	869 mm - 927mm
Y2	Tabber Head Support Height	37.90"	962 mm
Y3	Take-up Spool Height	11.00"	279 mm
Y4	Despool Height	24.00"	609 mm
Z1	Leveling Foot Width	24.00"	609 mm
Z2	Upper Transport Width	24.53"	623 mm
Z3	Front Face Width	8.31"	211 mm
D1	Despool Diameter	19.75"	502 mm
D2	Take-up Spool Diameter	13.00"	330 mm

2.1 Instrument Panel Functions

The BK730 tabbing base is equipped with a centrally located instrument panel that displays all the necessary controls to operate the base. The controls can be subdivided into three distinct classes of functions:

- Main and Head Power Rocker Switches
- Machine Function Pushbuttons and Knobs
- Production Speed Regulation Dial

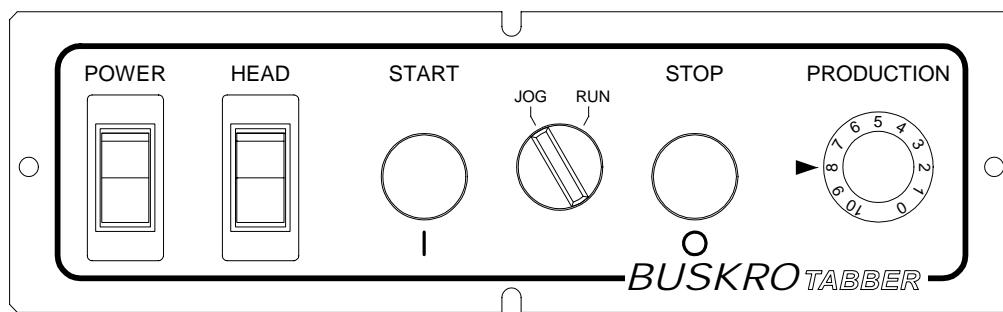


Figure 2-1: *Instrument Control Panel*

2.1.1 POWER Rocker Switch (Main Power)

Located on the far left of the instrument panel and labeled **POWER**, this switch turns on main power for the entire system (including the head when the **HEAD** switch is ON). When this switch is turned ON, it should illuminate. The switch is also equipped with a resettable circuit breaker to protect against overload conditions. It is rated at 10A (120 VAC).

2.1.2 HEAD Rocker Switch (Head Power)

Located to the right of the **POWER** switch, the **HEAD** switch supplies power to the tabbing head. When this switch is turned ON, it should illuminate. The switch is also equipped with a resettable circuit breaker to protect against overload conditions. It is rated at 5A (120 VAC).

2.1.3 Machine Function Pushbuttons and Knobs

The pushbuttons and selector knob located on the control panel permit control of the machine's operation. The **START** (green) and **STOP** (red) button allow for engagement and suspension of the tabbing system operation while the **JOG/RUN** selector (black) sets the system to run continuously (**RUN**) or intermittently (**JOG**) once the **START** button is depressed.

2.1.4 START Pushbutton

The **START** pushbutton turns on the machine contactor and applies power to the motor controller. When this button is pressed, the machine will cycle providing that the following conditions have been met:

- The machine **STOP** button is not pressed.
- The tabbing head is powered up.
- The upstream and downstream toggle switches are set on **Standalone** (Unless an upstream or downstream device is electrically connected to the tabber using an interconnect cable – Reference Section 2.3).
- All safety covers are in the closed position (Tabber Head door is closed, Upper Transport cover is down and closed).

2.1.5 STOP Pushbutton

The **STOP** pushbutton suspends operation of the system by interrupting the power to the machine DC controller. This is used mostly as an emergency stop button since depressing this button will cause the machine to stop instantly regardless of the Tabber/Labeler's operating status.

Note: The STOP pushbutton has a locking feature. When engaged it will prevent the system from cycling. Should this condition occur, twist and release the locking mechanism to allow base operation.

2.1.6 JOG/RUN Selector

This selector button 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 at the speed set by the production dial. In the Jog mode, the machine will cycle only as long as the **START** button remains depressed and at a predefined jog speed as set by the jog dial located inside the base cabinet.

- Run Mode - Machine will operate when the START button is pressed.
- Jog Mode - Machine will operate only while the START button is pressed and held.

Note: When operating in the Jog mode, the Tabber/Labeler system will run at the speed set by the Jog dial located behind the front door. This speed is substantially lower than typical production speeds.

2.1.7 Production Speed Regulation Dial

The production speed regulation dial is the knob located to the right of the machine pushbuttons. This dial permits machine speed adjustment. A clockwise rotation of the speed dial corresponds to a speed increase. Conversely, a counter-clockwise rotation results in a speed decrease. The speed range is from 0 (0) to 35,000 pieces/hour (10) for the Tabber/Labeler operation. This corresponds to a maximum linear belt speed of 600 ft/min (3.05 m/s).

2.2 Tabber Connection Receptacle Panel

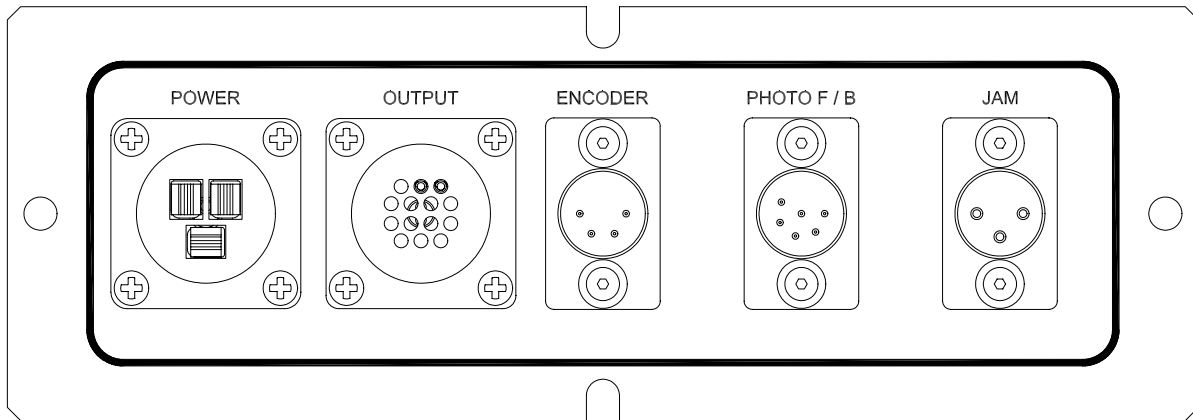


Figure 2-2: *Receptacle Panel*

The receptacle panel shown in Figure 2-2 provides electrical connections to the Tabber/Labeler head. This section will describe the function of each.

2.2.1 Power Receptacle

The **POWER** receptacle provides power to the Tabber/Labeler head. It is connected to the head power receptacle using cable P/N 9101657A.

2.2.2 Output Receptacle

The output receptacle is connected to a stop relay on the transport base that stops the base and head when a safety sensor is triggered. It is connected to the head **I/O** receptacle using cable P/N 9101656A. This cable must be connected for the base to run.

2.2.3 Encoder Receptacle

This receptacle provides communication from the encoder. It is connected to the head **Encoder** receptacle using cable P/N 9101658A.

2.2.4 Photo F/B receptacle

This receptacle is connected to the front and back photo sensors on the base. It is connected to the head **Photo F/B** receptacle using cable P/N 9101659A.

2.2.5 Jam Receptacle

This receptacle is connected to the base jam switch and the upper transport sensor. ***It must be connected*** for the Tabber/Labeler to function. It is connected to the head jam receptacle using cable P/N 9101660A.

2.3 Upstream and Downstream Installation Instructions

The upstream and downstream installation instructions comprise all the information necessary to properly integrate the Tabber/Labeler system with upstream and downstream equipment such as inkjet systems. Essentially there are two steps to successful installation. They are proper alignment of the base with the upstream and downstream equipment for smooth product flow, and integration of the electrical system to coordinate the control of all equipment embodied in the system. Note that the proper interconnect cable must be used depending on the configuration and is shown in Table 2-1.

Table 2-1: *BK730 Upstream/Downstream Integration*

Upstream	Downstream	Cable Required (Buskro P/N)
BK425 (Shuttle Feeder) BK460 (Inline Base – Series 4) BK660 (Inkjet Base) BK71B (Inline Base – Series 7)	BK730	9102083A
BK730 (Tabber/Labeler)	BK460 BK730 BK71B	9102083A
BK720 (Friction Feeder)	BK730	9101814A

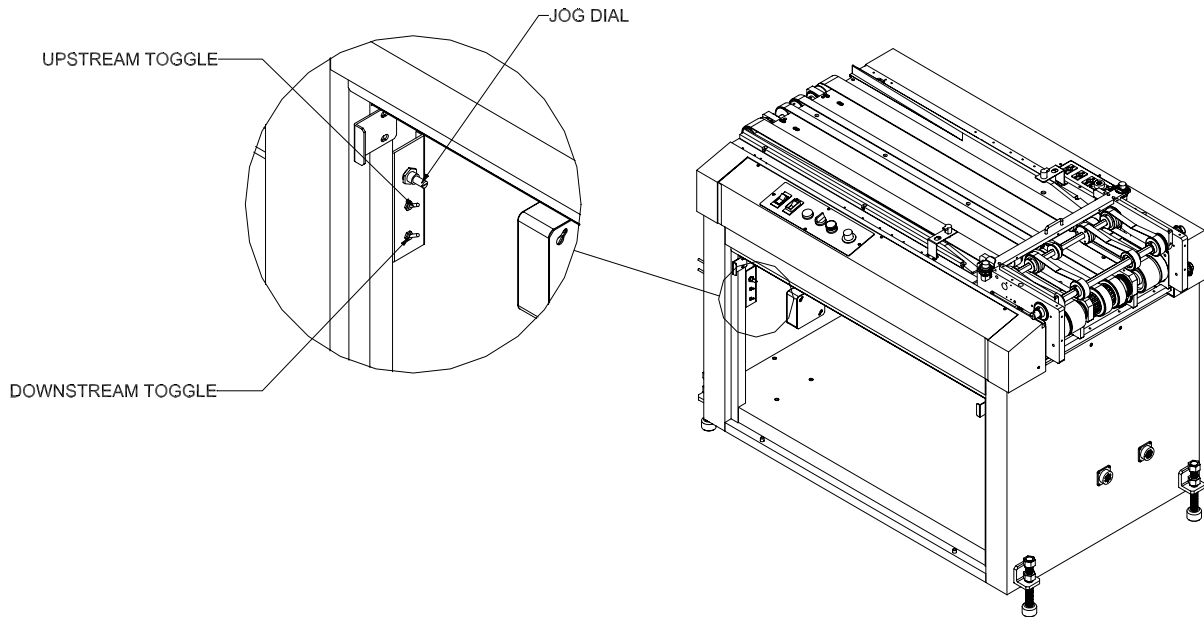


Figure 2-3: *Interconnect Toggle Switches*

2.3.1 Physical Alignment of Upstream/Downstream equipment

These instructions describe the physical alignment of the tabbing system with upstream or downstream equipment:

1. Place the BK730 next to the upstream/downstream equipment. Try to align the centers of the systems together and move the systems as close as possible to each other (approximately $\frac{1}{4}$ " or 5 mm from the infeed or outfeed rollers).
2. Raise the tabbing system by individually turning each of the four mounting legs in a clockwise manner using a 1-1/8" wrench. Ensure that the system is level and that the tabletop of the BK730 is equal to or slightly below the tabletop of the upstream equipment and equal to or slightly higher than the tabletop of the downstream equipment. Tighten the locking nuts on the legs when the system is correctly aligned.

2.3.2 Electrical Connection to Upstream/Downstream equipment

In order to connect upstream and downstream equipment electrically to the BK730, the proper interconnect cable is required. This information can be found in Table 2-1. Once the proper interconnect cable is determined, it must be plugged into the proper receptacles on the BK730 and the upstream/downstream equipment. Once this is done, the upstream/downstream toggle switches must be appropriately set (**Section 2.3.3**).

In the case where additional systems are connected upstream to the tabber, the interconnect cable must be connected to the upstream receptacle on the left side of the BK730 base (**Section 1.5**). The opposite end of the cable must then be connected to the downstream connector of the upstream system.

In the case where additional systems are connected downstream to the tabber, the interconnect cable must be connected to the downstream receptacle on the right side of the BK730 base (**Section 1.5**). The opposite end of the cable must then be connected to the upstream connector of the downstream system.

2.3.3 Upstream/Downstream Toggle Switch

The Upstream and Downstream toggle switches located behind the front base door (**Section 1.5**) must be properly set in order for the base to run. The settings depend on whether or not there is upstream or downstream equipment electrically connected to the BK730 through an interconnect cable. If there is no equipment electrically connected upstream or downstream to the tabber, both toggle switches should be set to **Standalone**. If upstream or downstream equipment are connected to the BK730, the toggle switches should be set to **Upstream** or **Downstream** respectively (or both if there is upstream AND downstream equipment).

2.4 Product Setup Instructions

The product setup instructions encompass all those instructions necessary to ensure smooth product flow and tab-wrap quality. Included is information pertaining to the lateral positioning of the BK730 table for edge selection, adjustments for various product thickness, setting of the skidbar for smooth product conveyance, and upper transport height adjustment for excellent tab wrapping results. In addition, the instructions will cover the setting of the relative transport speed to ensure smooth product transfer between the BK730 and the upstream system.

All tabbing head mechanical adjustments and control settings will be covered in **Chapter 3.0**. These instructions will cover the mechanical positioning of the tabbing head, tab spool threading, tabbing head leveling, and tab application.

2.4.1 To adjust the base speed for smooth product transfer

In order to prevent product buckling at the entry of the BK730 transport, it is important that the BK730 speed be slightly faster than the upstream delivery equipment. As a result, set the BK730 transport base so that it is slightly faster than the transport speed of the upstream equipment. In addition, ensure that the gap between the product pieces on the transport base is between 1 to 2 inches (25 to 50 mm). If the gap is too small, it may result in inconsistent tabbing and a higher risk of product jamming.

2.4.2 Skidbar and Material Side Guide Adjustments

Proper adjustment of the skidbar assembly and material side guides will permit dependable and accurate feeding of the conveyed products so that they are correctly registered against the material guide when they are conveyed on the BK730 tabletop. The function of the base's transport section is to re-align and register any product that may be delivered in a skewed fashion from the upstream equipment so that when the tabbing head places a tab on the product, it will be correctly and accurately placed along the edge of the product.

The function of the skidbar is to ensure positive product conveyance by forcing the product against the table transport belts. In order to correct product skew from upstream equipment, the BK730 uses biased transport belts as well as material guides which act as registration bars. The position of the material guides can be adjusted using the edge selection handwheel (Figure 2-4).

To adjust the skidbar for product thickness:

In order to adjust the skidbar to accommodate different product thicknesses, the following should be completed (reference Figure 2-5):

1. Loosen both skidbar handles and raise the skidbar away from the transport belts.
2. Place a product completely under the skidbar.
3. Lower the skidbar onto the product until the skidbar's ball bearings contact the upper surface of the mailpiece and pressure is applied.
4. Hold the skidbar down on the product and retighten both skidbar handles.

For certain types of products, some of the ball bearings may have to be removed to prevent product buckling at the entry of the base. In order to do this:

1. Place a product under the skidbar until its **trailing edge** is fully engaged by the skidbar.
2. Loosen and remove the thumbscrews holding the ball retention plate.
3. Remove all the ball bearings contacting the surface of the product. If a ball bearing just makes contact with the piece at its **leading edge**, it may be left in place.
4. Replace and tighten the ball retention plate against the ball bearings by turning the thumbscrews in a clockwise fashion.

Note: An improper skidbar adjustment may cause inconsistent transportation of the product. If the skidbar slows the product significantly, the tab positioning will be inconsistent and/or the piece will become trapped in the transport section.

If sufficient ball bearings are not removed when required, buckling of the mailpiece may occur. Ensuring the BK730 transport speed is faster than the speed of the upstream equipment may also alleviate this problem.

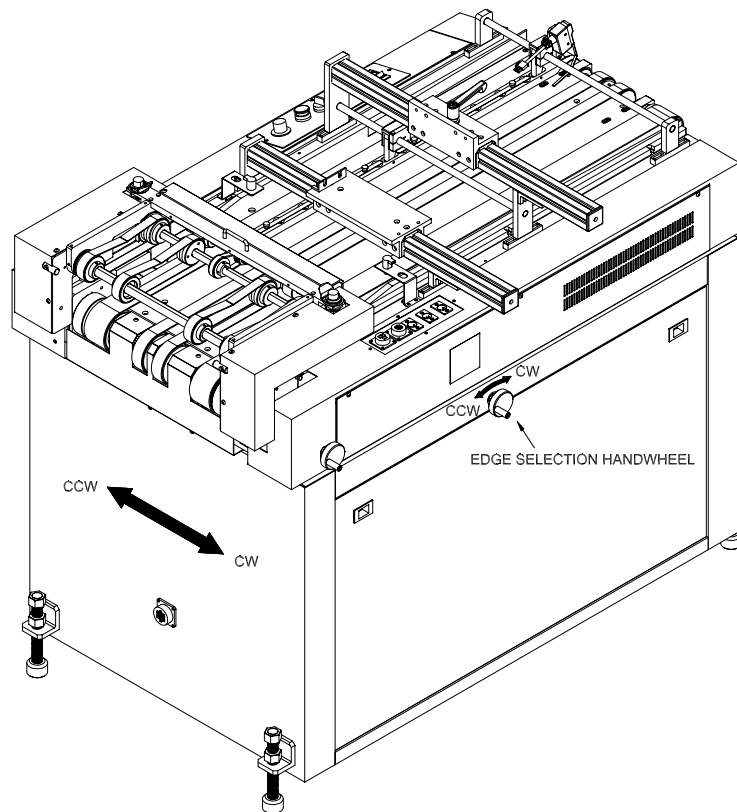


Figure 2-4: *Rear of BK730 showing the edge selection handwheel*

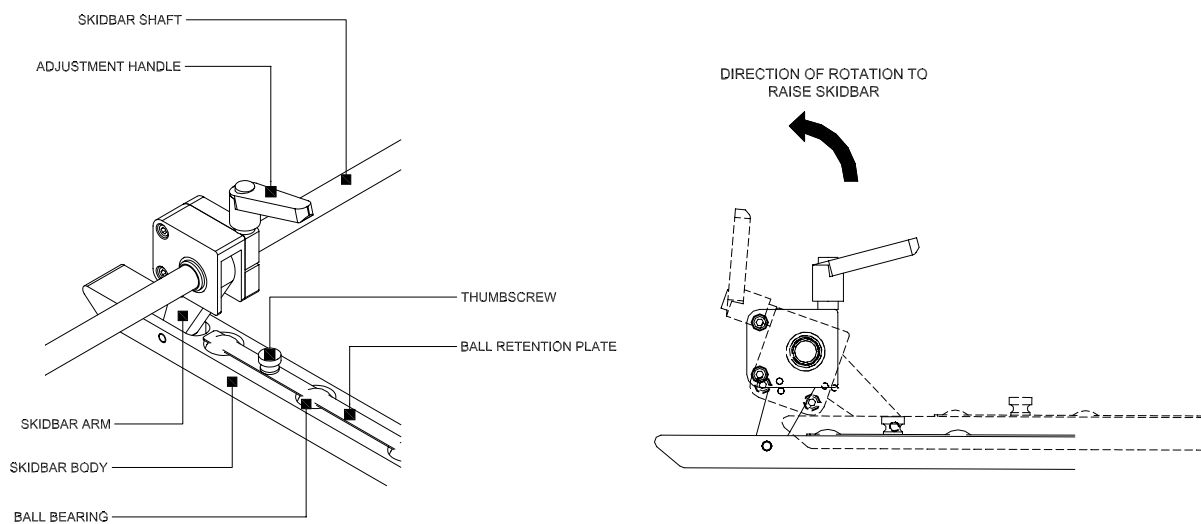


Figure 2-5: *Skidbar adjustment for height adjustment*

To select tabbed edge using the edge selection handwheel (Figure 2-6):

1. Determine the side of the product which must be tabbed.
2. For a back side tab placement, rotate the edge selection handwheel counter-clockwise (CCW) until the product is delivered within 1/8 to 1/4" (3 to 6 mm) from the back registration rail at the entry point. Ensure that the product makes contact with the back registration rail prior to passage past the tabbing head peel point.

- OR -

3. For a front side tab placement, rotate the edge selection handwheel clockwise (CW) until the product is delivered within 1/8 to 1/4" (3 to 6 mm) from the front registration rail at the entry point. Ensure that the product makes contact with the front registration rail prior to passage past the tabbing head peel point.

Note: Tight registration at the entry point may cause the occasional skewed product to jam against the registration rails.

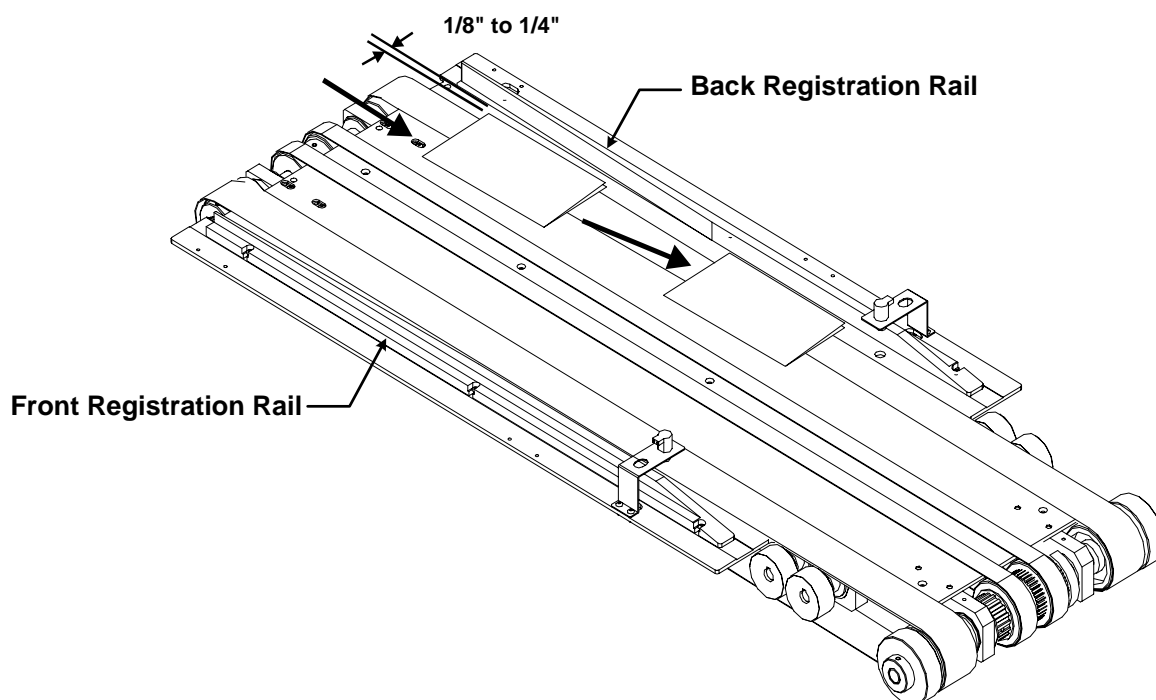


Figure 2-6: *Product flow showing desired infeed gap at entry of the registration rails*

2.4.3 Product Thickness Adjustment (Upper Transport)

When feeding a new product, it may be necessary to adjust the upper transport assembly and the Tabber/Labeler head peel point assembly to accommodate the product's thickness. Adjustment to the upper transport is made by rotating the product thickness handwheel (Figure 2-7). The tabbing head peel point assembly also needs to be moved up or down to accept different product thickness. Proper thickness adjustment will ensure that the product is tabbed and conveyed in the tab-wrap section without any hint of skewing.

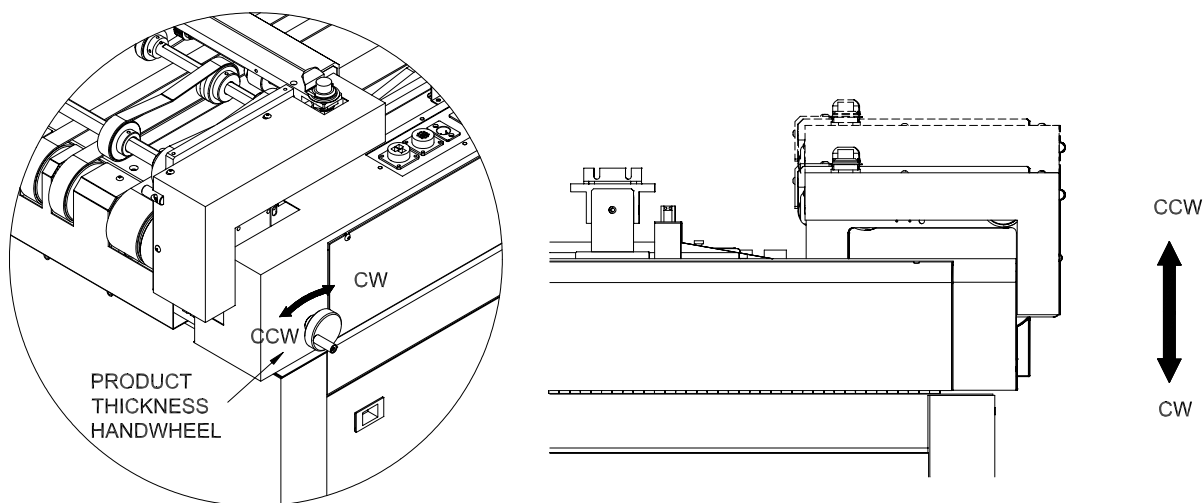


Figure 2-7: *Product Thickness adjustment*

In order to adjust the height of the upper transport:

1. Close the upper transport (it should be latched in place).
2. Raise the upper transport assembly sufficiently to allow free passage of the product by rotating the product thickness handwheel counter-clockwise (CCW).
3. Place the product between the upper transport assembly's outfeed rollers and the table belt outfeed rollers.
4. Lower the upper transport assembly such that the product is snugly held between the rollers in step 3. Do this by rotating the product thickness handwheel in a clockwise (CW) fashion. Perform a test by pulling the mailpiece to see if it is snugly held. Be careful not to put too much pressure on the mailpiece because it can cause the upper transport belts to fall off the rollers or product skew.

Note: Lowering of the upper transport assembly is accomplished by rotating the product thickness handwheel clockwise (CW). Conversely, a counter-clockwise (CCW) rotation of the handwheel will raise the upper transport assembly.

2.5 Advanced Setup Instructions

These instructions comprise all the adjustments necessary to optimize the operation of the tab-wrap section for trouble-free operation and superior tab-wrap quality. Careful attention and diligence should be used when performing these adjustments since even the slightest movement will result in dramatically different results. If you are unsure of the instructions in this section, please contact your representative to ensure correct compliance with these instructions.

Instructions covered here include the setting of the lower pinch rollers and the tab crease rollers. The Tabber/Labeler is equipped with an identical set of rollers and form plate on either side of the base for both left and right tabbing capabilities, hence the instructions must be repeated for both sides to ensure consistent operation of both the left and right side of the Tabber/Labeler.

2.5.1 Crease and Pinch Roller Adjustment

The purpose of the crease and pinch roller combination (Figure 2-8) is to initiate the tab wrap-forming process. The crease roller folds the protruding portion of the tab along the edge of the product with the pinch roller acting as an anvil. It is vitally important that the outer forming side of the pinch roller be closely aligned to the product edge registration line in order to produce a crisp fold line close to the product's edge. When adjusting these rollers, the pinch roller setting should be done first, followed by the crease roller setting.

The gap setting between the crease and pinch rollers is critically important as it determines the crispness and tab fold location with respect to the edge of the product. This ultimately determines the quality of the tab-wrap. If the crease roller is too far away from the pinch roller and the gap is too large, the tabs will skew since the pressure

between the two rollers is uneven. Conversely, a tight gap setting will cause the crease roller to act as a knife shearing the tab into two pieces.

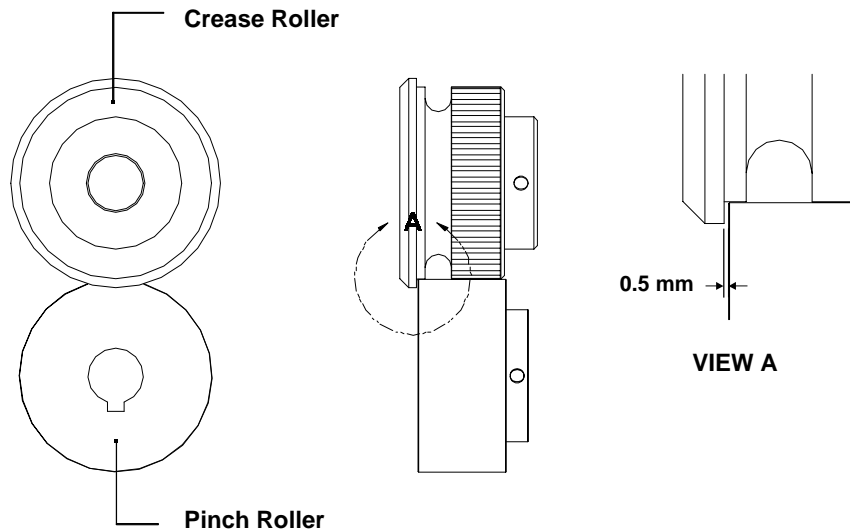


Figure 2-8: *Crease/Pinch Roller Combination*

To set the pinch rollers:

The objective of this adjustment is to align the outer edge of the pinch rollers with the material side guides to ensure that the tab fold produced by the crease roller is as close to the product's edge as possible.

1. Move the tabbing head peel point away from the front side's pinch rollers.
2. Obtain a clear, unobstructed access to the pinch rollers by pivoting the upper transport assembly upwards.
3. Place a ruler or a straight edge against the front material guide's inner edge as per Figure 2-9.
4. Loosen the 10-32 UNF set screw of both of the front side's pinch rollers using a 3/32" hex key ensuring that they are free to move laterally on the shaft. This setscrew is located on the roller's shoulder.
5. Grip the first pinch roller and move it until its outer edge aligns with the ruler. Secure it on the shaft by re-tightening its setscrew. Repeat for the second pinch roller.
6. Repeat steps 3 to 5 for the pinch rollers situated on the rear of the Tabber/Labeler.

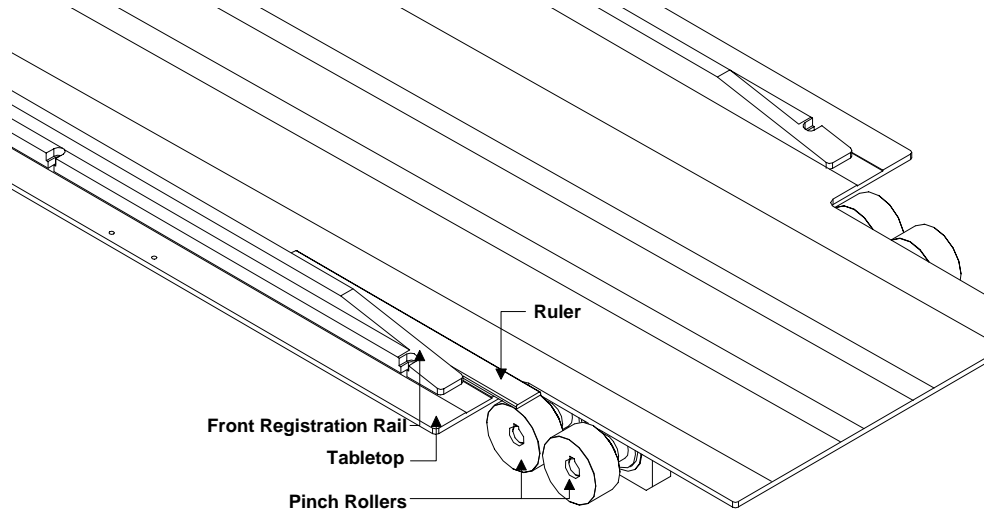


Figure 2-9: *Pinch Roller Alignment Method*

To set the crease roller:

1. Access the crease roller by lifting the plastic safety cover located on the upper transport.
2. Loosen the front crease roller's 10-32 UNF setscrew using a 3/32" hex key ensuring that it is free to move laterally on the shaft. This setscrew is located on the roller's shoulder.
3. Slide the crease roller towards the pinch roller until it can no longer advance due to interference with the pinch roller. Back the crease roller off slightly by gently nudging it. The best tabbing results are attained when the crease roller is set 0.02" away (0.50mm) from the pinch roller's edge (Figure 2-8). The gap can be set by placing a folded 20 bond piece of paper between the crease and pinch roller.
4. Secure the crease roller on the shaft by re-tightening its setscrew.
5. Repeat steps 2 to 4 for the rear crease roller.
6. Close the plastic safety cover.

2.6 Maintenance Schedule

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

Table 2-2: *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 that may have fallen into the machine.</p> <p>Remove any tabs that may have settled on the rollers, belts and form plates in the tab-wrap section. Use of Varsol will facilitate the glue removal process.</p> <p>Examine the table belts and rollers for wear. Replace if necessary.</p>
Monthly	<p>Grease gears accessible through the Outfeed Roller Cover (P/N 700537). See <i>Appendix A, drawing BK730T</i>. Special gear grease oil such as Shell Capac Lube is recommended.</p>
Semi Annually	<p>Remove tabletop and examine all mechanical drive components including belts, shafts, bearings, and rollers for wear. Replace if necessary.</p>

Note: Acquiring a small air compressor is recommended as compressed air is useful in removing debris.

3.1 Mechanical Adjustments

3.1.1 Tabber/Labeler Head Lateral Positioning

The Tabber/Labeler head (BK731) may be moved from one side of the Tabber/Labeler base to the other in order to place tabs on the left or right side of the product. In addition, the head can be operated as a flat labeling device or stamp affixing system by locating the peel point anywhere between the left and right tabbing positions. The head rests on two aluminum extrusion rails, which permits easy lateral adjustment of the head to achieve the desired tabbing location with little effort.

Flat tab sealing operations will require adjustments of the nip roller position such that it is aligned with the peel point to ensure proper tab adhesion. During tabbing operations, lateral positioning of the peel point must compensate for the tab's width to ensure even tab placement on the upper and lower side of the product. Lateral positioning of the head is accomplished by first loosening the head position lock handle (Figure 3-1) and then pushing or pulling the head in the desired direction. Once this is done, the lock handle is retightened to secure the head in place.

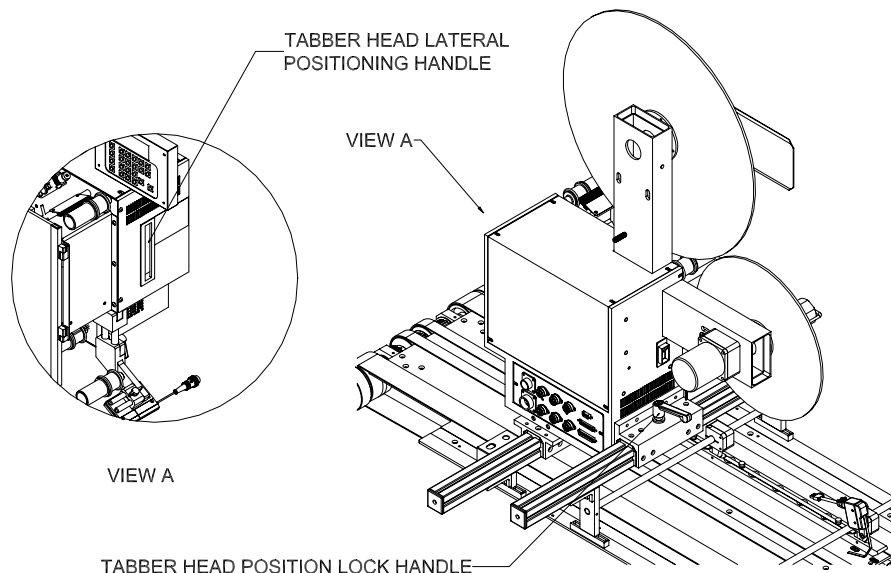


Figure 3-1: *Illustration of the Tabber/Labeler head lateral adjustment*

Note: The product must trigger either one of the two product sensors at the front or rear of the base to enable tab dispensation.

Ensure that the correct product sensor (front or back) has been selected in the head controller to permit correct operation of the Tabber/Labeler (Section 4.2.1).

3.1.2 Peel Point Height and Lateral Adjustment

In order to accommodate a different range of material thicknesses, the peel point height can be easily adjusted to handle thicknesses up to 1½". The peel point can also be adjusted laterally to accommodate different tab widths. It is important to properly set both of these for each job. Both the height and lateral positions can be adjusted by loosening either the locking handle or the lock knob as shown in Figure 3-2.

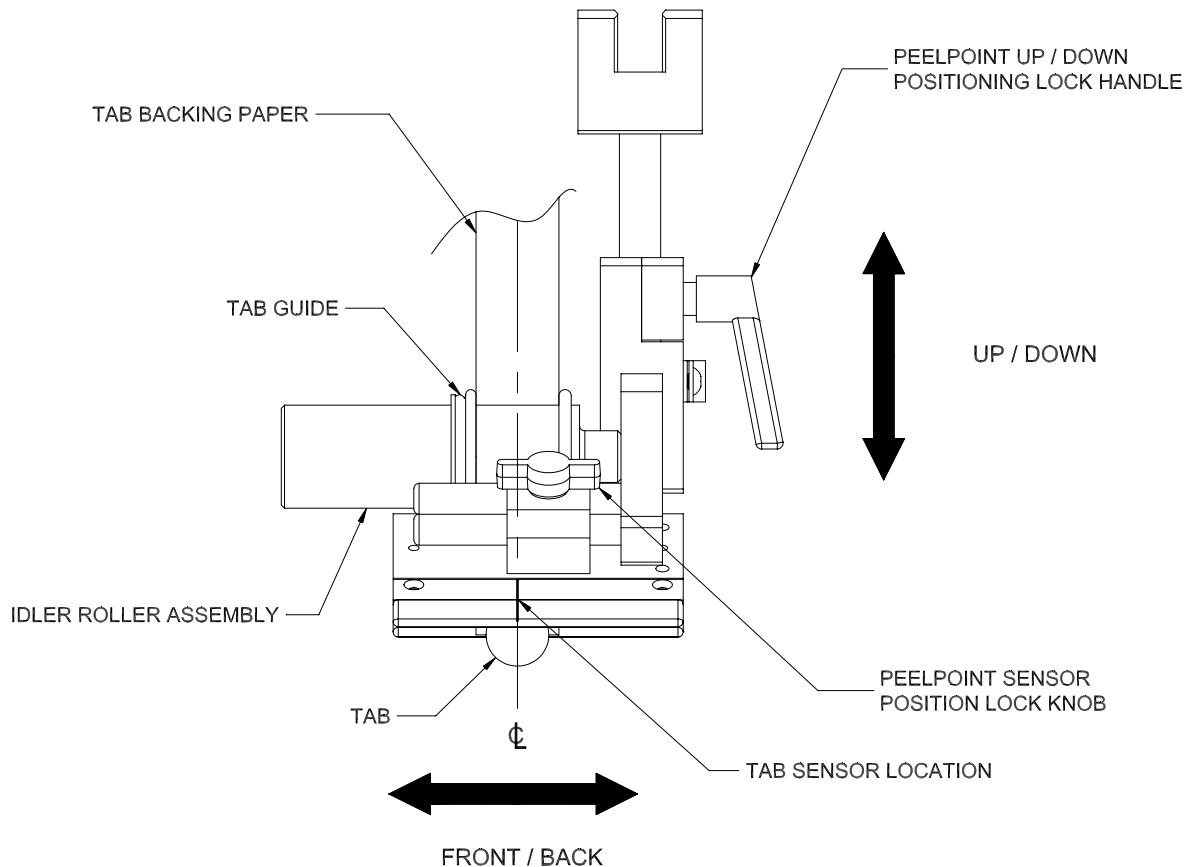


Figure 3-2: *Peel Point Assembly*

3.1.3 Tab Spool Threading and Lateral Positioning

When initially loading on a new roll of tabs, it is very important that the centerline of the tabs are aligned to the sensor location on the peel point as shown in Figure 3-2. A groove line on the peel point indicates the tab sensor location. This line must be placed at the center of the tab. Tabs that are sensed off-center will result in incorrect tab placement on the product.

In order to properly thread the tabs, the following instructions as well as Figure 3-3 should be referenced:

1. Load the roll of tabs onto the despool roll. Despooling is done in a clockwise direction. Assemble the hub guide to the core to lock the roll of tabs in place.
2. Pull back Pressure Roller 1 situated at the Despool Drive. The pressure roller should lock in an open position. Repeat for Pressure Roller 2.
3. Rotate the Brush Pivot Arm off Idler 2.
4. Create a leader in the tab backing paper by removing the tabs from the first 18 to 24 inches of the tab roll on the despool roll. Thread the leader into the head as shown in the figure.
5. Position each individual tab guide on the idler rollers so that they can guide the tab backing paper (Figure 3-2). Ensure that they are not set too tightly.
6. Thread the tab backing paper around the lock pin at the Take-Up roller. Rotate the Take-Up roller a few revolutions in the direction shown to lock the backing paper in place.
7. Ensure that the tab backing paper is resting straight on the Despool Drive and then pull the release knob on Pressure Roller 1.
8. Ensure that the tab backing paper is resting straight on the Tab Drive Roller and then pull the release knob on Pressure Roller 2.
9. Rotate the Brush Pivot Arm clockwise in order to brush lightly against the tab backing paper.

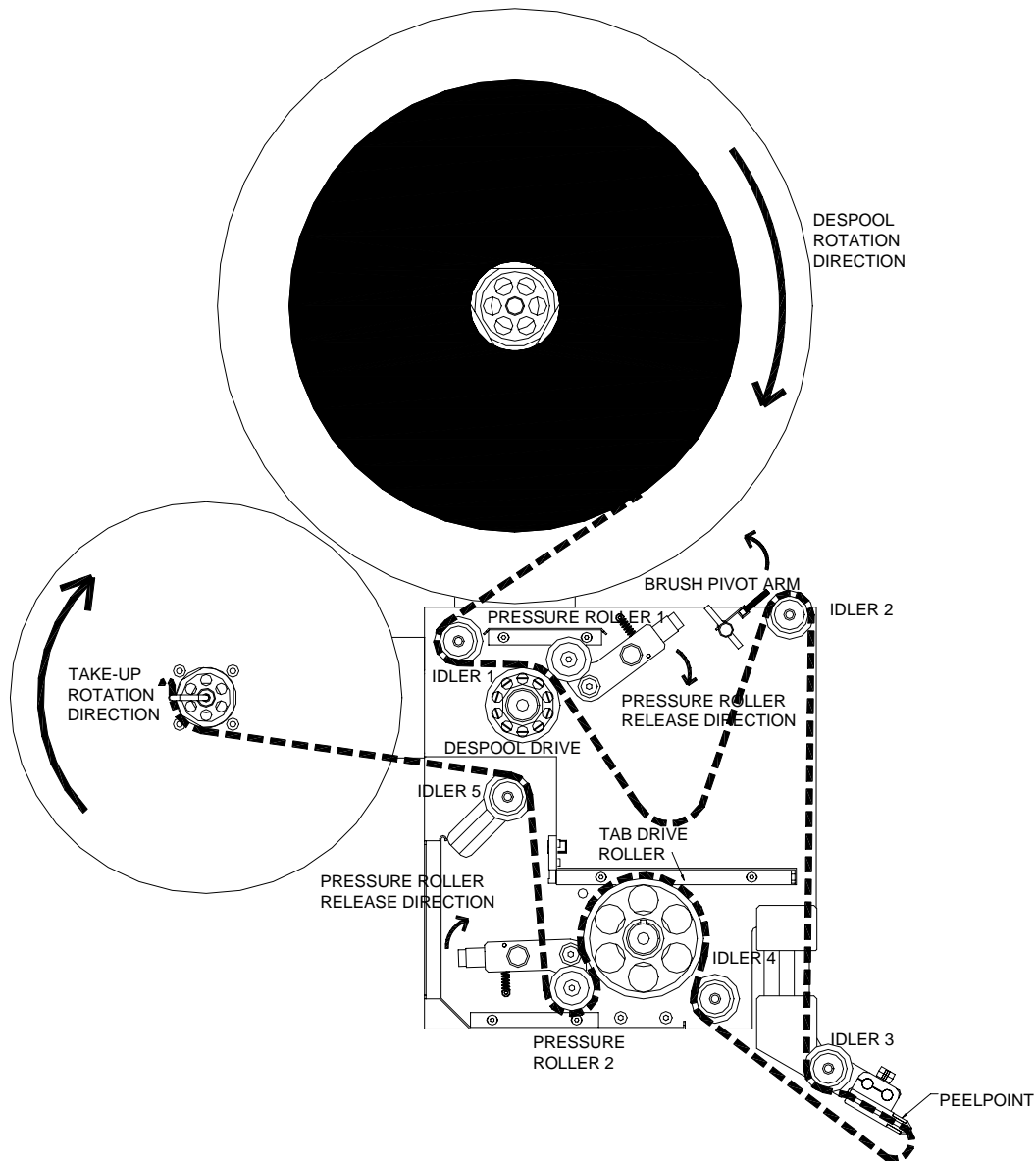


Figure 3-3: *Threading Path for the BK731*

3.1.4 Despool Brake Adjustment.

The despool speed is driven by the Despool Drive. At high speed, the despool speed needs to be decreased in order to avoid tangling of the tab backing paper. The despool speed can be adjusted by turning the Brake Adjust Knob as shown in Figure 3-4. A clockwise rotation of the knob will decrease speed while a counter-clockwise rotation will increase speed.

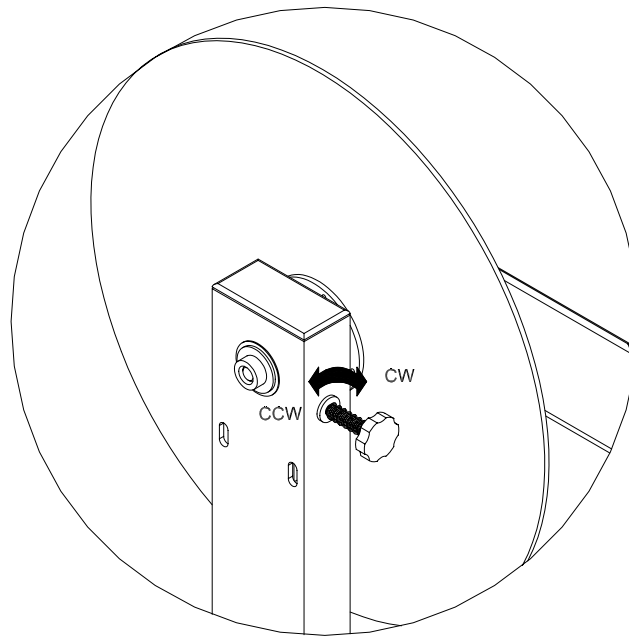


Figure 3-4: *Illustration of Despool Brake Adjust Knob*

3.2 Tabber/Labeler Connector Panel

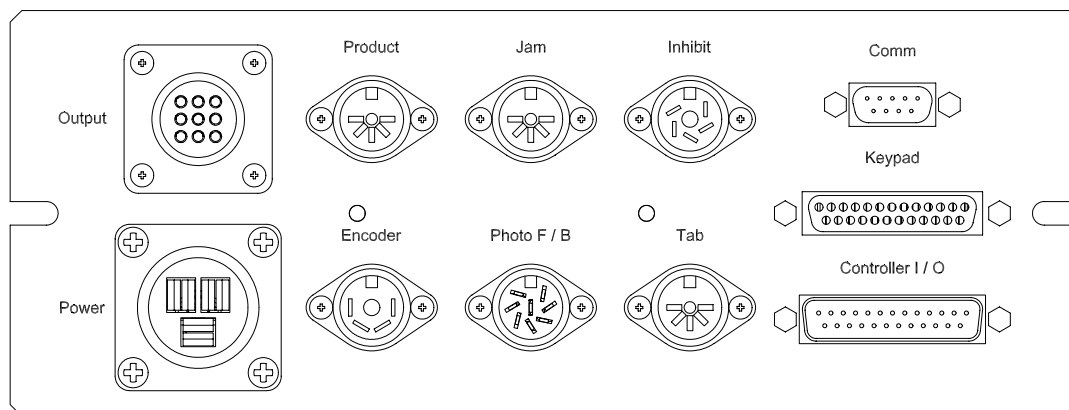


Figure 3-5: *Illustration of the BK731 Tabber Connector Panel*

The BK731 Tabber Connector Panel provides an electrical interface between the head and the base. The base has a corresponding connector panel described in **Section 2.2**.

Table 3-1: *Electrical Cables to the BK731 Head*

Receptacle	Cable	Destination/Function
Output	9101656A	To base OUTPUT receptacle (for output signals like stop)
Product	9101750A	Used only on stand-alone BK731 heads for optional photocue
Jam	9101660A	To base JAM receptacle (for Jam and Upper Transport safety sensors)
Inhibit	-	Used for future designs
Comm	-	Used for future designs
Power	9101657A	To base POWER receptacle (115 VAC)
Encoder	9101658A	To base ENCODER receptacle (for encoder signal)
Photo F/B	9101659A	To base PHOTO F/B receptacle (for front and back through beam product sensors)
Tab	9101264A	Peel Point Assembly (for tab sensor)
Keypad	606324	To Keypad Receptacle
Controller I/O	-	Used for future designs

Note: The Product and Photo F/B cables cannot be connected simultaneously. The BK730 comes standard with the Photo F/B sensor.

4.1 Tabber/Labeler Keypad Interface

The BK731 keypad shown in Figure 4-1 provides the user interface for all setup and diagnostic functions. The white buttons are for inputting setup changes (number pad, enter, + and -), the yellow buttons (scroll up and down) are to cycle through menus, the blue buttons (setup, test, position, and labels) are sub-menus for job setup and diagnostics, and the green button (online) sets the head operation mode.

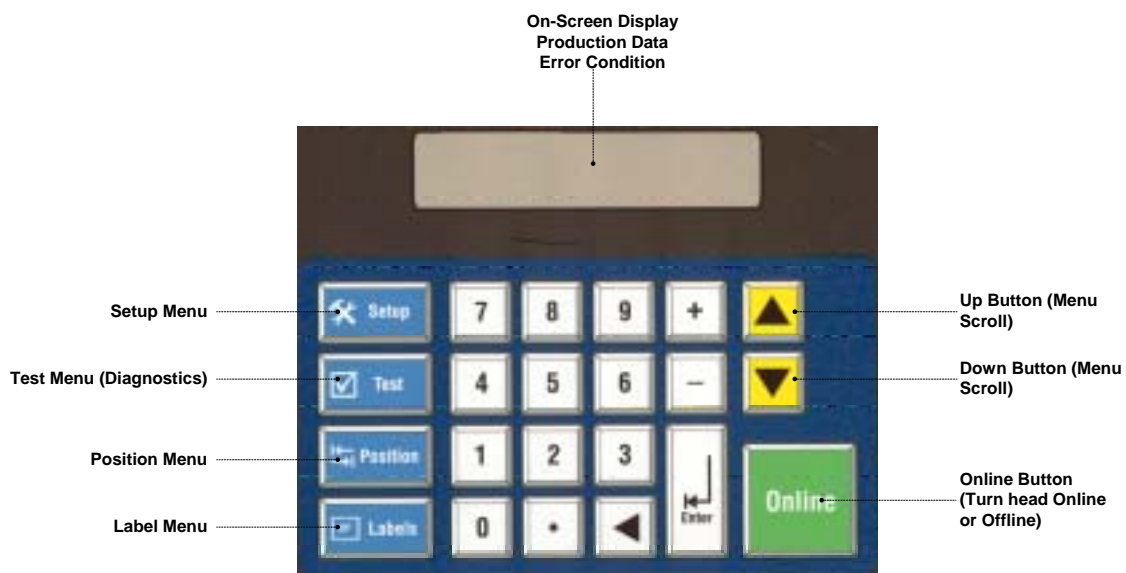


Figure 4-1: *BK731 Keypad Controls*

4.2 Keypad Setup Menu

The “**Setup**” button on the keypad permits the configuration of the head. The sub-commands under **Setup** are as follows:

- Front or Back Product Sensor Selection
- Product Sensor Position Setting
- Reset production count
- Display software version
- Reset to default factory setting
- Life count

4.2.1 Front or Back Product Sensor Selection

The Product sensors are through-beam photo-sensors that detect the presence of a product to be tabbed. They are mounted on the front and rear of the BK730 base and are located approximately 7” upstream to the peel point. This must be set whenever there is a change in tabbing location. If the product is being transported on the front of the base (operator side), the front product sensor (**FWD**) must be selected. If the product is transported on the rear, the back sensor (**BAK**) must be selected. In order to make this selection, refer to the following instructions:

1. If the keypad does not say “OFFLINE”, press the <**Online**> key.
2. Press the <**Setup**> button. The display should read “**PRODUCT SENSOR: FWD**” or “**PRODUCT SENSOR: BAK**”. If not, scroll through the menu by pressing the Up or Down arrow until the Product Sensor option is displayed.
3. Press <-> or <+> in order to select FWD or BAK. When your selection is made, press <**Online**>.

Note: If an incorrect product sensor has been chosen, then the system will not detect the conveyed products and no tabs will be dispensed from the Tabber/Labeler head.

4.2.2 Product Sensor Positional Adjustment

The Product Sensor Position (PS POS) indicates the distance the product sensors are from the peel point. This setting is normally only used for stand-alone BK731 labeling heads. This is because the product sensors are fixed on the BK730 and are set on the factory default. However, if the head is removed from the BK730 base and used on another transport base with a different product sensor location, this value will need to be changed. This can be accomplished by completing the following:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Setup> button. Press the Down button until the display reads “**PS POS: ##.###**” (where ##.### indicates the current position).
3. Using the keypad, enter in the distance (in inches) the center of the product sensor is from the tip of the peel point (where the tab is released) and then press <Enter>. It is also possible to press <+> or <-> to increment this value by $\pm 1/8$ ”.
4. Press <Online> to exit the Setup menu.

Note: The factory setting for the product sensor location is 6.25”. The BK731 head allows for values between 1 to 40 inches. However, it is recommended that the sensor be as close to the peel point as possible to avoid the possibility of the product moving out of position after passing the product sensor.

4.2.3 Production Counter Resetting

The production counter indicates the number of pieces tabbed in a given job. In order to reset this value after a job is complete, the following must be completed:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Setup> button. Press the Down button until the display reads “**RESET COUNT <++++>**”.
3. Press <+> three times. The head should beep and reset the counter.
4. Press <Online> to exit the Setup menu.

4.2.4 Software Version

In order to display the BK731 head software version, refer to the following instructions:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Setup> button. Press the Down button until the display reads “**VERSION #.#**” where #.# represents the version number.
3. Press <Online> to exit the Setup menu.

4.2.5 Factory Reset

The factory reset allows the operator to reset all operation variables except the life count back to their original factory settings. This operation might be necessary in the event the Tabber/Labeler is unable to operate under normal conditions or an upgrade has been performed. The most common requirement for a factory reset is when tabs are misplaced on the product, or no tabs are being placed at all, without any explanation. In order to execute a factory reset:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Setup> button. Press the Down button until the display reads “**FACTORY RESET <++++>**”.
3. Press <+> three times. The head should beep indicating a complete reset.
4. Press <Online> to exit the Setup menu.

4.2.6 Life Count Display

The Tabber/Labeler head controller is equipped with a non-resetable counter which records and displays the total number of tabs applied over the course of the system’s life. This counter is intended as a service counter and cannot be reset by the operator. To view the life count:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Setup> button. Press the Down button until the display reads “**LIFE COUNT: #####**”. This is the total number of tabs applied.
3. Press <Online> to exit the Setup menu.

4.3 Keypad Test Menu

The Tabber/Labeler head is equipped with diagnostic tools that allow for the testing of various functions of the head. This is an important troubleshooting tool that can be used to isolate a given problem. If any one of these tests fails, it can compromise the performance or even functionality of the system. In order to access the diagnostic tools, reference the following instructions:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Test> button.
3. Press the Up or Down arrow keys to scroll through the different tests.
4. Press <Online> to exit the Test menu.

There are a total of 12 different tests under the Test menu. They are described in Table 4-1. Also reference **Section 1.5** for the sensor locations.

Table 4-1: Head Diagnostic Tools

Test	Display	Description
Encoder Test	ENCODER COUNT:	This display value should increase when the base is running.
Peel Point Tab Sensor Test	LABEL:	Insert tabbing material between the peel point. The display should read "BLOCKED" when a tab is blocking the sensor and "UNBLOCKED" when there is no tab on the backing material.
Front Product Sensor Test	FWD PROD:	Physically block the front product sensor with your hand (do not touch the sensor). The display should read "BLOCKED" when your hand covers the sensor and "UNBLOCKED" when your hand is clear.
Rear Product Sensor Test	BAK PROD:	Physically block the back product sensor with your hand (do not touch the sensor). The display should read "BLOCKED" when your hand covers the sensor and "UNBLOCKED" when your hand is clear.
Bin Sensor Test	BIN:	Physically block the bin sensor with your hand (do not touch the sensor). The display should read "BLOCKED" when your hand covers the sensor and "UNBLOCKED" when your hand is clear.
Take-Up Sensor Test	TAKE-UP:	Rotate the take-up spool one full rotation. The keypad display should say "UNBLOCKED" during part of the rotation and "UNBLOCKED" for the remainder of the rotation.
Jam Test	JAM:	Lifting the Jam lever or opening the upper transport should display "JAMMED". Otherwise it should display "NOT JAMMED".
Front Door Cover Test	COVER:	When the BK731 head front door is closed it should display "CLOSED". Otherwise it should display "OPEN".
Tab Drive Motor Test	LABEL STEP:	The tab drive roller should rotate counter-clockwise one step each time <ENTER> is pressed.
Despool Drive Motor Test	UNWIND STEP <ENTER>	The despool drive motor should rotate clockwise one step each time <ENTER> is pressed.
Take-Up Test	TAKEUP TEST <ENTER>	When performed WITHOUT a roll of tabs installed, the take-up spool should rotate clockwise and stop automatically.
Stop Relay Test	STOP RELAY <ENTER>	While the base is running, pressing <ENTER> will cause the base to stop.

4.4 Keypad Position Menu

The “**Position**” button on the keypad provides the user with the ability to change the number of tabs/labels per product and where they are positioned on the product. This includes automatic symmetrical positioning of tabs or manual placement.

4.4.1 Tab Spacing Option

The Tab Spacing function allows the spacing between each tab to be set manually or automatically. The automatic spacing allows the tabs to be spaced equally. If the manual option is selected, the user can key in the spacing between tabs manually. In order to set the tab spacing to auto or manual:

1. If the keypad does not say “OFFLINE”, press the <**Online**> key.
2. Press the <**Position**> button.
3. The display should read “**SPACING: AUTO**” or “**SPACING: MANUAL**”. If not, press the Down key until it does.
4. Press the <+> or <-> key to change between the Auto and Manual settings.
5. If you wish to manually change the tab position, go to **Section 4.4.4**.
6. Press <**Online**> to exit the Position menu.

Note: If automatic tab spacing is chosen, tab position cannot be keyed in.

4.4.2 Number of Tabs

The Buskro tabber/labeler has the ability to apply 1 to 3 tabs on a piece during a single pass. In order to change the number of tabs applied, reference the following steps:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Position> button.
3. Press the Down key until the display reads “**LABELS PER PIECE: #**” where # indicates the number of tabs. This value can be changed by either pressing <+> or <-> or by hitting the number corresponding to the number of required tabs and hitting <Enter>.
4. Press <Online> to exit the Position menu.

4.4.3 Product Length Entry

Anytime a different length material is used, the product length must be entered into the head. Otherwise, the tabs will not be placed in the proper locations. To set the product length:

1. Measure the product length.
2. If the keypad does not say “OFFLINE”, press the <Online> key.
3. Press the <Position> button.
4. Press the Down key until the display reads “**LENGTH: ##.###**” where ##.### indicates the product length.
5. Using the keypad, enter in the length of the product and press <Enter>.
6. Press <Online> to exit the Position menu.

4.4.4 Manual Tab Position

This section is only relevant if the tab spacing is set on manual (**Section 4.4.1**). The tab position entry is defined as the distance from the leading edge of the product to the leading edge of the tab with tab position #1 being closest to the leading edge of the product (Figure 4-2).

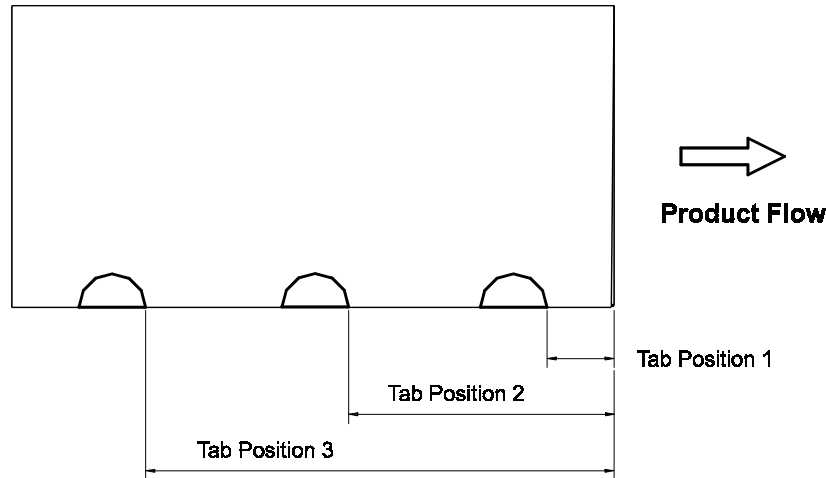


Figure 4-2: *Tab Position*

In order to set the tab position (assuming 3 tabs per pass):

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Position> button.
3. Follow the instructions in **Section 4.4.1** and set the spacing to manual.
4. Press the Down key until the display reads “POS 1: ##.###” where ##.### indicates the position of the first tab in inches.
5. Using the keypad, enter in the position of the tab and press <Enter>.
6. Press the Down key until the display reads “POS 2: ##.###” and repeat step 5.
7. Press the Down key until the display reads “POS 3: ##.###” and repeat step 5.
8. Press <Online> to exit the Position menu.

Note: 0.00” is the minimum setting.

A material size error condition could occur if the tab positions are set too close together. The result is immediate.

4.4.5 Keypad Labels Menu

The “**Labels**” button on the keypad provides the user with the ability to set up the type, position, and pitch of a tab. The sub-commands under **Labels** are as follows:

- Tab Pitch Auto Configuration
- Tab Pitch Manual Configuration
- Type of Tab
- Sensor Sensitivity Setting
- Sensor Nudge Factor

4.4.6 Tab Pitch Auto and Manual Setting

The BK731 utilizes the Tab Pitch value to determine how much of an incremental move the tab drive roller has to make between each tab. This value is extremely important to maintain accurate tab placement. The pitch is determined by measuring the distance from the beginning of the first tab to that of the second tab (Figure 4-3). This value must be within $\pm 0.05''$ to ensure that each successive tab is accurately placed on the product.

Failure to set this parameter accurately will result in tab “drift” with tabs being incorrectly placed on successive products. Although it is possible to manually enter in the tab pitch, the BK731 is capable of automatically determining both the appropriate pitch and sensor gain (Section 4.4.8).

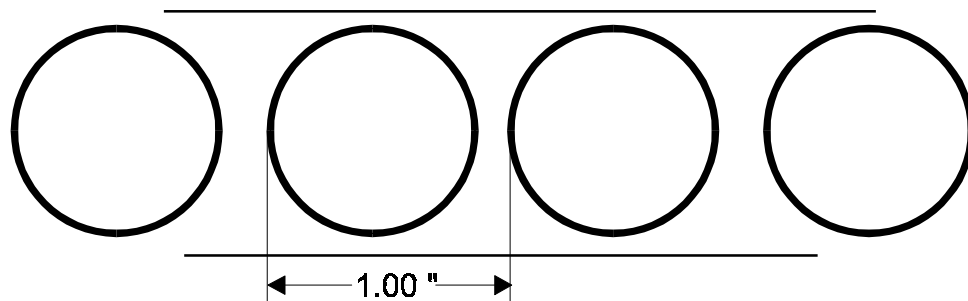


Figure 4-3: *Tab Pitch Example (In this case Tab Pitch is 1.00")*

In order to set the tab pitch automatically:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Labels> button. The display should read “**AUTO CONFIG** <ENTER>”. If not, press the Down arrow key until it does.
3. Place a product underneath the peel point. Now press <ENTER>. The BK731 should release a small number of tabs.
4. Repeat step 3.
5. Press <Online> to exit the Labels menu.

In order to set the tab pitch manually:

1. If the keypad does not say “OFFLINE”, press the <Online> key.
2. Press the <Labels> button.
3. Press the Down arrow key until the display reads “**PITCH: #.###**”.
4. Using the keypad, enter in the tab pitch and press <Enter> (Figure 4-3).
5. Press <Online> to exit the Labels menu.

Note: It is recommended that the automatic tab pitch setting be used to set the tab pitch.

If the Tab Pitch entry is not accurately set, the result will be that each successive tab applied will drift incrementally on successive products. That is, the first tab may be applied at 1” from the lead edge, with the second applied at 1.05”, the third one at 1.1” and so on.

The tab sensor gain will also need adjustment for accurate tab placement when the manual tab pitch function is used.

4.4.7 Type of Tab Setting

The BK731 was designed to operate using two main types of tabs, clear or solid (transparent or opaque). Clear tabs require backing paper that comes with two black lines acting as leading and trailing edge for the peel point sensor to detect. In order to set the type of tab:

1. If the keypad does not say “OFFLINE”, press the **<Online>** key.
2. Press the **<Labels>** button.
3. Press the Down arrow key until the display reads “**LABEL TYPE: CLEAR**” or “**LABEL TYPE: SOLID**”.
4. Press **<+>** or **<->** to change the setting to solid or clear tabs.
5. Press **<Online>** to exit the Labels menu.

4.4.8 Peel Point Sensor Adjustment

The tab sensor in the peel point assembly is a photo-sensor that detects the presence of the tab’s leading edge. Tab sensor adjustment involves setting the gain such that its beam is strong enough to pass through the tab backer yet weak enough to be blocked by the tab. This adjustment should be made if there is a noticeable misalignment in the placement of the tabs on the product. To set the peel point sensor gain:

1. If the keypad does not say “OFFLINE”, press the **<Online>** key.
2. Press the **<Labels>** button.
3. Press the Down arrow key until the display reads “**SENSOR VALUE: ###**”.
4. Press the **<+>** or **<->** key to increase or decrease the sensor gain to an appropriate value.
5. Press **<Online>** to exit the Labels menu.
6. Test the peel point sensor by referencing Table 4-1. If the display indicates the peel point is “BLOCKED” when a tab is inserted between the peel point sections and “UNBLOCKED” when only the backing paper is inserted, the setting is correct. If not, repeat this section until the system operates properly.

Note: It is recommended that the automatic tab pitch function be used. This function will also adjust the sensor gain automatically. If the Peel Point sensor gain is not properly set, the tab placement will not be accurate.

This setting should only be used if there is a noticeable degradation in the positioning of the tabs on the product and when the manual tab pitch function is used to set tab pitch.

4.4.9 Peel Point Sensor Nudge Factor

The nudge factor allows the BK731 to automatically offset the tab relative to the peel point. A positive nudge factor will cause the tabs to protrude outside of the peel point tip more during tabbing operation. This setting can help in improving accurate tab placement when set properly. In order to set the peel point nudge factor:

1. If the keypad does not say “OFFLINE”, press the <**Online**> key.
2. Press the <**Labels**> button.
3. Press the Down arrow key until the display reads “**SENSOR NUDGE: ±#**”.
4. Press the <+> or <-> key to increase or decrease the nudge factor
5. Press <**Online**> to exit the Labels menu.

4.5 Operational Controls

This section describes the functions available during normal operation of the Tabber/Labeler system.

4.5.1 Online/Offline Status

The head must be placed online if the tabbing operation is to be enabled. Conversely, placing the system offline will result in the suspension of the tabbing operation. To place the system online or offline, press the <**ONLINE**> button. The system will be offline during initial startup, whenever an error condition is detected, or when the user manually takes the system offline.

Note: When the system is placed offline, the Tabber/Labeler system will immediately cease operation.

4.5.2 Product Count, Production Rate, and Belt Speed Display

The Tabber/Labeler is capable of displaying the job product count (number of products with tabs applied), production rate (in Pieces Per Hour or PPH), or line/transport speed (in Feet per Minute or FPM). During normal operation (Online mode), the user can cycle through these displays by pressing the Up or Down arrow keys on the keypad.

4.5.3 Error Conditions

The Tabber/Labeler is designed to automatically go offline when an error condition is triggered. This will automatically stop the tabbing process and display an error message. As a result, the user will need to remedy the problem that caused the error condition. The main error conditions are listed in Table 4-2.

Table 4-2: *Error conditions reported by the Tabber/Labeler head controller*

Error Condition	Cause	Remedy
ONLINE	All systems are operating normally and no errors are detected	None. Normal operation.
PRODUCT JAM	Product jammed or the upper transport was opened during operation.	Remove jammed product from jam switch. - OR - Close the upper transport and upper transport cover.
TAKEUP ERROR	The take-up spool rotates freely.	Empty tab backing paper from take-up roll and rethread the tab backing paper onto the roll.
COVER OPEN	The Tabber/Labeler head front safety cover is opened during operation.	Close the Tabber/Labeler head cover.
MATERIAL SIZE ERROR	There is a misfeed or product skew.	Check if the product is fed correctly.

4.6 Maintenance Schedule

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

Table 4-3: *Head Maintenance Schedule Table*

Period	Maintenance Function
Daily	Remove the front safety cover and clean any debris which may have fallen into the machine. Remove any tabs which may have settled on the rollers and sensor bin. Wipe debris off all sensors to prevent malfunction.
Monthly	Grease all moving parts to help reduce wear due to friction. The peel point sensor must be cleaned to prevent material build up. An air compressor is recommended.
Semi Annually	Examine all moving parts for wear. Replace if necessary.

Note: Acquiring a small air compressor is recommended as compressed air is useful in removing debris.

Assembly Drawings

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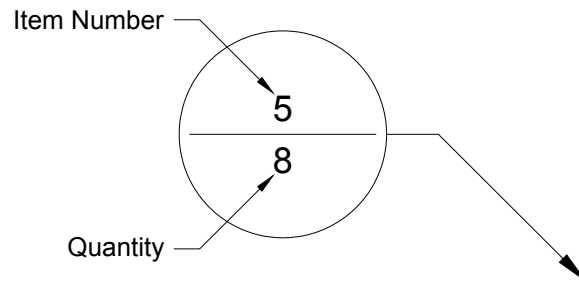
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Balloon Annotation and Parts Listing



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: BK730 Tabbing System (BK730A)

Item	Part Number	Quantity	Description	Reference
1	405250	4	Screw, SHCS, 1/4-20 UNC x 3/4"	
2	439010	4	Lockwasher, 1/4" I.D.	
3	614530A	1	Conveyor Plug Assembly	
4	646002	1	Fuse, 5 x 20, 10 A, Spare (Not Shown)	
5	700574	1	Shipping Bracket	
6	9101627	1	Buskro Serial Number Label	
7	BK730T	1	BK730 Tabber, Testing	Page A-2

Figure A-1: BK730 Tabbing System (BK730A)

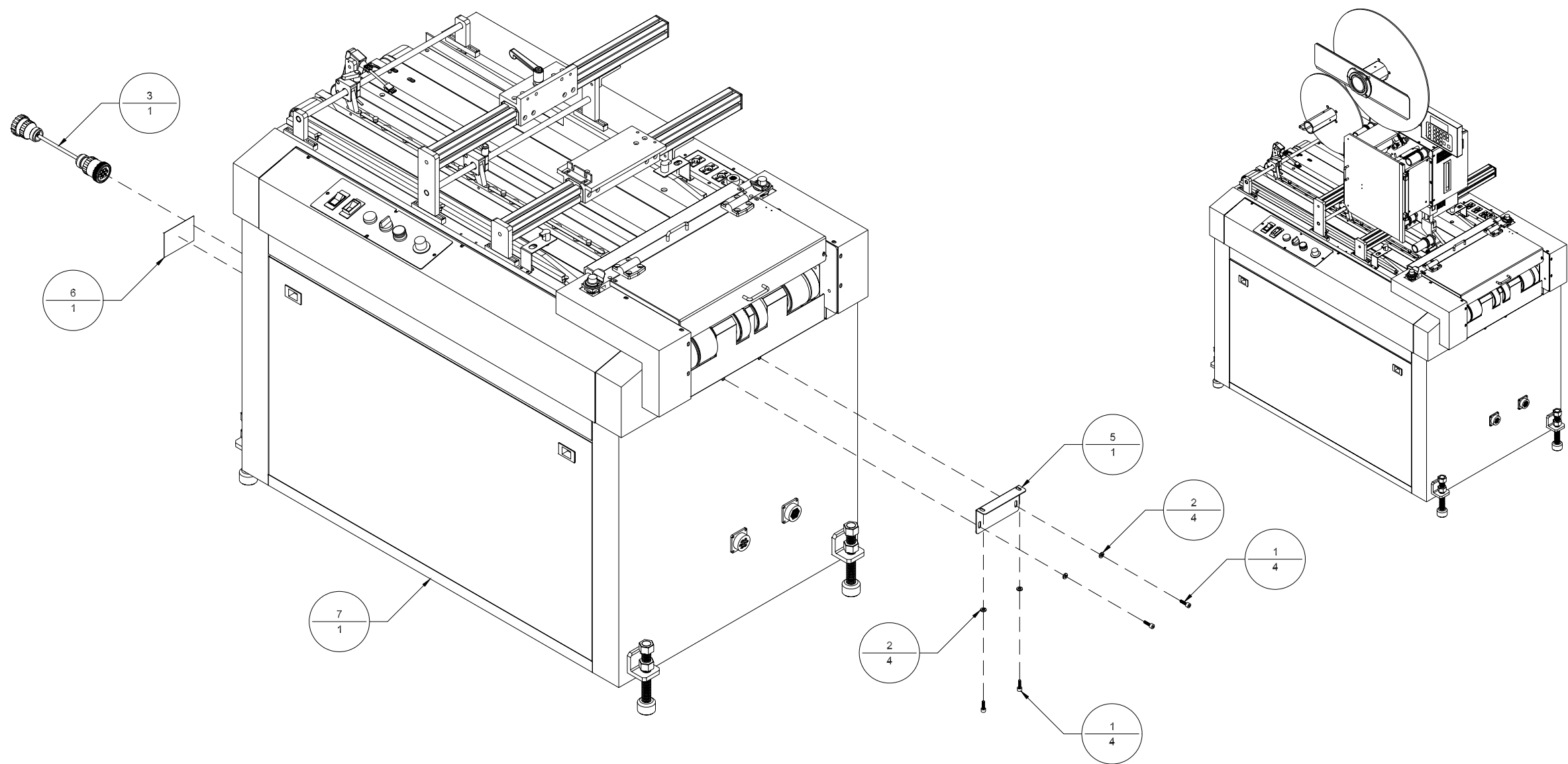
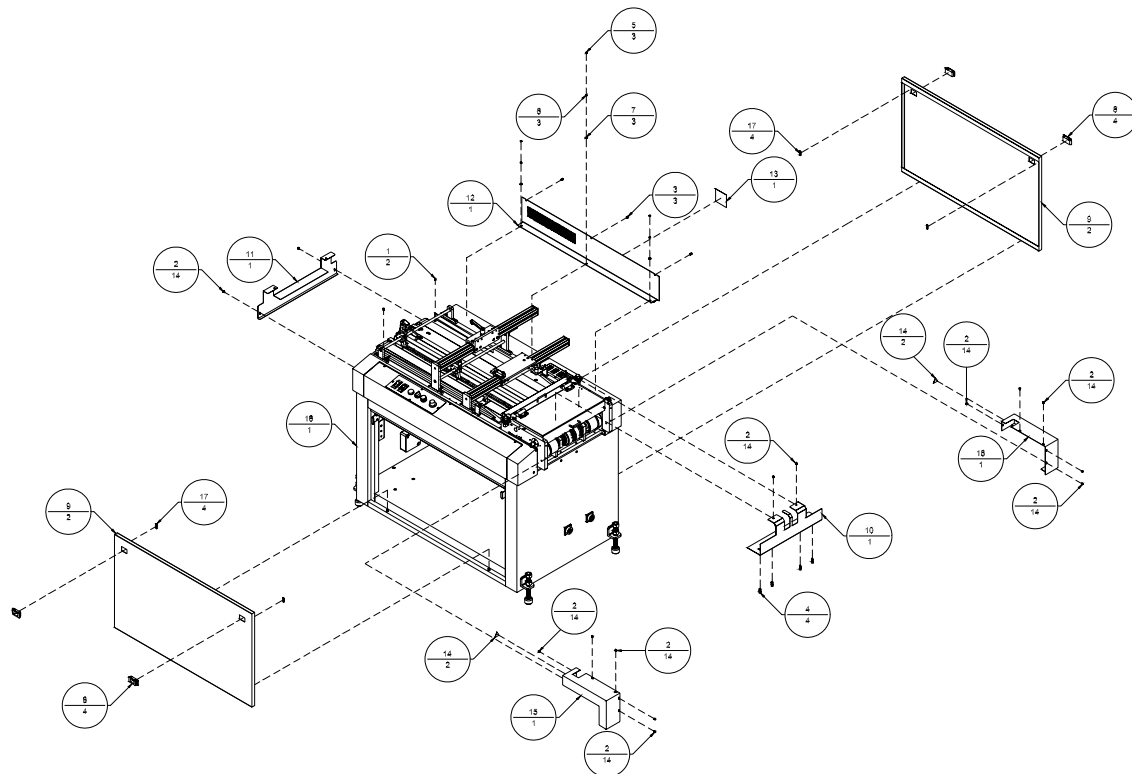


Table A-2: BK730 Tabber Testing (BK730T)

Item	Part Number	Quantity	Description	Reference
1	402020	2	Screw, FHCS, 6-32 UNC x 3/8"	
2	404510	14	Screw, BHCS, 10-32 UNF x 1/4"	
3	404520	3	Screw, BHCS, 10-32 UNF x 3/8"	
4	405250	4	Screw, SHCS, 1/4-20 UNC x 3/4"	
5	420008	3	Nut, 10-32 UNF	
6	439009	3	Lockwasher, #10	
7	440008	3	Washer, #10 I.D.	
8	446000	4	Slide Latch - A3	
9	700536	2	Tabber Cabinet Door	
10	700537	1	Outfeed Roller Cover	
11	700538	1	Front Protective Cover	
12	700542	1	Rear Panel Access Door	
13	803020	1	Electrical Warning Label	
14	9100869	2	Hand Entanglement Label	
15	9101560	1	Upper Transport Cover, Front	
16	9101561	1	Upper Transport Cover, Rear	
17	9101644	4	Sponge Rubber Weather Stripping	
18	BK730F	1	Tabber Final Assembly	Page A-3

Figure A-2: BK730 Tabber Testing (BK730T)**NOTE:**

THE TABBER HEAD IS NOT SHOWN BUT IS PART OF THIS ASSEMBLY.

Table A-3: BK730 Tabber Final Assembly (BK730F)

Item	Part Number	Quantity	Description	Reference
1	330116	1	Microswitch Bracket	
2	330740A	1	Tabber Skidbar Assembly, BK730	Page A-11
3	402375	2	Screw, PHMS, 6-32 UNC x 1 1/4"	
4	403020	2	Screw, FHCS, 8-32 UNC x 3/8"	
5	404550	12	Screw, BHCS, 10-32 UNF x 3/4"	
6	405520	4	Screw, BHCS, 1/4-20 UNC x 3/8"	
7	405560	2	Screw, BHCS, 1/4-20 UNC x 7/8"	
8	530706A	1	Tabber Base Mechanical Assembly (BK730A)	Page A-14
9	603520A	1	Jam Switch Assembly, Tabber	Page A-17
10	615140	2	Lashing Tie	
11	9101077A	1	Front Mounting Rail Assembly	Page A-23
12	9101656A	1	Output Cable Assembly, Tabber	Page A-26
13	9101657A	1	Power Cable Assembly, Tabber	Page A-27
14	9101658A	1	Encoder Cable Assembly, Tabber	Page A-28
15	9101659A	1	Photo F/B Cable Assembly	Page A-29
16	9101660A	1	Jam Cable Assembly, Tabber	Page A-30
17	BK731A	1	Tabber Head Assembly	Page A-34

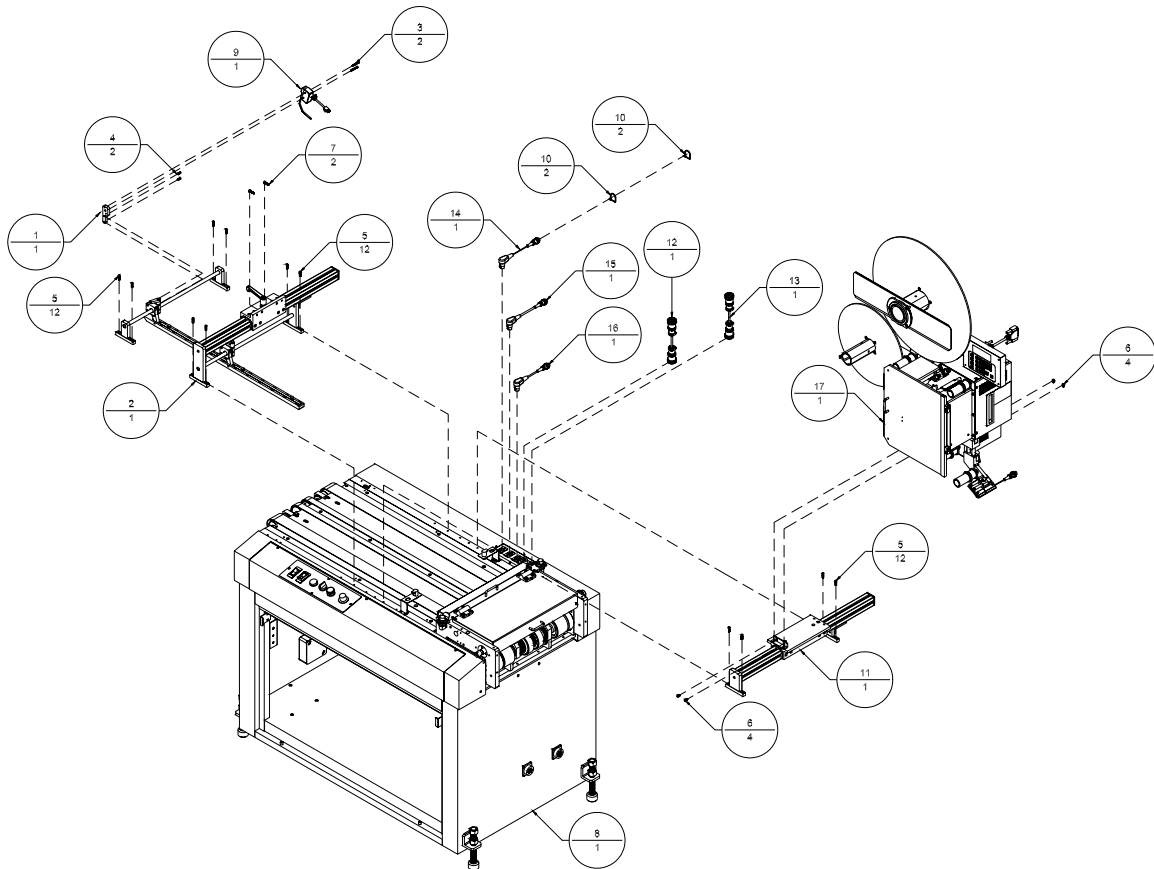
Figure A-3: BK730 Tabber Final Assembly (BK730F)

Table A-4: *Height Adjustment Screw Assembly (100540A)*

Item	Part Number	Quantity	Description	Reference
1	100540	1	Height Adjustment Screw	
2	110311	1	Gearbox Worm Gear, 0.374" Bore	
3	436040	1	Spring Pin, 1/8" Dia. x 5/8"	

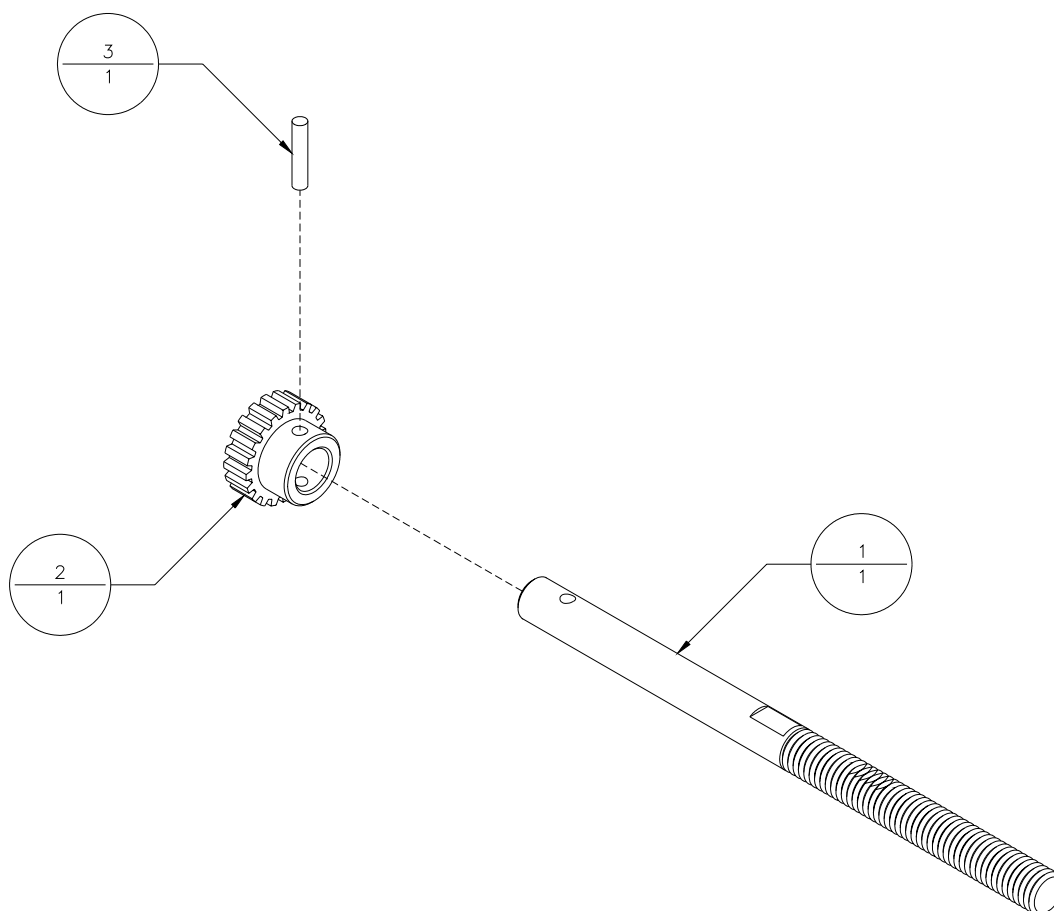
Figure A-4: *Height Adjustment Screw Assembly (100540A)*

Table A-5: *Upper Transport Assembly (212735A)*

Item	Part Number	Quantity	Description	Reference
1	100534	1	Upper Transport Pivot Shaft	
2	100547	1	Upper Transport Shaft	
3	100548	1	Nip Roller Shaft	
4	106536	2	Tab Nip Roller	
5	106543	4	Upper Drive Belt Roller	
6	106544	2	Crease Roller	
7	106545	4	Upper Belt Drive Roller	
8	116531	1	Pulley, 12LF050 x 5/8"	
9	116535	1	Pulley, 24XLB037 x 5/8"	
10	116536	1	Pulley, 18XLB037 x 5/8"	
11	120209	1	Timing Belt, 90XL037	
12	120532	4	Upper Transport Belt, 18.94"	
13	209531	4	Spring, 11/32 O.D. x 5/8"	
14	212535	1	Right Hopper Roller Block	
15	212536	1	Left Hopper Roller Block	
16	212537	2	Upper Transport Frame	
17	310530	1	Upper Transport Cover Bar	
18	401310	2	Screw, PHMS, 4-40 UNC x 1/4"	
19	402220	2	Screw, SHCS, 6-32 UNC x 3/8"	
20	402510	2	Screw, BHCS, 6-32 UNC x 1/4"	
21	402805	2	Screw, SHSS, 6-32 UNC x 1/8"	
22	404030	6	Screw, FHCS, 10-32 UNF x 1/2"	
23	404240	4	Screw, SHCS, 10-32 UNF x 5/8"	
24	404520	4	Screw, BHCS, 10-32 UNF x 3/8"	
25	404530	8	Screw, BHCS, 10-32 UNF x 1/2"	
26	404807	11	Screw, SHSS, 10-32 UNF x 3/16"	
27	414180	4	Shoulder Bolt, 1/4" x 1 1/2" (10-24)	
28	420008	4	Nut, 10-32 UNF	
29	430150	1	Woodruff Key, #406, 1/8" x 3/4"	
30	430250	1	Woodruff Key, #606, 3/16" x 3/4"	
31	438314	2	Ink Well Door Handle	
32	439009	4	Lockwasher, #10	
33	446530	2	Upper Transport Latch	
34	449930	2	Space Washer, 1" I.D. x 0.031" THK	
35	500030	4	Bearing, R8 x 1/2" I.D.	
36	500055	2	Bearing, UBR204-12S, 3/4" I.D.	
37	615533	1	Actuator, Magnetic	
38	700547	1	Nip Roller Cover	
39	700548	1	Upper Transport Cover	
40	9101641	2	Hinge, 115 Deg. Detent	

Figure A-5: Upper Transport Assembly (212735A)

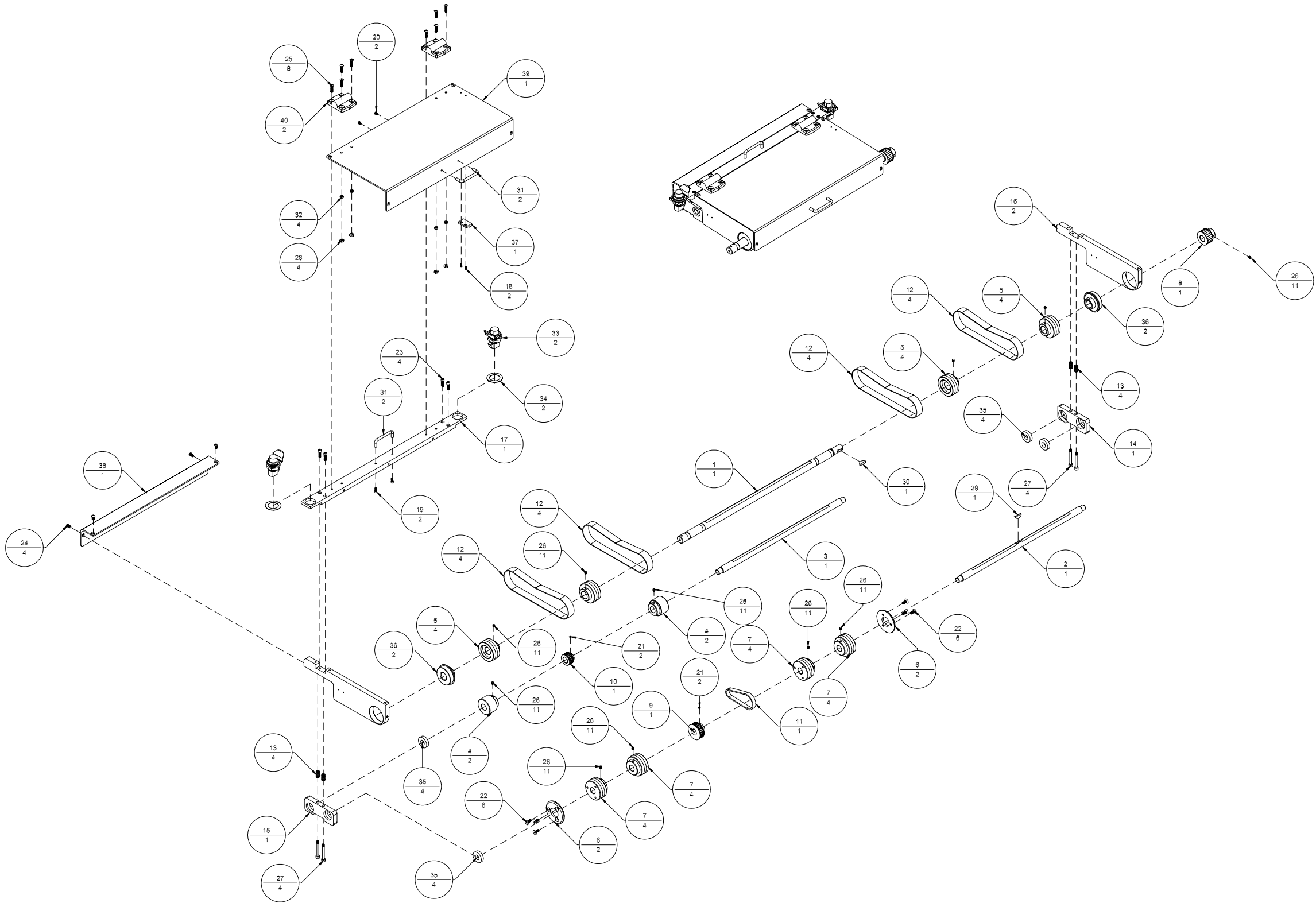


Table A-6: *Tabletop Assembly (325530A)*

Item	Part Number	Quantity	Description	Reference
1	100530	1	Belt Takeup shaft	
2	100531	1	Table Belt Drive Shaft	
3	100532	2	Lower Roller Shaft	
4	106530	2	Outer Takeup Roller	
5	106531	1	Center Belt Takeup Roller	
6	106532	4	Pinch Roller	
7	106533	2	Outfeed Pinch Roller	
8	106534	2	Table Belt Drive Pulley	
9	106535	2	Vacuum Belt Drive Pulley	
10	110207	1	Gear, NSS1636 x 3/4"	
11	116309	1	Pulley, 18LB075 x 3/4" w/o Shoulder	
12	116530	2	Pulley, 22XL037 x 5/8"	
13	116531	1	Pulley, 12LF050 x 5/8"	
14	116532	1	Pulley, 18LB050 x 3/4"	
15	120209	1	Timing Belt, 90XL037	
16	120317	1	Timing Belt, 187L050	
17	120342	1	Timing Belt, 420L075	
18	120530	2	Tabber Table Belt (1" x 99")	
19	120531	2	Tabber Table Belt (2" x 99")	
20	325530	1	Tabber Tabletop	
21	330530	2	Take-up Roller Block	
22	330531	2	Drive Roller Block	
23	330532	2	Lower Roller Block	
24	403310	4	Screw, PHMS, 8-32 UNC x 1/4"	
25	404030	8	Screw, FHCS, 10-32 UNF x 1/2"	
26	404510	4	Screw, BHCS, 10-32 UNF x 1/4"	
27	404530	4	Screw, BHCS, 10-32 UNF x 1/2"	
28	404807	6	Screw, SHSS, 10-32 UNF x 3/16"	
29	404820	4	Screw, SHSS, 10-32 UNF x 3/8"	
30	404830	1	Screw, SHSS, 10-32 UNF x 1/2"	
31	405820	2	Screw, SHSS, 1/4-20 UNC x 3/8"	
32	405830	5	Screw, SHSS, 1/4-20 UNC x 1/2"	
33	405850	4	Screw, SHSS, 1/4-20 UNC x 3/4"	
34	430250	10	Woodruff Key, #606, 3/16" x 3/4"	
35	436300	1	Spring Pin, 3/16 DIA x 1 3/4" Long	
36	440008	4	Washer, #10 I.D.	
37	500045	4	Bearing, UBR202-10S, 5/8" I.D.	
38	500055	4	Bearing, UBR204-12S, 3/4" I.D.	
39	706533	2	Upper Photosensor Bracket	
40	707532	1	Left Form Plate Guide	
41	707533	1	Right Form Plate Guide	
42	9101271	2	Nut, M12	

Figure A-6: *Tabletop Assembly (325530A)*

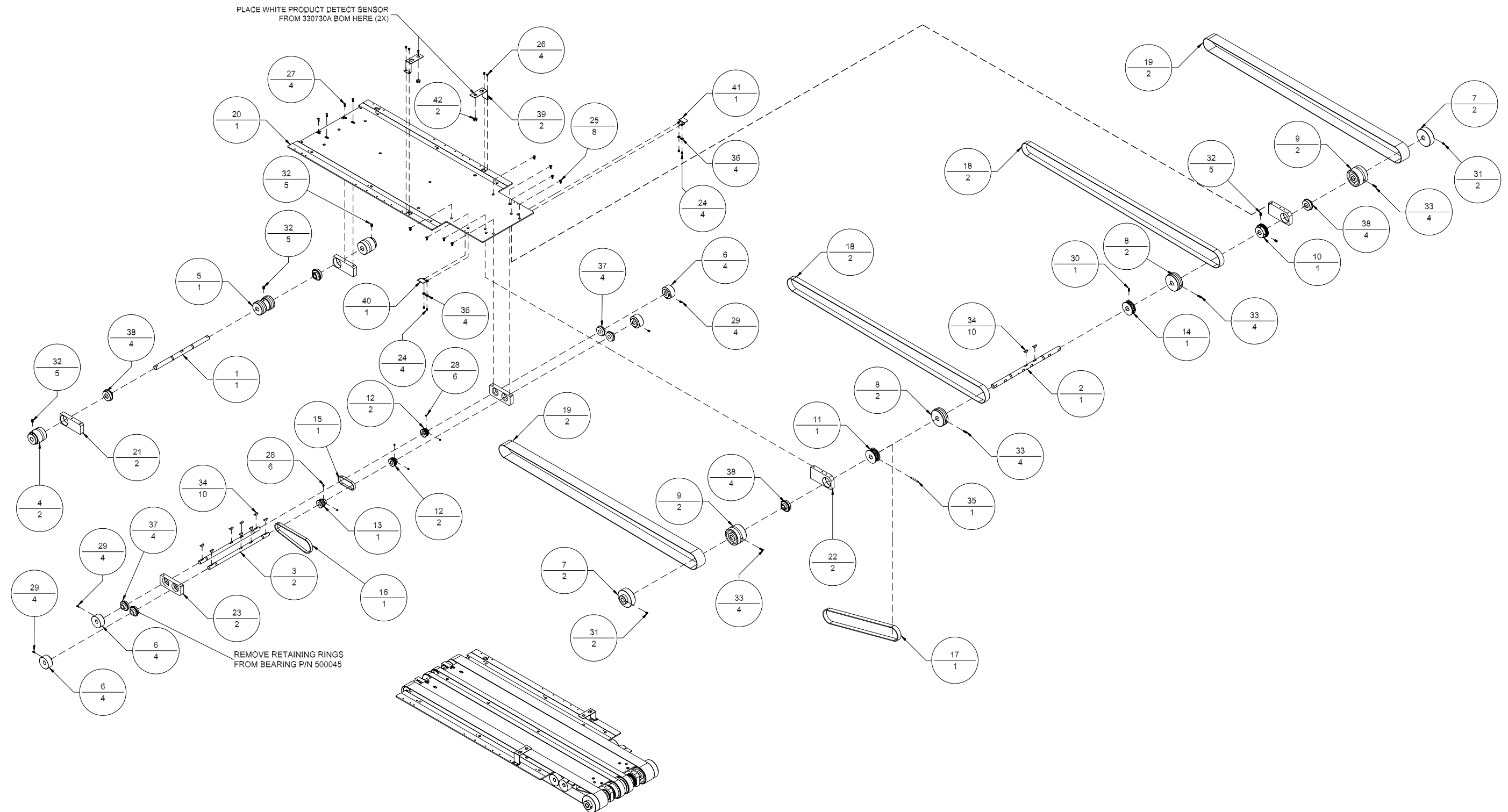


Table A-7: Tabber Base Mechanical Assembly (330730A)

Item	Part Number	Quantity	Description	Reference
1	100310	2	Gear Box Shaft	
2	100538	1	Upper Transport Drive Shaft	
3	100540A	2	Height Adjustment Screw Assembly	Page A-4
4	100541	2	Lateral Shaft	
5	100542	1	ACME Screw Shaft	
6	100543	1	Gear Box Coupling Shaft	
7	100544	1	Height Adjustment Extension Shaft	
8	106540	1	Upper Belt Idler Roller	
9	110310	2	Gearbox Worm, Hardened, 1/4" Bore *	
10	110530	1	Gear, NSS1628 x 5/8"	
11	116539	1	Pulley, 14LF050 x 5/8"	
12	122201	2	Gearbox Coupling	
13	131020	3	Collar, 3/8" I.D.	
14	131030	1	Collar, 1/2" I.D.	
15	212530	2	Upper Transport Slide Frame	
16	212533	4	Linear Bearing, 1" I.D.	
17	300531	1	Right Tabber Frame	
18	300532	1	Left Tabber Frame	
19	300533	1	Right Transport Slide Mount	
20	300534	1	Left Transport Slide Mount	
21	310322	3	Angle Bracket	
22	320531	3	Lower Frame Spacer	
23	320532	3	Tabletop Spacer	
24	320533	2	Frame / Transprort Spacer Bar	
25	325534	1	Right Tab Form Plate	
26	325535	1	Left Tab Form Plate	
27	330315	2	Gearbox Body	
28	330533	6	Tabletop Mounting Bracket	
29	330535	4	Frame Mounting Foot	
30	330536	2	Right Form Plate Block	
31	330537	2	Tabletop Block	
32	330538	1	ACME Screw Bracket	
33	330539	1	ACME Screw Block	
34	330541	4	Lateral Shaft Mount	
35	401310	2	Screw, PHMS, 4-40 UNC x 1/4"	
36	402210	8	Screw, SHCS, 6-32 UNC x 1/4"	
37	404070	3	Screw, FHCS, 10-32 UNF x 1"	
38	404250	4	Screw, SHCS, 10-32 UNF x 3/4"	
39	404270	4	Screw, SHCS, 10-32 UNF x 1"	
40	404520	4	Screw, BHCS, 10-32 UNF x 3/8"	
41	404807	9	Screw, SHSS, 10-32 UNF x 3/16"	
42	404830	1	Screw, SHSS, 10-32 UNF X 1/2"	
43	405240	8	Screw, SHCS, 1/4-20 UNC x 5/8"	
44	405270	17	Screw, SHCS, 1/4-20 UNC x 1"	
45	405280	4	Screw, SHCS, 1/4-20 UNC x 1 1/2"	
46	405530	1	Screw, BHCS, 1/4-20 UNC x 1/2"	
47	405570	15	Screw, BHCS, 1/4-20 UNC x 1"	
48	405810	8	Screw, SHSS, 1/4-20 UNC x 1/4"	
49	407270	2	Screw, SHCS, 3/8-16 UNC x 1"	
50	407282	8	Screw, SHCS, 3/8-16 UNC x 1 3/4"	

Item	Part Number	Quantity	Description	Reference
51	416180	1	Shoulder Bolt, 3/8 x 1 1/2 (5/16-18 UNC)	
52	420530	1	ACME Bronze Nut	
53	430250	2	Woodruff Key, #606, 3/16 x 3/4	
54	436311	2	Spring Pin, 3/32 Dia x 3/8	
55	436312	2	Spring Pin, 3/32 Dia x 5/8	
56	436530	4	Transport Slide Key	
57	437156	8	Retaining Ring, 1 9/16 I.D., External	
58	438311A	2	Bridge Handwheel Assembly	Page A-13
59	440010	1	Washer, 1/4" I.D.	
60	440015	1	Washer, 5/16" I.D.	
61	442530	6	Spacer Washer, 1/4" I.D. x 0.032 THK	
62	443830	1	Spacer Washer, 3/8" I.D. x 0.031 THK	
63	500020	2	Bearing, R6, 3/8" I.D.	
64	500045	2	Bearing, UBR202-10S, 5/8"	
65	500055	2	Bearing, UBR204-12S, 3/4"	
66	505110	2	Flange Bushing, 3/8 I.D. x 1/2" O.D. X 3/8" LG.	
67	505384	4	Flange Bushing, 3/8 I.D. x 1/2" O.D. X 1/2" LG.	
68	505463	4	Flange Bushing, 1/4 I.D. x 3/8" O.D. X 3/8" LG.	
69	615537	2	Sensor, Product Detect (Black)	
70	706532	2	Photo Reflector Bracket	
71	9101271	2	Nut, M12	
72	9101557A	1	Sensor, Magnetic, NO/NC Cable	Page A-25

Table A-8: *Tabber Skidbar Assembly (330740A)*

Item	Part Number	Quantity	Description	Reference
1	100021H	2	Front Skidbar Shaft	
2	100026	2	Hollow Skidbar Shaft	
3	203003	2	Skidbar Arm	
4	209003	2	Spring, 1/2", Extension	
5	330018H	2	Skidbar Holder Block	
6	330302	2	Skidbar Bracket	
7	343006	2	Skidbar Holder Clamp	
8	403250	2	Screw, SHCS, 8-32 UNC x 3/4"	
9	403260	2	Screw, SHCS, 8-32 UNC x 7/8"	
10	404030	8	Screw, FHCS, 10-32 UNF x 1/2"	
11	404040	4	Screw, FHCS, 10-32 UNF x 5/8"	
12	404240	8	Screw, SHCS, 10-32 UNF x 5/8"	
13	404570	2	Screw, BHCS, 10-32 UNF x 1"	
14	404820	4	Screw, SHSS, 10-32 UNF x 3/8"	
15	405520	2	Screw, BHCS, 1/4-20 UNC x 3/8"	
16	405530	2	Screw, BHCS, 1/4-20 UNC x 1/2"	
17	406530	2	Screw, BHCS, 5/16-18 UNC x 1/2"	
18	436030	2	Spring Pin, 1/8" Dia. x 1/2"	
19	436050	2	Spring Pin, 1/8" Dia. x 3/4"	
20	438171	4	Thumbscrew, 10-32 UNF x 3/8"	
21	440020	1	Washer, 3/8" I.D.	
22	500211	12	Skidbar Ballbearing, 3/4" O.D.	
23	505003	2	Bushing, 3/16" I.D. X 5/16 O.D. x 1/2 LG.	
24	505004	2	Bushing, 3/4" I.D. X 7/8 O.D. x 1/2 LG.	
25	9100485	2	Lever Handle, 1/4-20 UNC x 1 1/2"	
26	9101059	4	Support Block, Tabber Rail	
27	9101064	1	Tabber Mounting Rail	
28	9101126	1	Double T nut	
29	9101243	1	Skidbar Body	
30	9101246	2	Ball Retention Spring, 13.47"	
31	9101248	6	Bearing Pad, Tabber Head Mount	
32	9101249	1	Rail Mounting Block	
33	9101269	1	Handle, Racheting, 15 Series	
34	9101398	1	Economy T-slot Stud, 5/16-18 UNC x 1"	
35	9101492	1	Mounting Slide, AL	
36	9101622	1	Mounting Bracket, Aligning Rail	
37	9101623	1	Mounting Block, Slide Rail	
38	9101624	1	End Caps (15 Series)	

Figure A-8: Tabber Skidbar Assembly (330740A)

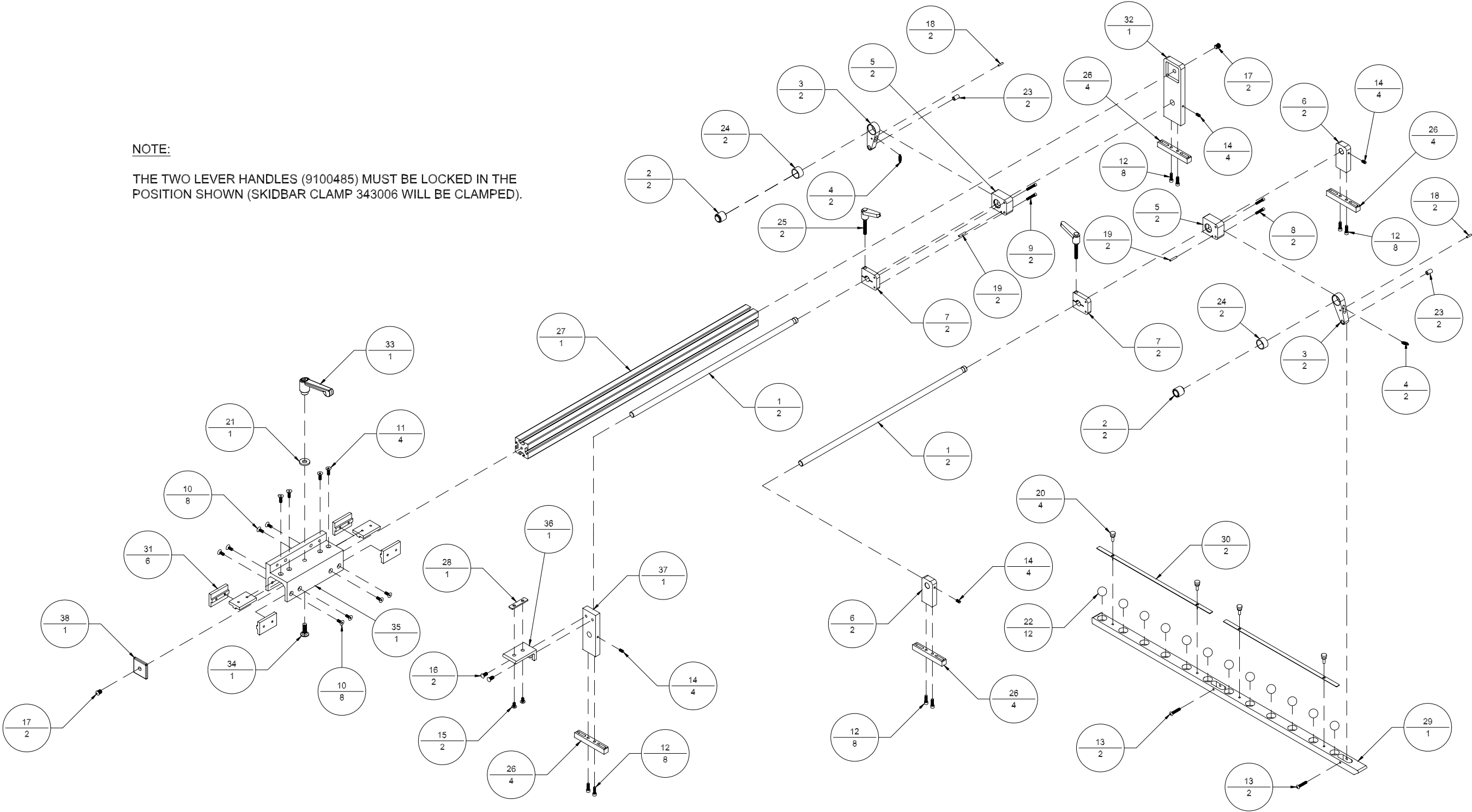


Table A-9: *Bridge Handwheel Assembly (438311A)*

Item	Part Number	Quantity	Description	Reference
1	414170	1	Shoulder Bolt, 1/4" x 1" (10-24)	
2	438309	1	Bridge Handwheel Arm	
3	438311	1	Bridge Handwheel	

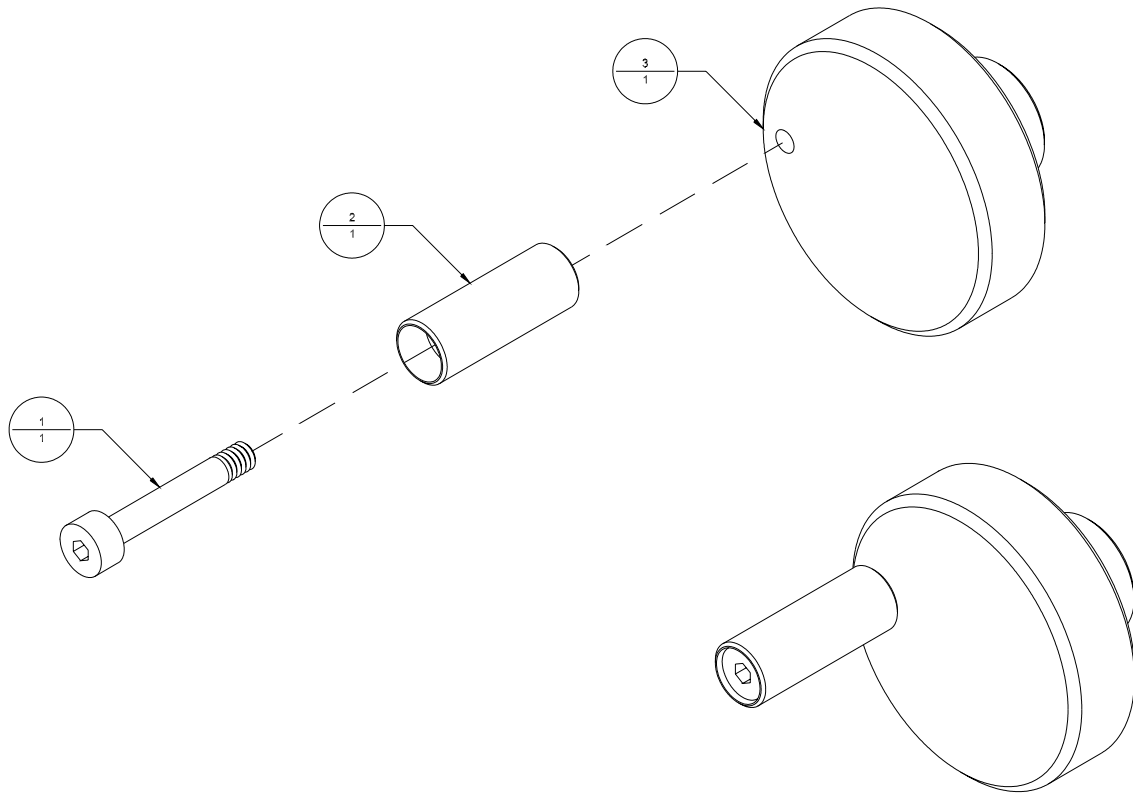
Figure A-9: *Bridge Handwheel Assembly (438311A)*

Table A-10: *Tabber Base Assembly (530706A)*

Item	Part Number	Quantity	Description	Reference
1	116533	1	Pulley, 12LF050 X R6	
2	120323	1	Timing Belt, 225L050	
3	212430	1	Right Side Guide	
4	212431	1	Left Side Guide	
5	212735A	1	Upper Transport Assembly	Page A-5
6	325530A	1	Tabletop Assembly	Page A-7
7	330730A	1	Tabber Base Mechanical Assembly	Page A-9
8	404030	11	Screw, FHCS, 10-32 UNF x 1/2"	
9	404520	35	Screw, BHCS, 10-32 UNF x 3/8"	
10	407280	10	Screw, SHCS, 3/8-16 UNC x 1 1/2"	
11	407675	3	Screw, HHMS, 3/8-16 UNC x 1 1/4"	
12	416175	1	Shoulder Bolt, 3/8" x 1 1/4" (5/16-18)	
13	420008	7	Nut, 10-32 UNF	
14	439009	7	Lockwasher, #10	
15	439020	13	Lockwasher, 3/8" I.D.	
16	440008	7	Washer, #10 I.D.	
17	440020	13	Washer, 3/8" I.D.	
18	500020	2	Bearing, R6, 3/8" I.D.	
19	530707A	1	Tabber Motor Assembly	Page A-16
20	606330	1	Replacement Cord, #16/3 x 15 ft.	
21	615131	2	Box Connector, 3/8"	
22	700534	1	Right Upper Cabinet Cover	
23	700535	1	Left Upper Cabinet Cover	
24	700540A	1	Tabber Base Control Panel Assembly	Page A-20
25	700743A	1	Connector Plate Assembly, BK730	
26	706540A	1	Front Panel Assembly	Page A-21
27	706541	1	Rear Panel	
28	9101562	1	Front Panel Access Door	
29	9101749A	1	Base Cabinet Assembly	Page A-31

Figure A-10: Tabber Base Assembly (530706A)

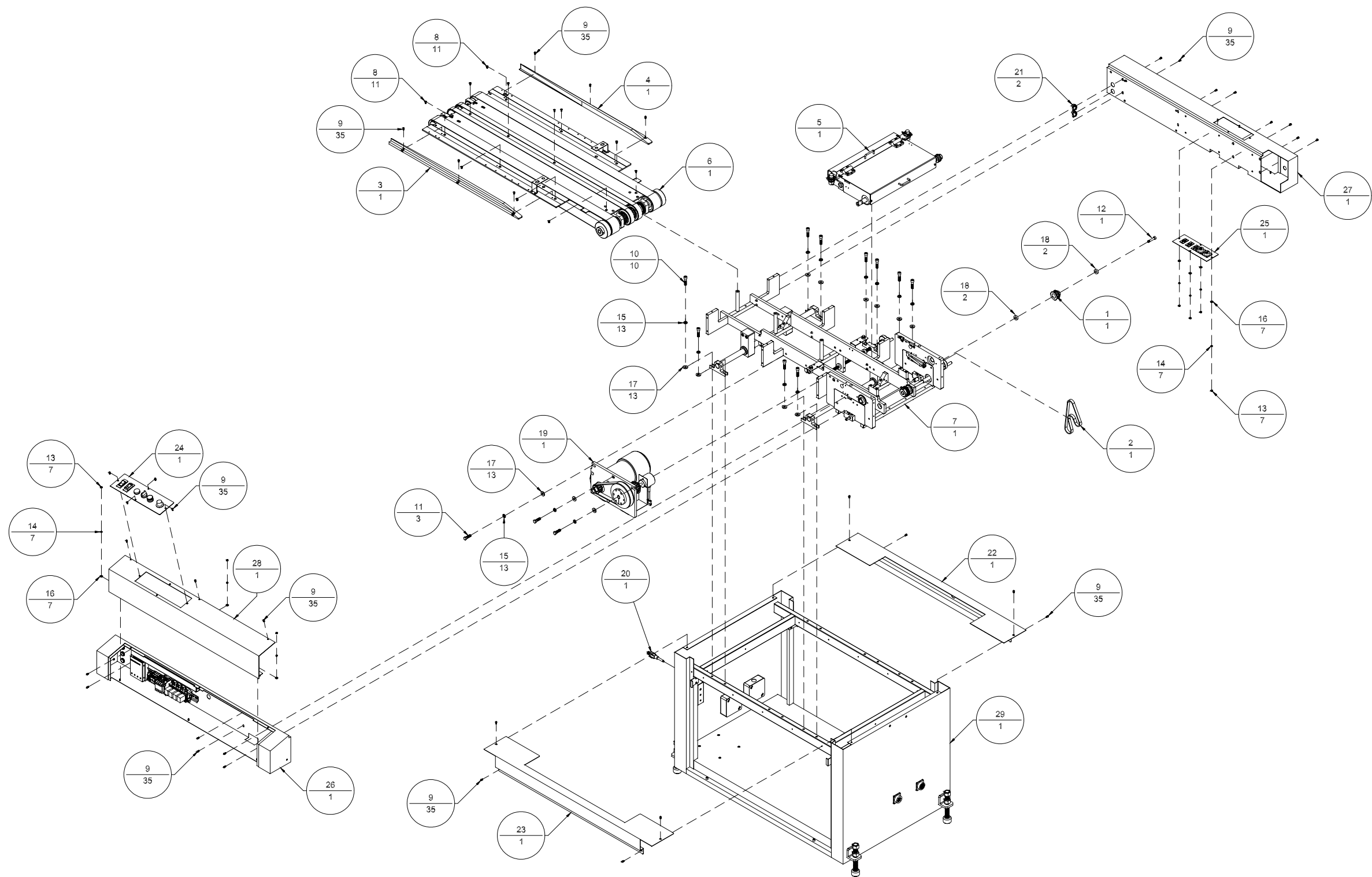


Table A-11: Tabber Motor Assembly (530707A)

Item	Part Number	Quantity	Description	Reference
1	116302	1	Pulley, 15LF075 X 3/4"	
2	116537	1	Pulley, 14LF075 X 5/8"	
3	116538	1	Pulley, 14LF075 X STD"	
4	120326	1	Timing Belt, 240L075	
5	127314	1	Pulley Hub	
6	325533	1	Motor Mount Plate	
7	330534	1	Mainshaft Housing	
8	404520	2	Screw, BHCS, 10-32 UNF x 3/8"	
9	404810	2	Screw, SHSS, 10-32 UNF x 1/4"	
10	405250	3	Screw, SHCS, 1/4-20 UNC x 3/4"	
11	405675	3	Screw, HHMS, 1/4-20 UNC x 1 1/4"	
12	405810	3	Screw, SHSS, 1/4-20 UNC x 1/4"	
13	407240	4	Screw, SHCS, 3/8-16 UNC x 5/8"	
14	430250	2	Woodruff Key, #606, 3/16" x 3/4"	
15	437063	1	Retaining Ring, 5/8" I.D., External	
16	500040	2	Bearing, R10, 5/8" I.D.	
17	606034	54"	Cable, #16-3, SJOW-A	
18	609101	2	Marettte, Orange, 14-22	
19	609111	1	Ring Tongue Terminal	
20	615131	1	Box Connector, 3/8", Cable	
21	800530	1	Motor, 1/3 HP, 90 VDC	
22	9100188A	1	Shaft Encoder Assembly, 6000 ppr	Page A-22
23	9101563	1	Encoder Mount	
24	9101672	3	Screw, BHCS, M3 x 6	
25	9101812	1	Main Drive Shaft	

Figure A-11: Tabber Motor Assembly (530707A)

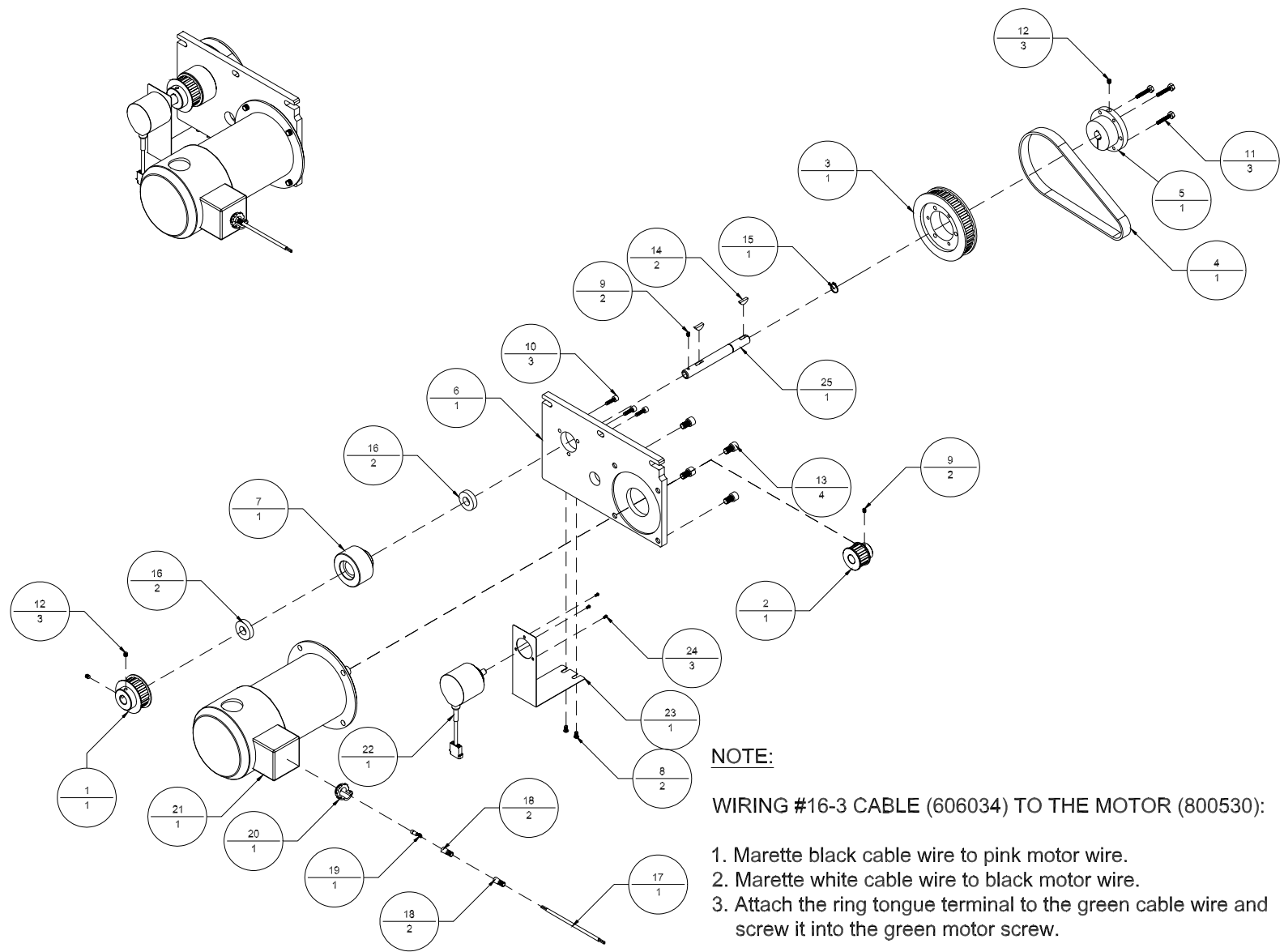


Table A-12: *Jam Switch Assembly, Tabber (603520A)*

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-12: *Jam Switch Assembly, Tabber (603520A)*

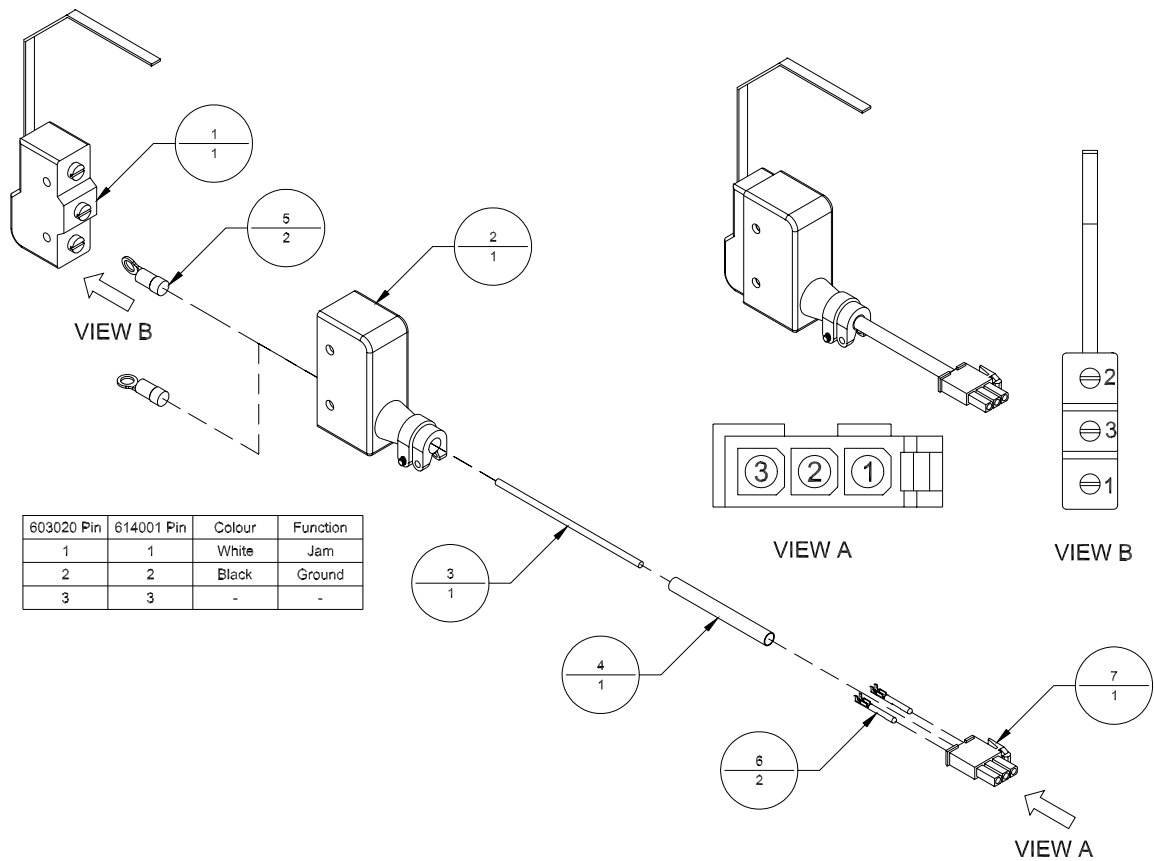


Table A-13: *Upstream Remote Cable, BK730 (606016A)*

Item	Part Number	Quantity	Description	Reference
1	606016	100"	Cable, #22-15, Unshielded	
2	609000	0.75"	Shrink Wrap, 3/16" I.D.	
3	614108	10	Female Contact, Socket	
4	614135	1	Receptacle, 23-37, Square Flanged	
5	9101647	1	Keying Plug, Series 1	

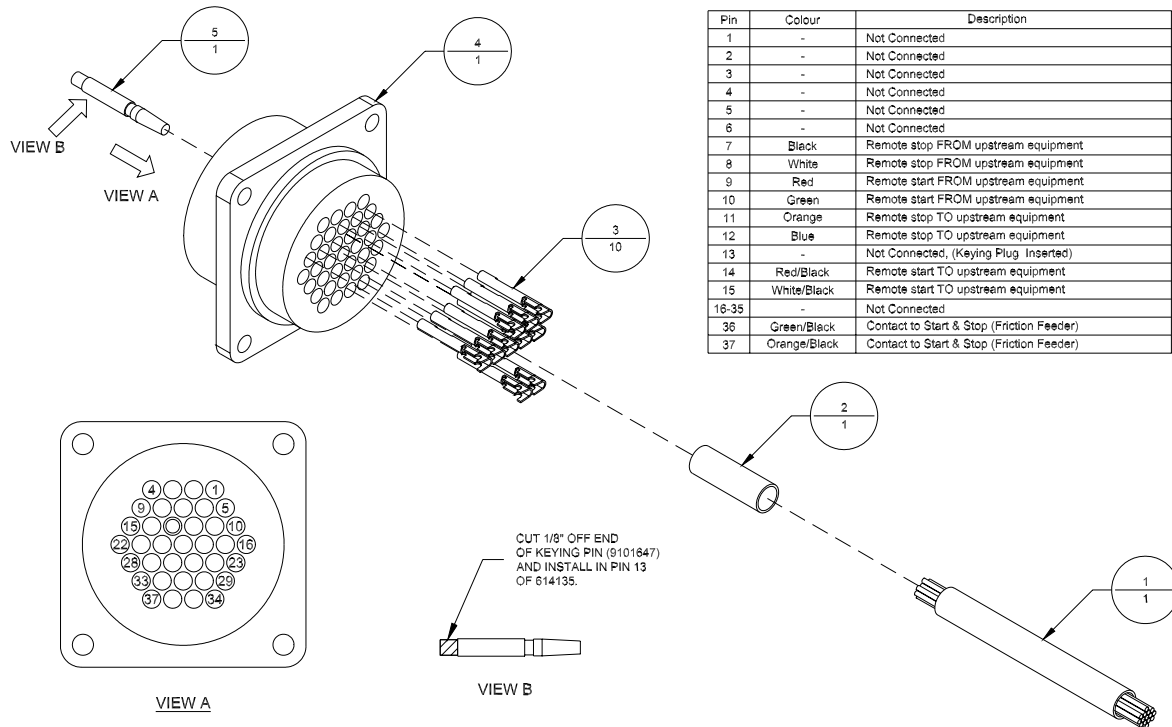
Figure A-13: *Upstream Remote Cable, BK730 (606016A)*

Table A-14: *Terminal Block Assembly (610001A)*

Item	Part Number	Quantity	Description	Reference
1	606020	2	Wire, #18, Black, Hookup (5" Long)	
2	606029	3	Wire, #18, White, Hookup (5" Long)	
3	606029	1	Wire, #18, White, Hookup (8" Long)	
4	610001	1	Contactor, 3 Pole, 9A, 120V	
5	610100	4	Relay, 120 VAC	
6	615002	4	Terminal Block, M4/6, Grey, 6mm	
7	615003	3	Terminal Block, M10/10, Grey, 10mm, 7.5A	
8	615004	4	Relay Base	
9	615016	1	End Stop, BAM, 9.1mm	
10	615017	2	Terminal, EK2.5/35, Ground	
11	615018	1	Ground Block, M10/10P, Green & Yellow	
12	615021	1	T-Rail, DIN (13" Long)	
13	615023	1	End Section, FEM13U	
14	615024	1	Fuse Holder, MU10/13.SF.1, 10mm, 16A	
15	615027	1	Marker Card Protection, Label EP8	
16	615028	2	Marker Card Screw	
17	640300	5	Metal Oxide Varistor, 120 VAC	
18	646002	1	Fuse, 5 x 20mm, 10A	

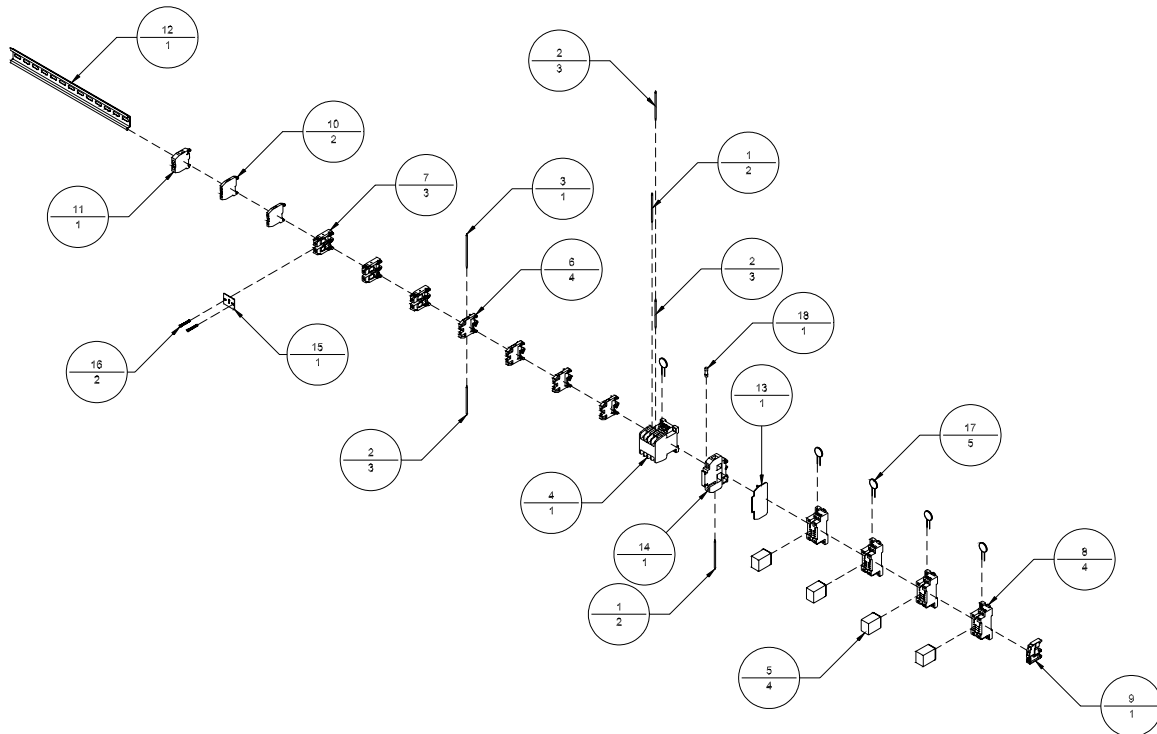
Figure A-14: *Terminal Block Assembly (610001A)*

Table A-15: Tabber Base Control Panel Assembly (700540A)

Item	Part Number	Quantity	Description	Reference
1	600011	1	Potentiometer, w/Dart 600005	
2	603118	1	Circuit Breaker Switch, 10 Amp, 1 Pole	
3	603120	1	Switch, Green Push Button	
4	603121	1	Switch, Red Mushroom Push Button	
5	603122	1	Switch, 2 Position Rotary Knob	
6	603125	3	Switch Locking Collar	
7	603126	3	Block, N.O. Contact	
8	603127	3	Block, N.C. Contact	
9	603300	1	Circuit Breaker Switch, 5 Amp, 1 Pole	
10	606000	4	Wire, #16, Black, Hookup (12" Long)	
11	606009	2	Wire, #16, White, Hookup (12" Long)	
12	606016	1	Cable, #22-15, Shielded (40" Long)	
13	609004	3	Shrink Wrap, 1/8" (0.5" Long)	
14	609110	6	Connector, Push-on, Blue	
15	613002	1	Knob, 36mm Skirted	
16	615100	2	Adhesive Backed Tie Mount	
17	615140	2	Lashing Tie	
18	700540	1	Tabber Base Control Panel	

Figure A-15: *Tabber Base Control Panel Assembly (700540A)*

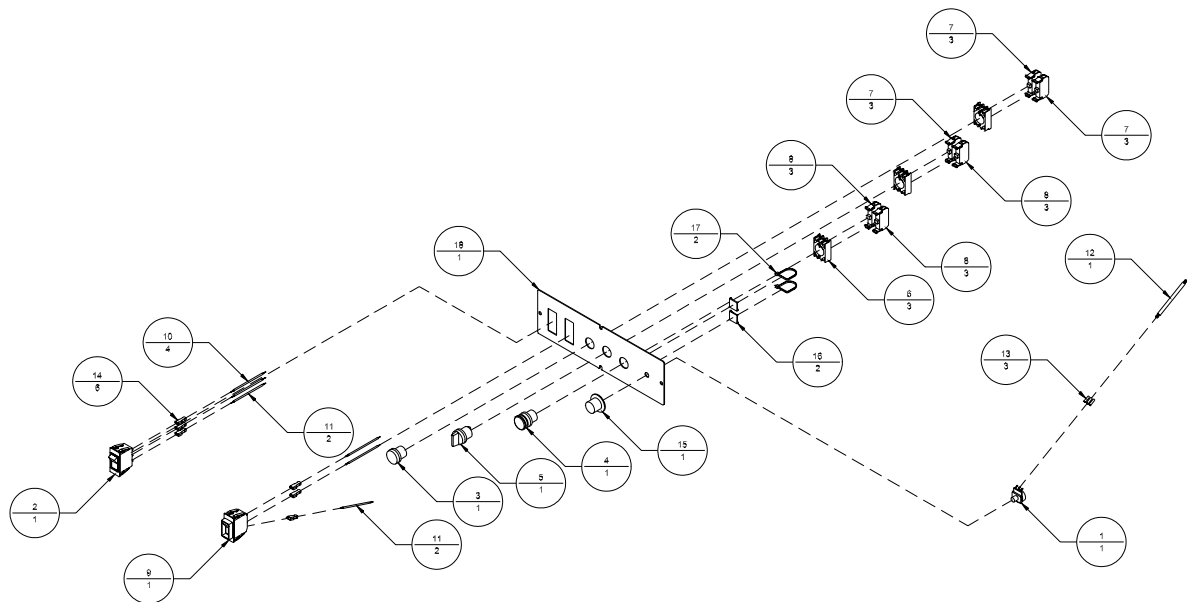


Table A-16: *Front Panel Assembly (706540A)*

Item	Part Number	Quantity	Description	Reference
1	402520	2	Screw, BHCS, 6-32 UNC x 3/8"	
2	404520	11	Screw, BHCS, 10-32 UNF x 3/8"	
3	420006	2	Nut, 6-32 UNC	
4	600005	1	DC Controller, 90 VDC	
5	606000	15"	Wire, #16, Black, Hook-up	
6	606037	15"	Wire, #22, Black, Hook-up	
7	610001A	1	Tabber Base Terminal Block Assembly	Page A-19
8	615100	3	Adhesive Backed Tie Mount	
9	615131	4	Box Connector, 3/8"	
10	615140	3	Lashing Tie	
11	615210	17"	Wiring Duct Cover, 1"	
12	615220	17"	Wiring Duct, 1" x 1"	
13	640300	1	Metal Oxide Varistor, 120 VAC	
14	640301	1	Diode, 1N4004	
15	700321	1	Dart Control Cover	
16	706540	1	Front Panel	
17	803020	1	Electrical Warning Label	

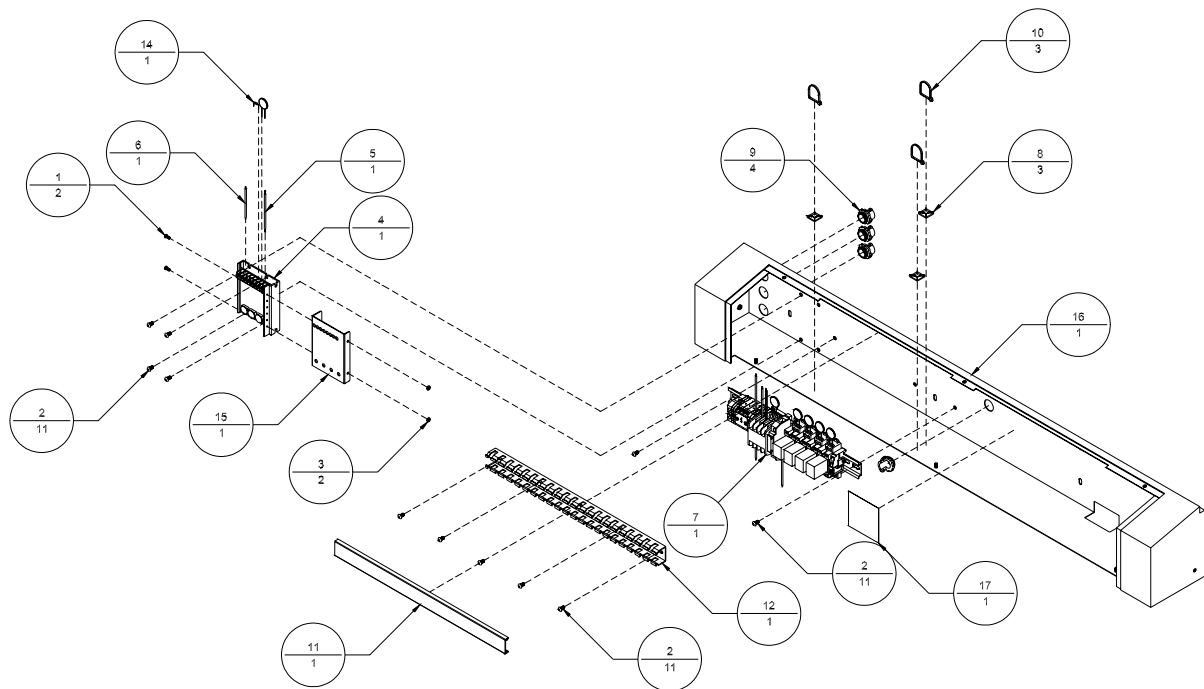
Figure A-16: *Front Panel Assembly (706540A)*

Table A-17: *Shaft Encoder Assembly (9100188A)*

Item	Part Number	Quantity	Description	Reference
1	609000	0.75"	Shrink Wrap, 3/16" I.D.	
2	614008	4	Male Contact, Pin	
3	614009	1	Plug, Pin Housing	
4	9100188	1	Shaft Encoder	

Figure A-17: *Shaft Encoder Assembly (9100188A)*

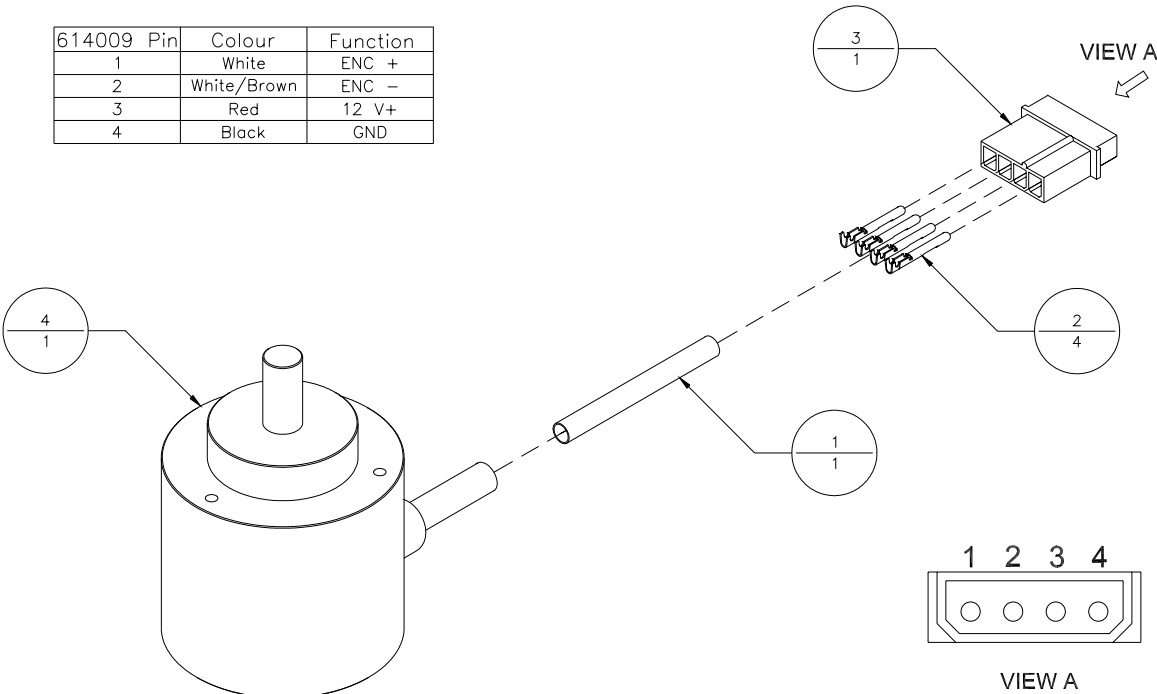


Table A-18: *Front Mounting Rail Assembly (9101077A)*

Item	Part Number	Quantity	Description	Reference
1	404030	12	Screw, FHCS, 10-32 UNF x 1/2"	
2	404230	4	Screw, SHCS, 10-32 UNF x 1/2"	
3	405520	6	Screw, BHCS, 1/4-20 UNC x 3/8"	
4	406530	2	Screw, BHCS, 5/16-18 UNC x 1/2"	
5	9101059	2	Tabber Rail Support Block	
6	9101064	1	Tabber Head Mounting Rail	
7	9101077	1	Front Rail Mounting Block	
8	9101126	1	Double T-nut	
9	9101247	1	Bearing Profile, Double Flange	
10	9101248	6	Bearing Pad, Tabber Head Mount	
11	9101620	1	Mounting Bracket, Slide Rail	
12	9101621	1	Mounting Block, Right Slide Rail	
13	9101622	1	Mounting Bracket, Aligning Rail	
14	9101624	1	End Caps (15 Series)	

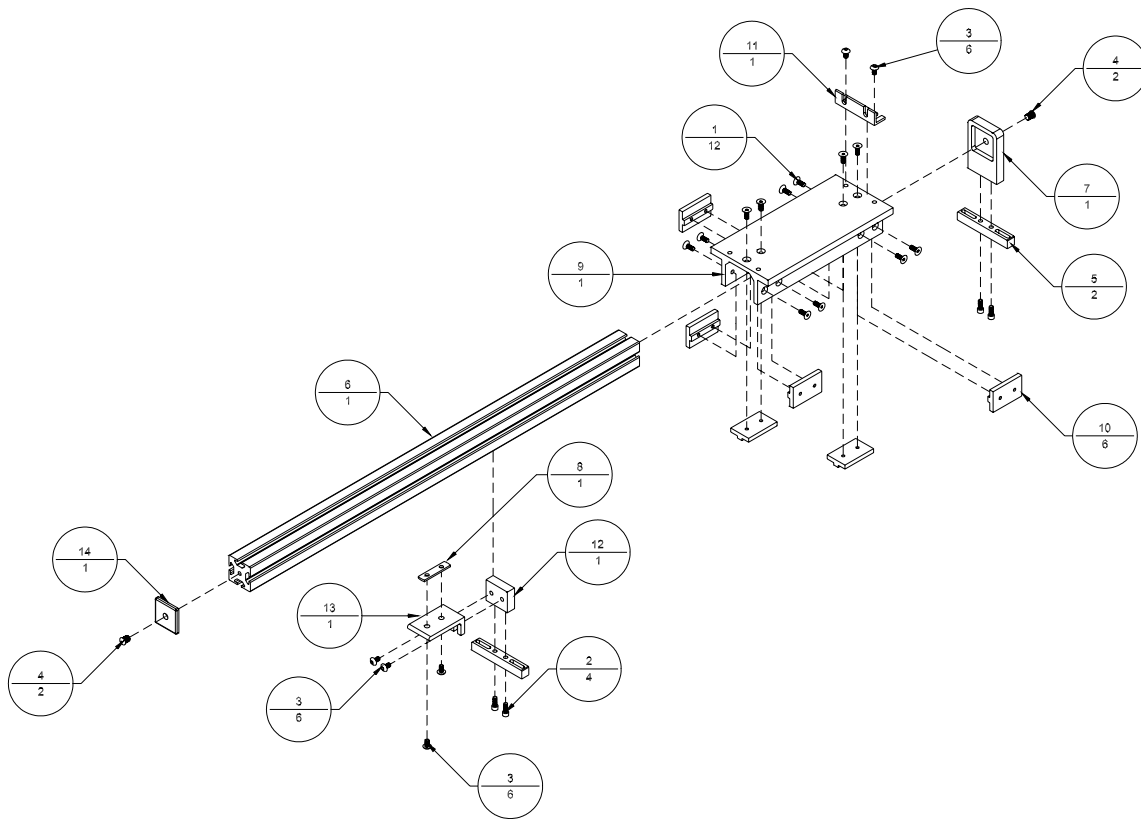
Figure A-18: *Front Mounting Rail Assembly (9101077A)*

Table A-19: *Speed Control Cable (9101550A)*

Item	Part Number	Quantity	Description	Reference
1	600007	1	Potentiometer, 5K Ohm, ¼ Watt	
2	606013	60"	Cable, #22-3, Shielded	
3	609000	1.5"	Shrink Wrap, 3/16" I.D.	

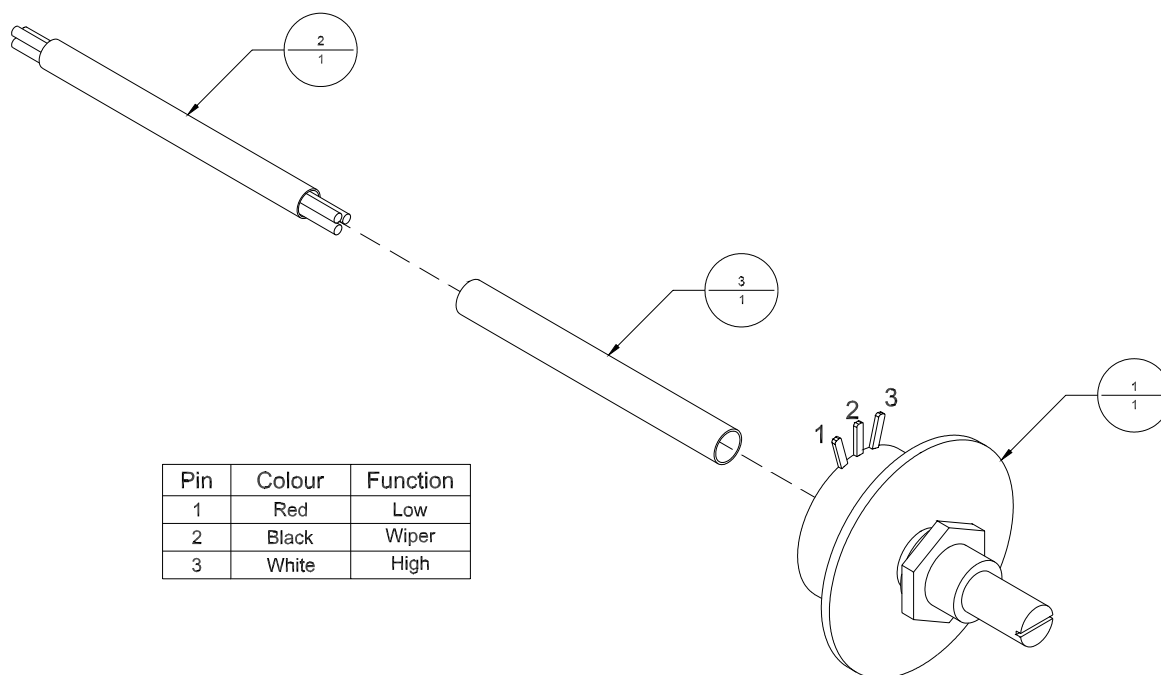
Figure A-19: *Speed Control Cable (9101550A)*

Table A-20: *Sensor, Magnetic, NO/NC Cable (9101557A)*

Item	Part Number	Quantity	Description	Reference
1	609000	10"	Shrink Wrap, 3/16" I.D.	
2	614000	3	Male Contact Pin	
3	614001	1	Plug, Cap Pin Housing	
4	9101557	1	Sensor, Proximity, Magnetic NO/NC	

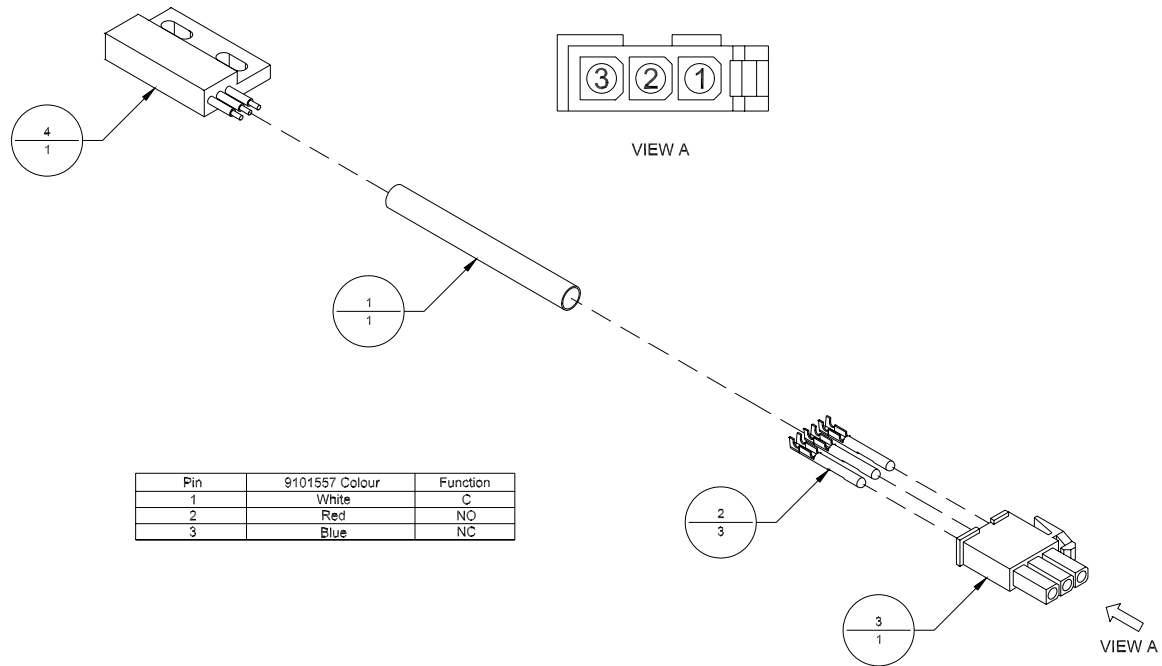
Figure A-20: *Sensor, Magnetic, NO/NC Cable (9101557A)*

Table A-21: *Output Cable Assembly, BK730 (9101656A)*

Item	Part Number	Quantity	Description	Reference																				
1	606018	22"	Cable, #22-10, Shielded																					
2	614107	9	Male Contact, Pin, Yellow																					
3	614108	9	Female Contact, Socket, Yellow	<tr> <td>4</td><td>614125</td><td>1</td><td>Plug, CPC, 13-9</td><td></td></tr> <tr> <td>5</td><td>614126</td><td>1</td><td>Cable Clamp, Shell 13</td><td></td></tr> <tr> <td>6</td><td>614140</td><td>1</td><td>Cable Clamp, Shell 17</td><td></td></tr> <tr> <td>7</td><td>9101172</td><td>1</td><td>Plug, Reverse, 17-14</td><td></td></tr>	4	614125	1	Plug, CPC, 13-9		5	614126	1	Cable Clamp, Shell 13		6	614140	1	Cable Clamp, Shell 17		7	9101172	1	Plug, Reverse, 17-14	
4	614125	1	Plug, CPC, 13-9																					
5	614126	1	Cable Clamp, Shell 13																					
6	614140	1	Cable Clamp, Shell 17																					
7	9101172	1	Plug, Reverse, 17-14																					

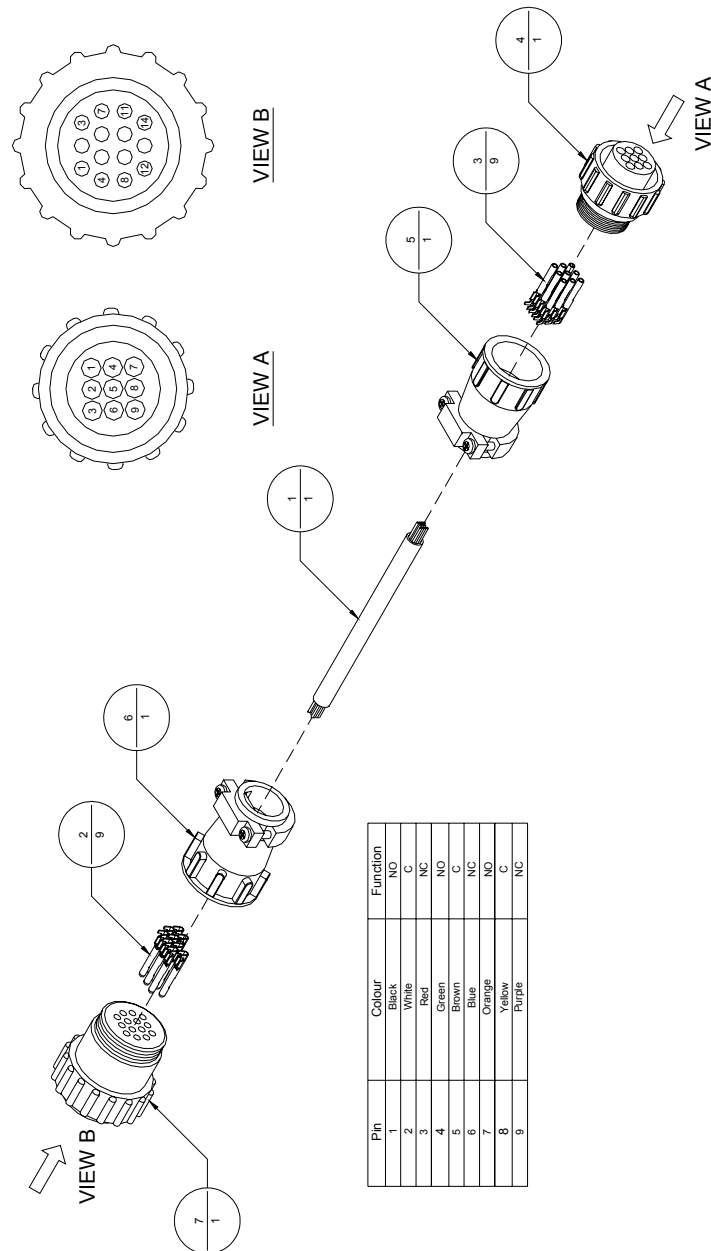
Figure A-21: *Output Cable Assembly, BK730 (9101656A)*

Table A-22: *Power Cable Assembly, BK730 (9101657A)*

Item	Part Number	Quantity	Description	Reference
1	606034	22"	Cable, #16-3, SJOW-A	
2	614104	1	Plug Connector 17-3, Standard	
3	614109	3	Pin, Power Contact	
4	614110	3	Socket, Power Contact	
5	614140	2	Cable Clamp, Shell 17	
6	614207	1	Plug (Reverse Sex), 17-3	

Figure A-22: *Power Cable Assembly, BK730 (9101657A)*

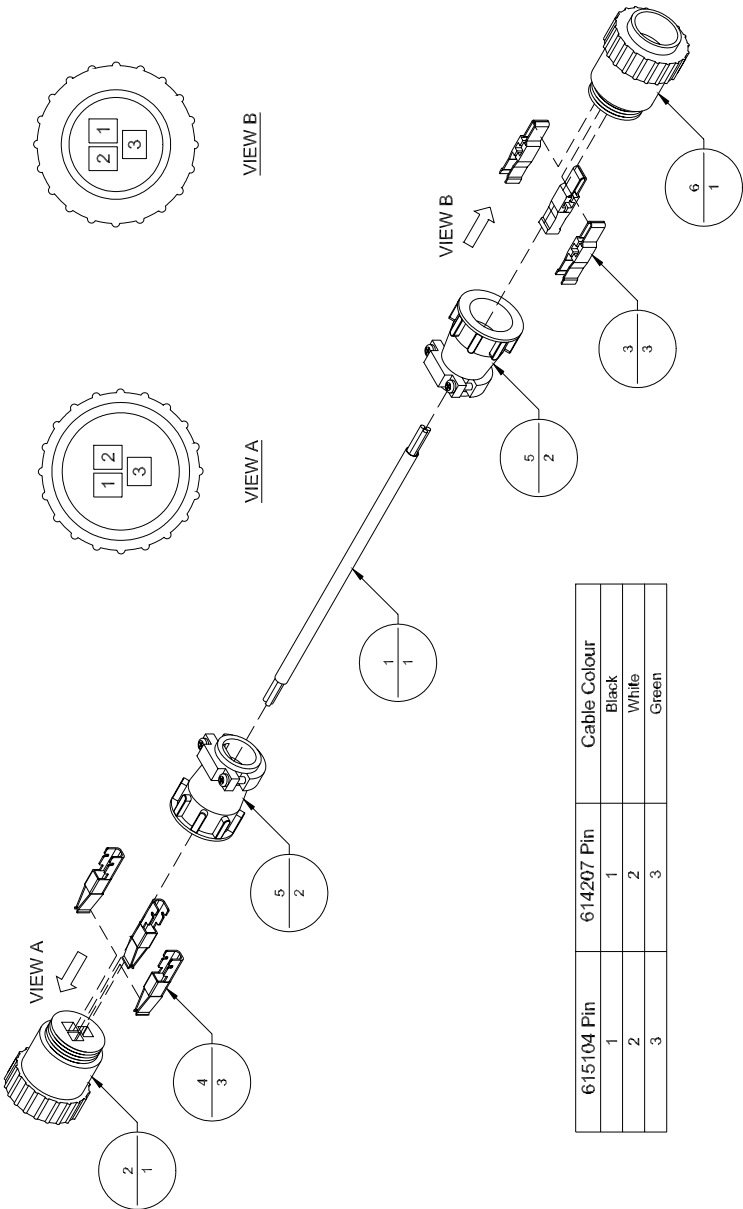


Table A-23: Encoder Cable Assembly, BK730 (9101658A)

Item	Part Number	Quantity	Description	Reference
1	606014	22"	Cable, #22-4 Shielded	
2	9100725	1	Plug, Preh Locking, 4 Pin	
3	9101280	1	Plug, Neutrik, Female, 4 Pin	

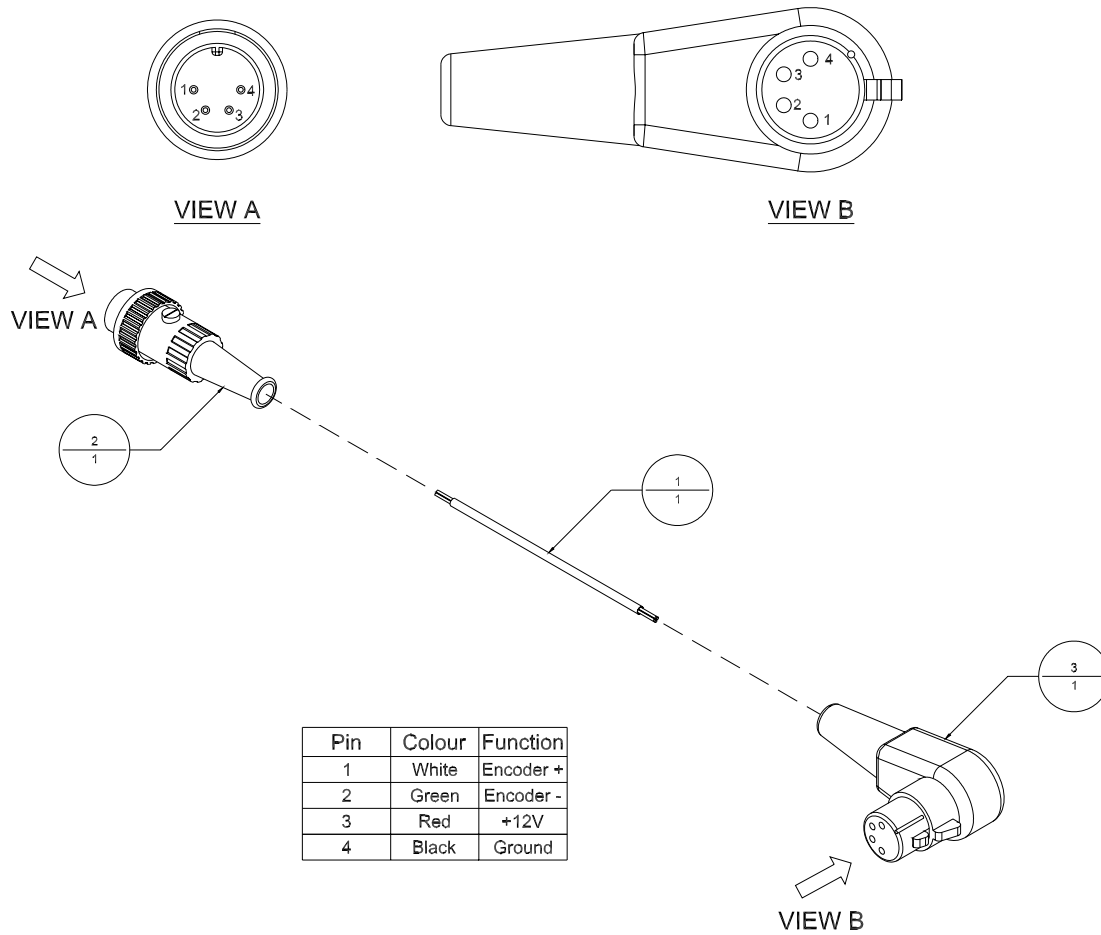
Figure A-23: Encoder Cable Assembly, BK730 (9101658A)

Table A-24: *Photo F/B Cable Assembly, BK730 (9101659A)*

Item	Part Number	Quantity	Description	Reference
1	606018	22"	Cable, #22-10 Shielded	
2	9101238	1	Plug, Preh, Locking, 8 Pin	
3	9101282	1	Plug, Neutrik, Female, 6 Pin	

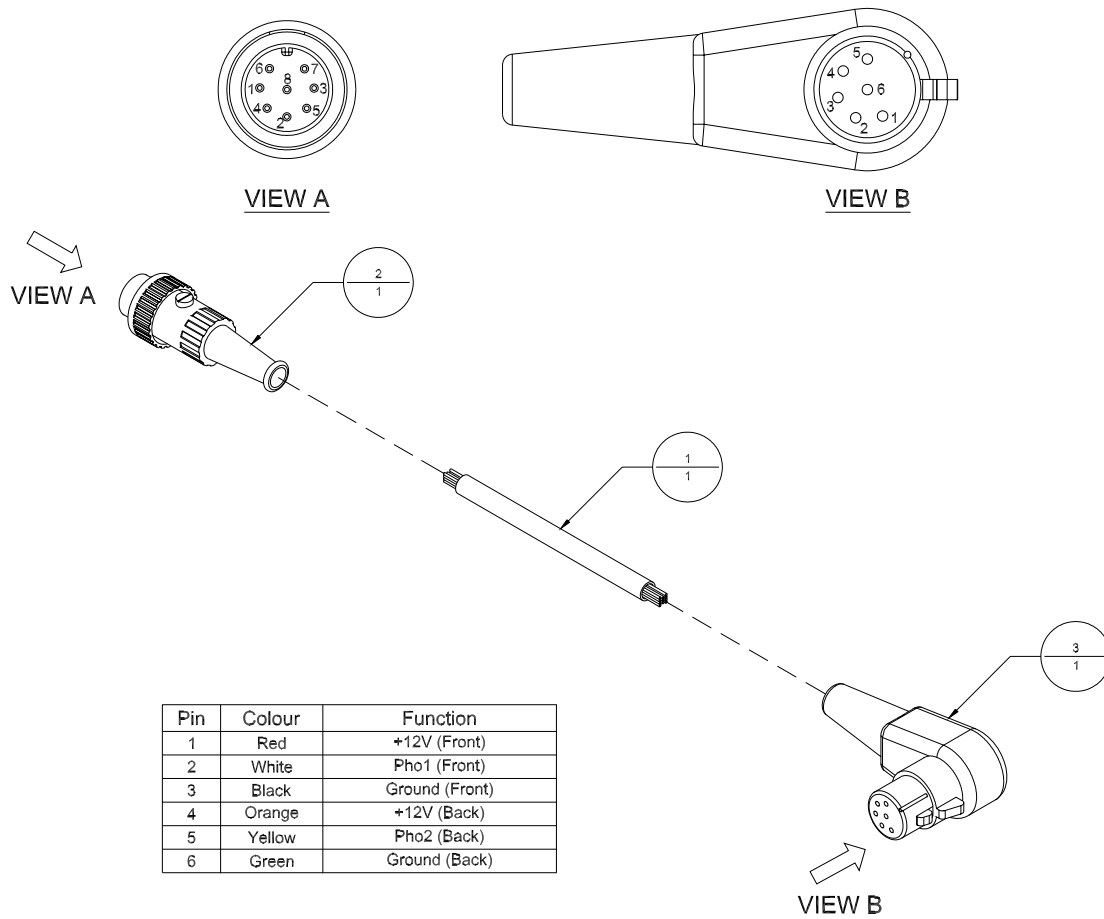
Figure A-24: *Photo F/B Cable Assembly, BK730 (9101659A)*

Table A-25: Jam Cable Assembly (9101660A)

Item	Part Number	Quantity	Description	Reference
1	606013	22"	Cable, #22-3 Shielded	
2	9100724	1	Plug, Preh Locking, 3 Pin	
3	9101549	1	Plug, Neutrik, 3 Pin	

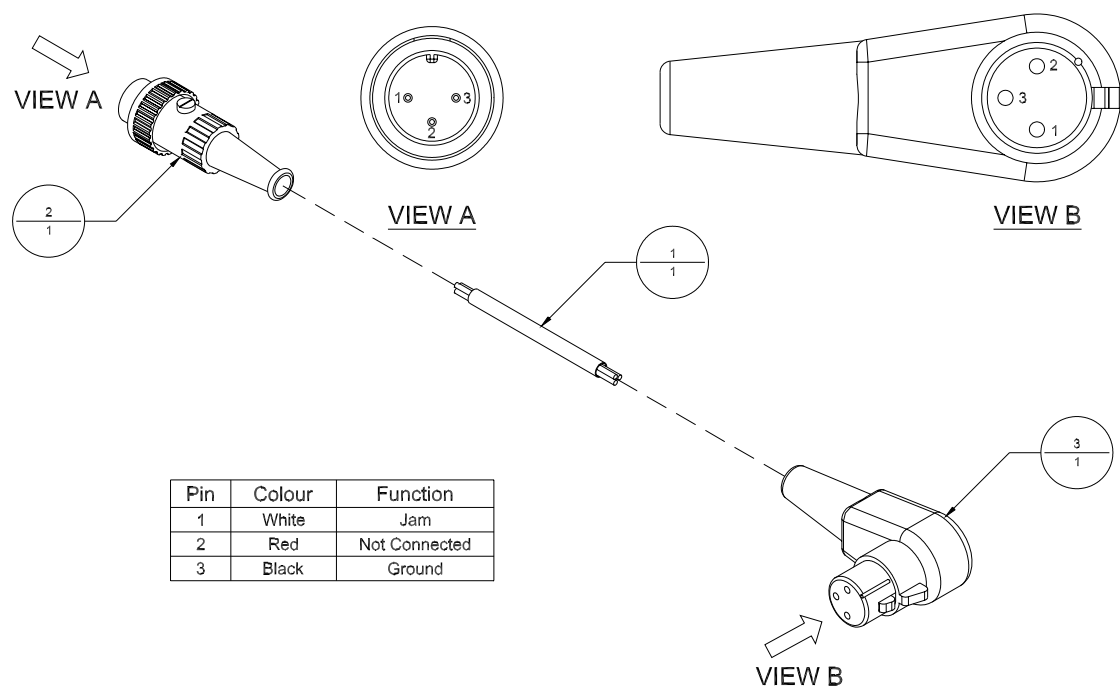
Figure A-25: Jam Cable Assembly (9101660A)

Table A-26: *Base Cabinet Assembly (9101749A)*

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	402320	16	Screw, PHMS, 6-32 UNC x 3/8"	
5	404510	17	Screw, BHCS, 10-32 UNF x 1/4"	
6	405230	4	Screw, SHCS, 1/4-20 UNC x 1/2"	
7	420010SS	3	Nut, 1/4-20 UNC SS	
8	439007	2	Lock Washer, #145 Ex Tooth	
9	440510	4	Rubber Washer, 1/4" I.D.	
10	606016A	1	Upstream Remote Cable (BK730)	Page A-18
11	606360	1	Wire #10, Green / Yellow Hookup (40" Long)	
12	606531A	1	Conveyor Extension Cable	
13	609115	1	Ring Tongue Terminal, 1/4"	
14	614109	7	Pin, Power Contact	
15	614127	1	Receptacle, 23-7 AMP	
16	615102	9	Tie Mount	
17	615131	5	Box Connector, 3/8", Cable	
18	615141	9	Lashing Tie	
19	615153	4	Box Cover, 4" x 4"	
20	713530A	1	Base Cabinet Shell Assembly	
21	717530	4	Door Catch	
22	9101136A	1	Toggle Switch Cable (BK730)	
23	9101550A	1	Speed Control Cable	Page A-24
24	9101750	1	Label, BK730 Switch	
25	9102054A	1	Downstream Remote Cable (BK730)	Page A-33

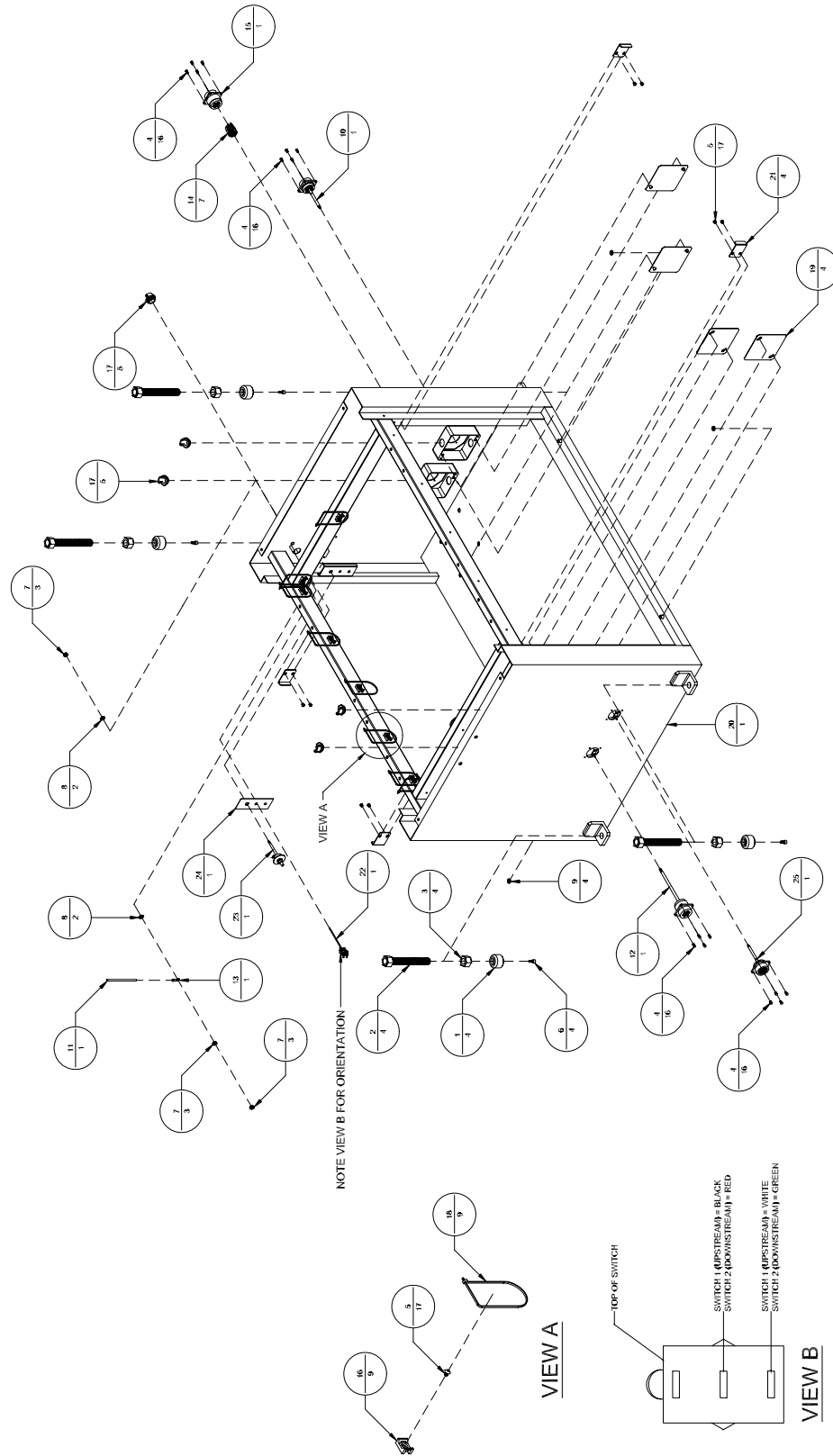
Figure A-26: Base Cabinet Assembly (9101749A)

Table A-27: Downstream Remote Cable, BK730 (9102054A)

Item	Part Number	Quantity	Description	Reference
1	606016	100"	Cable, #22-15, Unshielded	
2	609000	0.75"	Shrink Wrap, 3/16" I.D.	
3	9100785	8	Socket Contact, Size 20 DF	
4	9102054	1	Receptacle, 23-57, Square Flanged	

Figure A-27: Downstream Remote Cable, BK730 (9102054A)

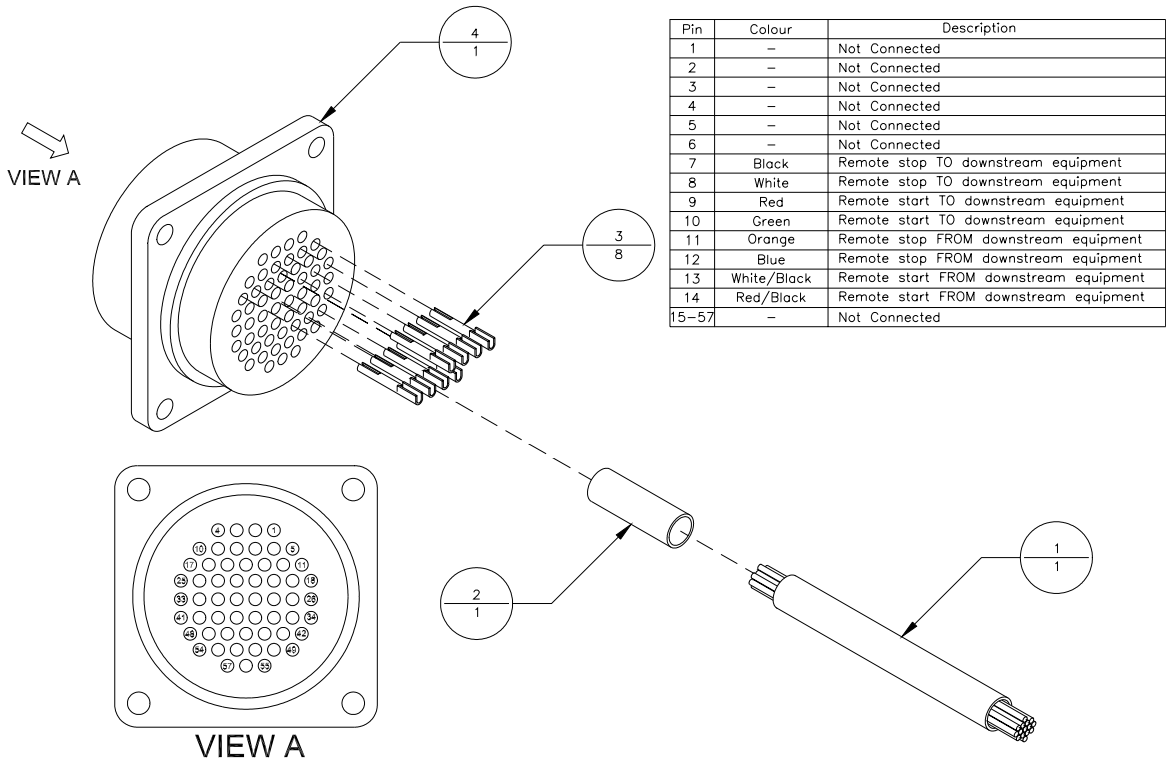


Table A-28: Tabber Head Assembly (BK731A)

Item	Part Number	Quantity	Description	Reference
1	401510	5	Screw, BHCS, 4-40 UNC x 1/4"	
2	402250	2	Screw, SHCS, 6-32 UNC x 3/4"	
3	402520	4	Screw, BHCS, 6-32 UNC x 3/8"	
4	403530	4	Screw, BHCS, 8-32 UNC x 1/2"	
5	404070	1	Screw, FHCS, 10-32 UNF x 1"	
6	404250	4	Screw, SHCS, 10-32 UNF x 3/4"	
7	404510	35	Screw, BHCS, 10-32 UNF x 1/4"	
8	404530	2	Screw, BHCS, 10-32 UNF x 1/2"	
9	404805	3	Screw, SHSS, 10-32 UNF x 1/8"	
10	405240	2	Screw, SHCS, 1/4-20 UNC x 3/4"	
11	405270	4	Screw, SHCS, 1/4-20 UNC x 1"	
12	405510	2	Screw, BHCS, 1/4-20 UNC x 1/4"	
13	405530	2	Screw, BHCS, 1/4-20 UNC x 1/2"	
14	405540	6	Screw, BHCS, 1/4-20 UNC x 5/8"	
15	406585	4	Screw, BHCS, 5/16-18 UNC x 2"	
16	416160	2	Shoulder Bolt, 3/8" x 7/8" (5/16-18 UNC)	
17	416185	5	Shoulder Bolt, 3/8" x 2" (5/16-18 UNC)	
18	420006	2	Nut, 6-32 UNC	
19	420008	2	Nut, 10-32 UNF	
20	433000	2	Keystock, 3/16 x 3/16 (3/4" Long)	
21	455030	1	Ball Plunger, 1/4-20 UNC X 1/2" Long	
22	500055	1	Bearing UBR204-12S, 3/4" I.D.	
23	600600	1	Power Supply, 12 VDC	
24	606020	1	Wire, #18, Black Hookup (15" Long)	
25	606020	4	Wire, #18, Black Hookup (18" Long)	
26	606022	1	Wire, #18, Red Hookup (18" Long)	
27	606025	1	Wire, #18, Orange Hookup (18" Long)	
28	606026	1	Wire, #18, Blue Hookup (10" Long)	
29	606029	1	Wire, #18, White Hookup (10" Long)	
30	606029	1	Wire, #18, White Hookup (15" Long)	
31	606029	2	Wire, #18, White Hookup (18" Long)	
32	609000	1	Shrink Wrap, 3/16" I.D. (10" Long)	
33	609110	1	Connector, Push-on, Blue	
34	609113	1	Connector, Push-on, Yellow	
35	609117	3	Connector, Push-on, Red	
36	609118	3	Connector, Tab, Red	
37	615534	1	Sensor, Proximity, Magnetic, NO	
38	9101051A	1	Unwind Assembly	Page A-38
39	9101052A	1	Rewind Base Assembly	Page A-39
40	9101053	1	Tabber Head Base Plate	
41	9101054	1	Tab Storage Bin	
42	9101055	1	Tab Drive Shaft	
43	9101056	1	Abrasive Roller	
44	9101058	1	Stepper Motor, 2 Phase	
45	9101060A	5	Idler Roller Assembly	Page A-41
46	9101061	1	Polyurethane Drive Shaft Roller	
47	9101062	1	Shaft, Unwind Motor	

Item	Part Number	Quantity	Description	Reference
48	9101063	1	Stepper Motor, 5 Phase	
49	9101066	2	Collar, 1/4" Thick	
50	9101069A	2	Lower Pivot Arm Assembly	Page A-42
51	9101081A	1	Peel Point Base Assembly	Page A-43
52	9101085	1	Bin Sensor	
53	9101107	2	Mounting Block, Stepper Motor	
54	9101111A	1	Front Cover Assembly	Page A-44
55	9101112A	1	Brush Pivot Assembly	Page A-45
56	9101113A	1	Stepper Motor Driver Assembly	Page A-46
57	9101121A	1	Keypad Mounting Rail Assembly	Page A-48
58	9101131	1	Support Post	
59	9101134A	1	Tabber Connector Plate Assembly	
60	9101148	1	Front Cover Guard Plate	
61	9101233A	1	Oscillating Idler Assembly	Page A-51
62	9101235	2	Washer, 25/64" I.D., Bow Spring Tension	
63	9101244A	1	Tabber Backcover Assembly	Page A-52
64	9101256	1	Tabber Head Removable Back Cover	
65	9101274	1	Power Supply, Linear, 24V, 2A	
66	9101552	1	Tab Threading Label	
67	9101577	1	Top Guard Plate	
68	9101619	2	Magnetic Latch	

Figure A-29: Tabber Head Assembly Page 2 of 2 (BK731A)

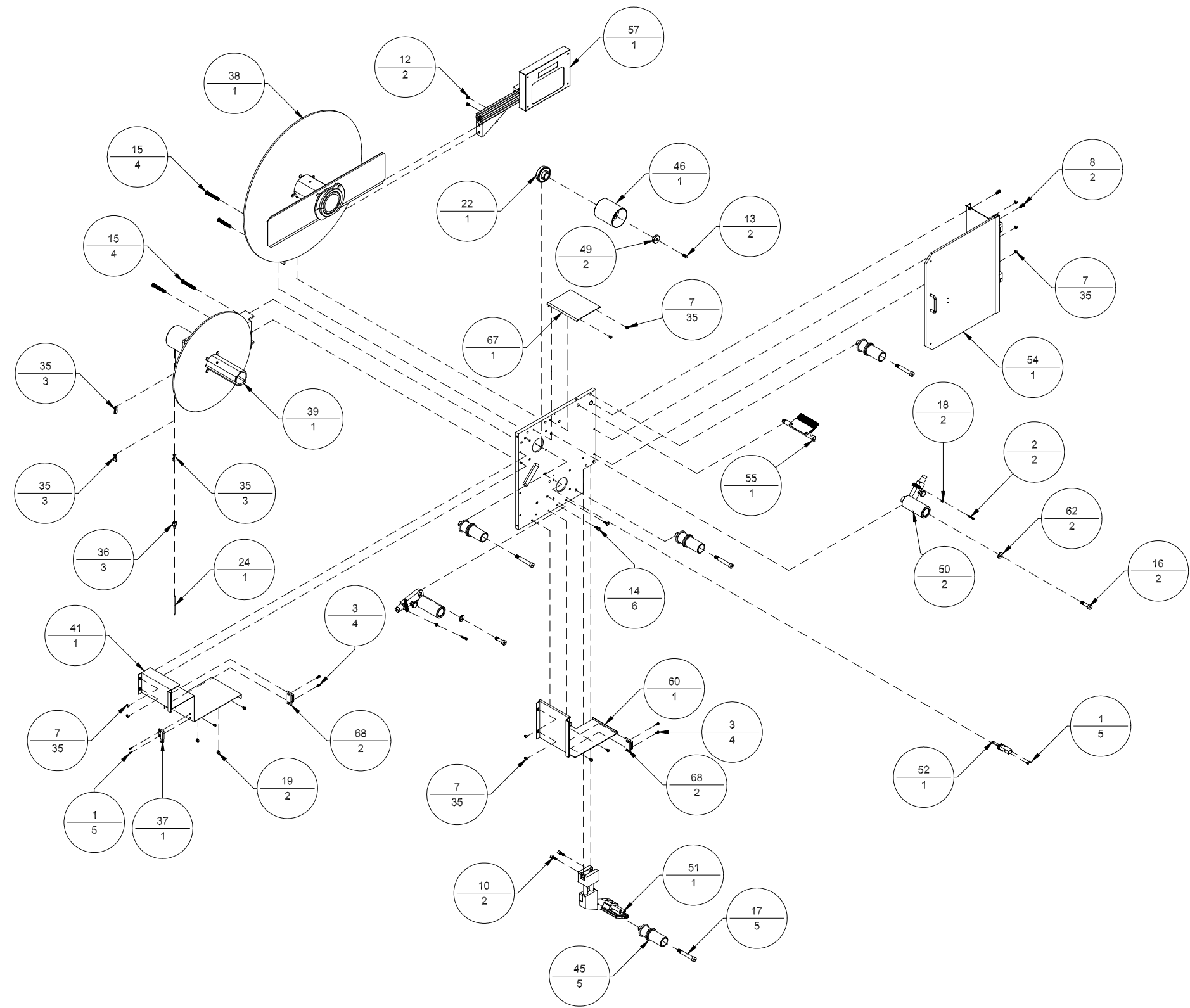


Table A-29: *Cycle Proximity Switch Assembly (630004A)*

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

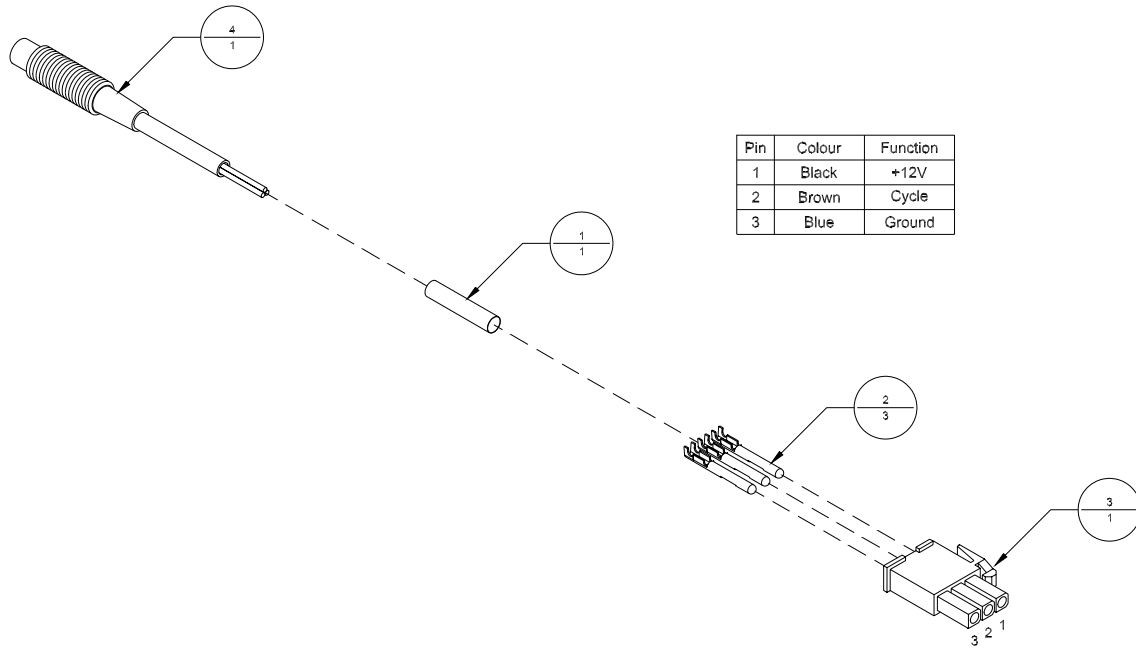
Figure A-30: *Cycle Proximity Switch Assembly (630004A)*

Table A-30: *Unwind Assembly (9101051A)*

Item	Part Number	Quantity	Description	Reference
1	404510	8	Screw, BHCS, 10-32 UNF x 1/4"	
2	405830	2	Screw, SHSS, 1/4-20 UNC x 1/2"	
3	407285	1	Screw, SHCS, 3/8-16 UNC x 2"	
4	438503	1	Rosette Knob, Black Plastic, 3/8" Screw	
5	440008	4	Washer, #10 I.D.	
6	440020	2	Washer, 3/8" I.D.	
7	500045	2	Bearing UBR202-10S, 5/8" I.D.	
8	9101051	1	Unwind Mounting Extrusion	
9	9101088	2	Mounting Bracket, Brake Belt	
10	9101103	1	Extrusion Cap	
11	9101143	1	Shaft, Unwind Motor	
12	9101145A	1	Unwind Disc Assembly	Page A-50
13	9101146	1	Unwind Braking Pad	
14	9101147	1	Unwind Brake Belt	
15	9101258	1	Oscillating Idler Roller Spring	

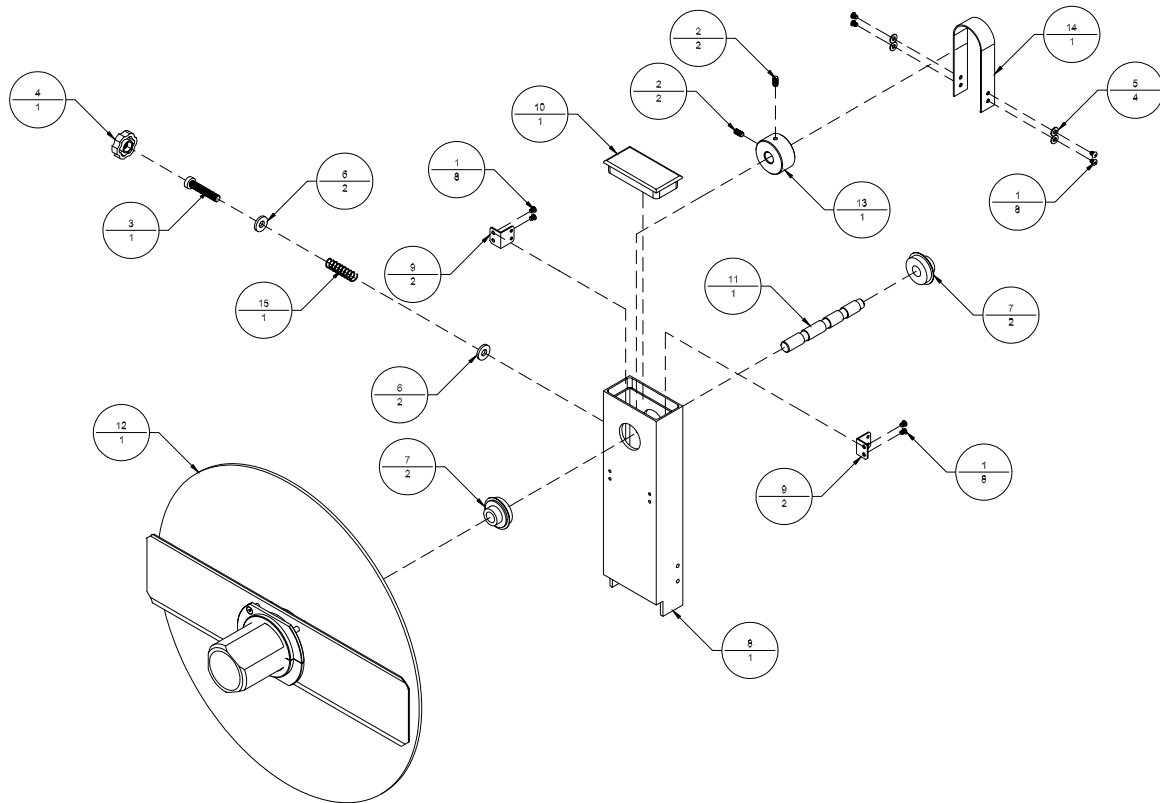
Figure A-31: *Unwind Assembly (9101051A)*

Table A-31: Rewind Assembly (9101052A)

Item	Part Number	Quantity	Description	Reference
1	404282	4	Screw, SHCS, 10-32 UNF x 1 3/4"	
2	404510	2	Screw, BHCS, 10-32 UNF x 1/4"	
3	404807	2	Screw, SHSS, 10-32 UNF x 3/16"	
4	439009	4	Lockwasher, #10	
5	440010	4	Washer, 1/4" I.D.	
6	500045	1	Bearing, UBR202-10S, 5/8"	
7	609000	1	Shrink Wrap, 3/16" I.D. (10" Long)	
8	630004A	1	Take-Up Sensor (Cycle Proximity Assembly)	Page A-37
9	9101052	1	Rewind Mounting Extrusion	
10	9101065	1	Motor, Torque, 900 RPM	
11	9101078	1	Tab Retaining Rod	
12	9101103	1	Extrusion Cap	
13	9101130A	1	Rewind Disc Assembly	Page A-49
14	9101140	1	Rewind Torque Motor Gear Head	
15	9101141	1	Cam, 90 Degree	
16	9101142	1	Shaft, Winding Motor	
17	9101270	1	Strain Relief Bushing, SR 5M-3	
18	9101569	1	Mounting Bracket, Proximity Sensor	

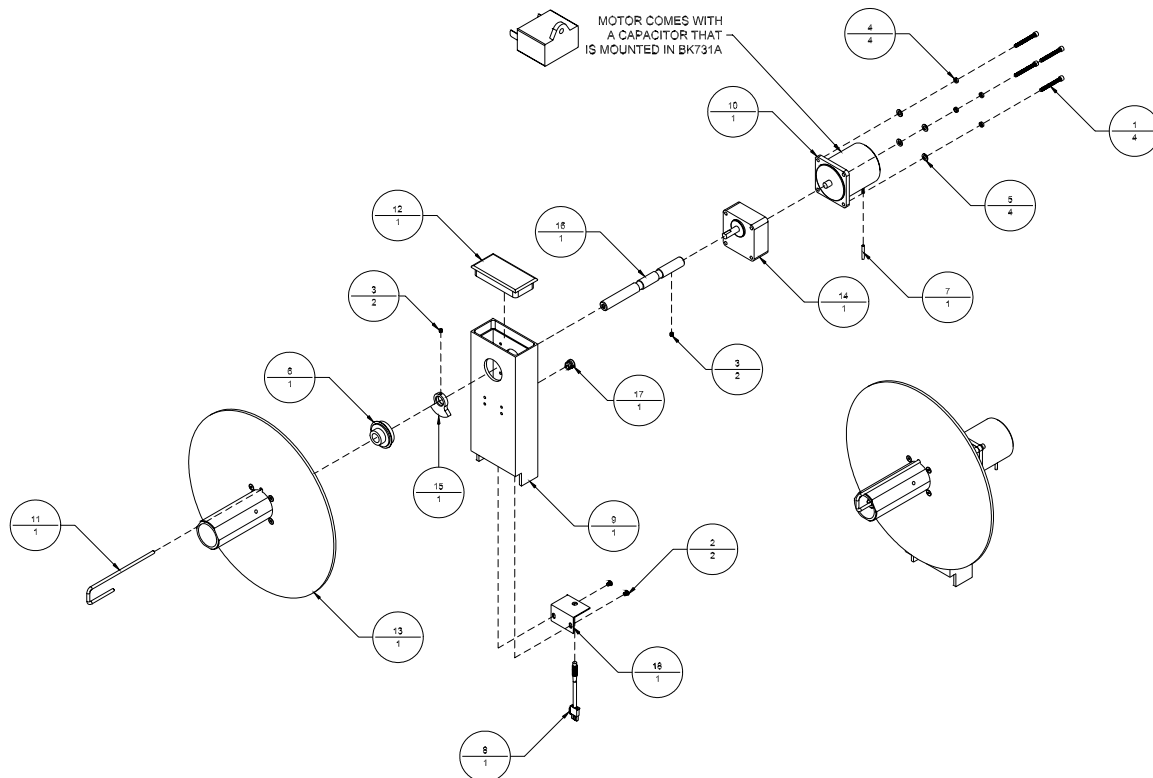
Figure A-32: Rewind Assembly (9101052A)

Table A-32: *Tabber Keypad Assembly (9101057A)*

Item	Part Number	Quantity	Description	Reference
1	402310	4	Screw, PHMS, 6-32 UNC x 1/4"	
2	615322	2	Female Screwlock, 4-40 UNC	
3	9101079	1	Tabber Keyboard Box	
4	9101080A	1	Tabber Keypad Board Assembly	
5	9101083	1	Cover, Rear Tabber Keypad	
6	9101083A	1	Tabber Keypad Ribbon Cable Assembly	
7	9101119	4	Hex Spacer, 6-32 UNC x 1/2"	

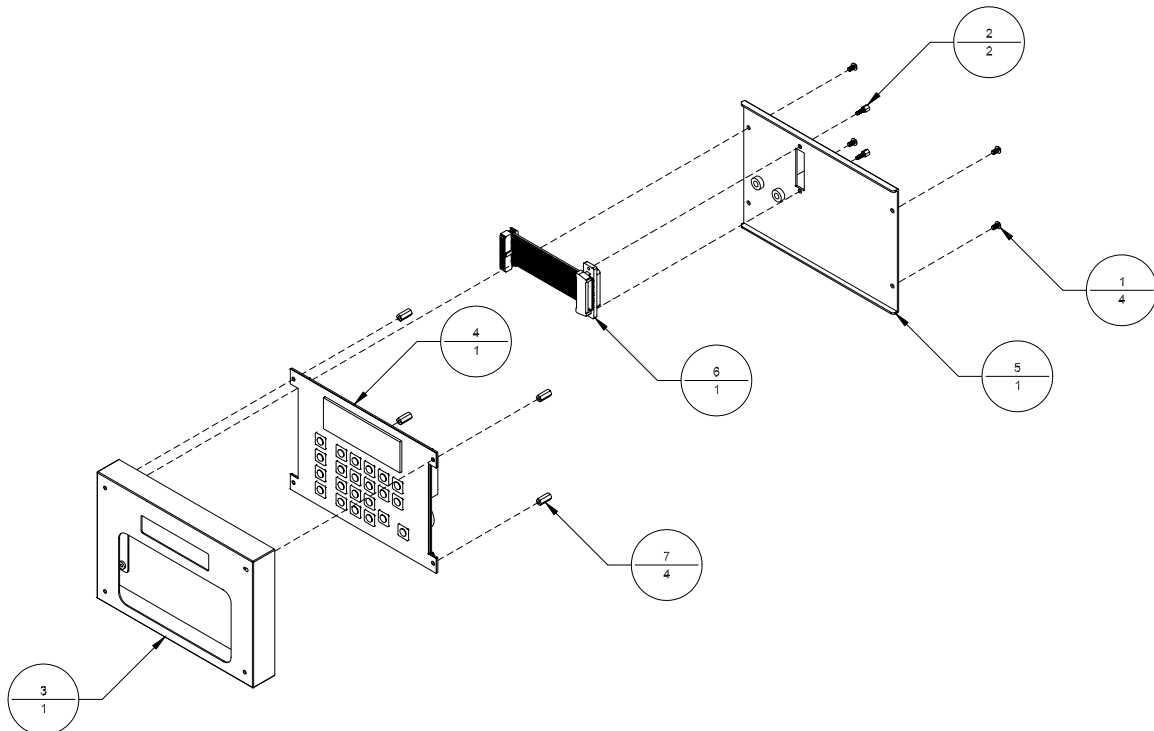
Figure A-33: *Tabber Keypad Assembly (9101057A)*

Table A-33: *Idler Roller Assembly (9101060A)*

Item	Part Number	Quantity	Description	Reference
1	9101060	1	Backer Idler Roller	
2	9101071	1	Tab Backer Guide	
3	9101075	1	O-Ring, 1-1/4 I.D. x 1-1/2 x 1/8"	

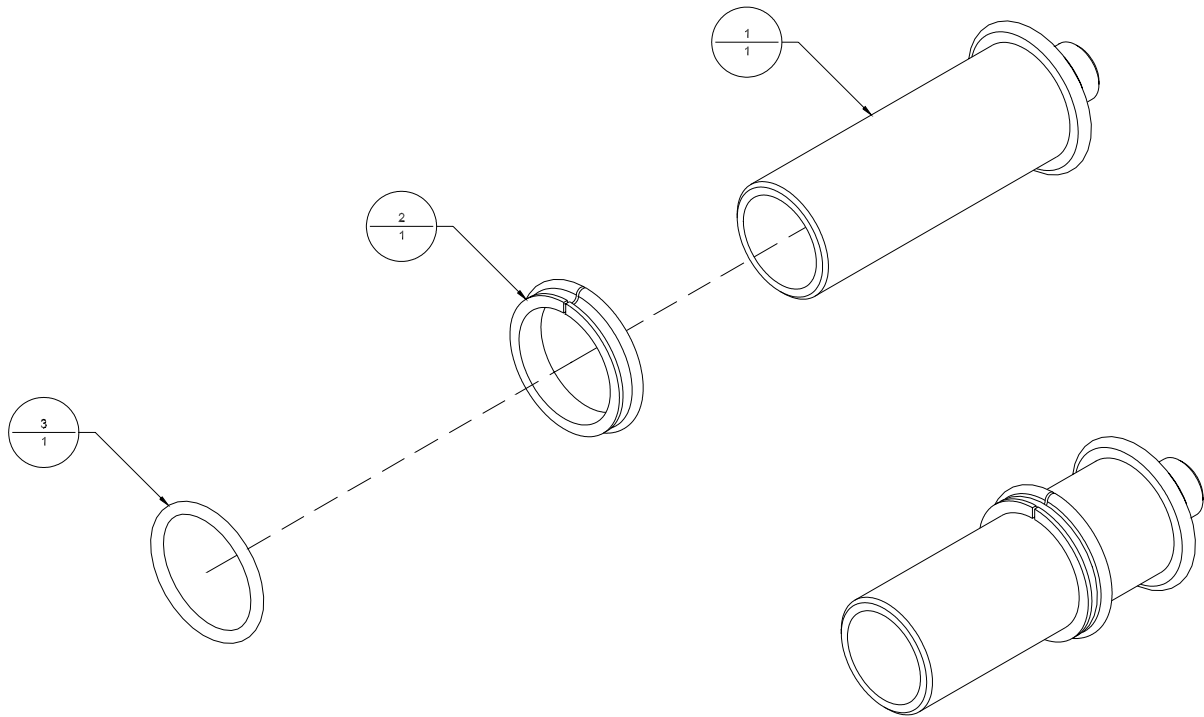
Figure A-34: *Idler Roller Assembly (9101060A)*

Table A-34: *Lower Pivot Arm Assembly (9101069A)*

Item	Part Number	Quantity	Description	Reference
1	416140	1	Shoulder Bolt, 3/8" X 5/8", 5/16-18 UNC	
2	416185	1	Shoulder Bolt, 3/8" X 2", 5/16-18 UNC	
3	436030	1	Spring Pin, 1/8" Dia X 1/2"	
4	440533	1	Washer, 3/8" I.D. X 0.06"	
5	500020	2	Bearing, R6, 3/8" I.D.	
6	505384	1	Flange Bushing, 3/8 I.D. x 1/2 O.D. x 1/2 LG.	
7	9101069	1	Pressure Roller	
8	9101070	1	Pivot Arm	
9	9101082	1	Quick Release Plunger	
10	9101240	1	Spring, Pivot Arm	
11	9101638	1	Bushing, Nylon, 3/8 "I.D. X 5/8" O.D. X 5/8"	

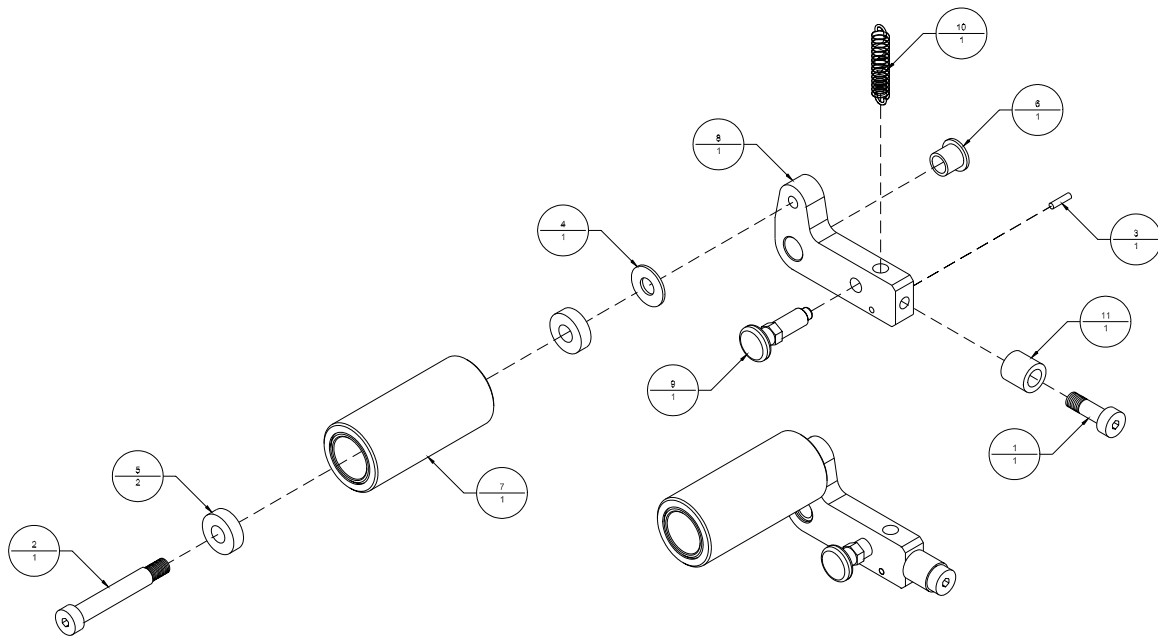
Figure A-35: *Lower Pivot Arm Assembly (9101069A)*

Table A-35: Peel Point Base Assembly (9101081A)

Item	Part Number	Quantity	Description	Reference
1	206010	1	Side Guide Locking Lever	
2	404520	1	Screw, BHCS, 10-32 UNF x 3/8"	
3	405230	1	Screw, SHCS, 1/4-20 UNF X 1/2"	
4	405805	2	Screw, SHSS, 1/4-20 UNC X 1/8"	
5	405830	2	Screw, SHSS, 1/4-20 UNC x 1/2"	
6	438505	1	Tee Knob, Black Plastic, 1/4-20 Screw	
7	440010	1	Washer, 1/4" I.D.	
8	9101081	1	Peel Point Base Plate	
9	9101087	1	Mounting Block, Peel Point Shaft	
10	9101115	2	Dowel Pin, 1/2" DIA x 3"	
11	9101128	2	Dowel Pin, 1/2" DIA x 4"	
12	9101264A	1	Peel Point Assembly	Page A-54
13	9101687	1	Peel Point Lock Plate	
14	9101743	1	Cable Clamp, 3/16 Dia.	

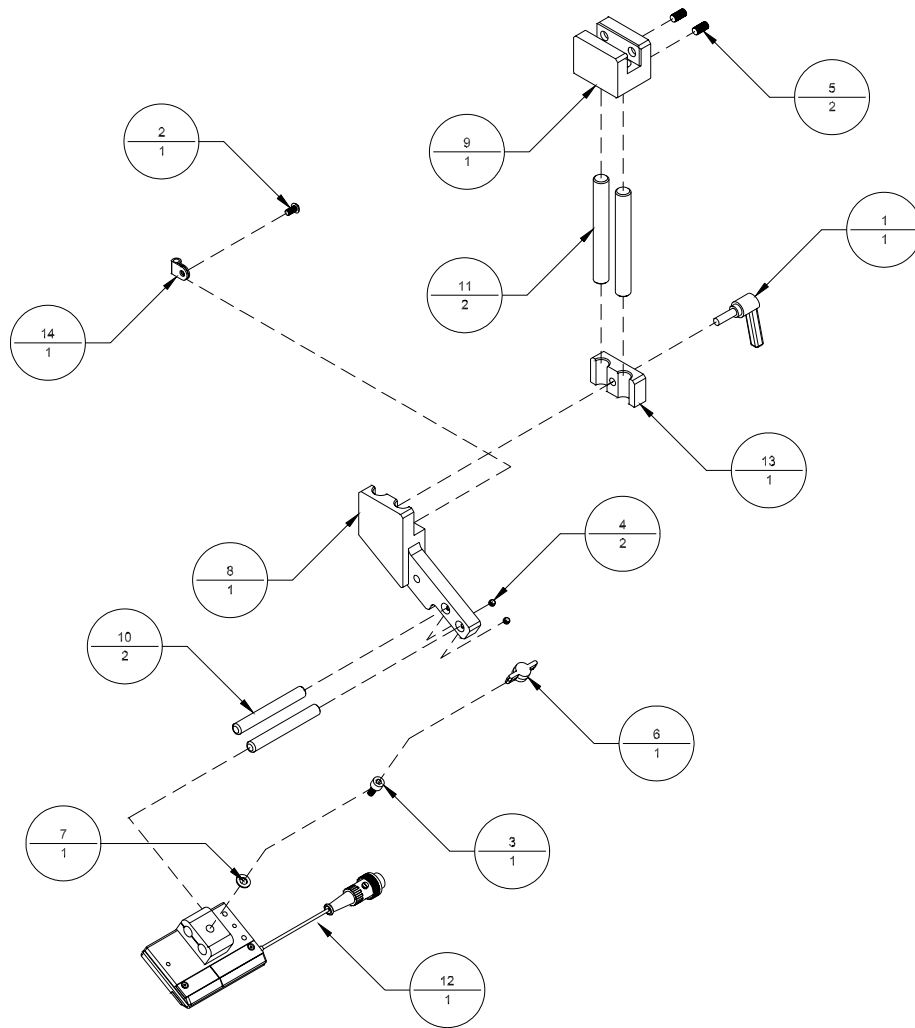
Figure A-36: Peel Point Base Assembly (9101081A)

Table A-36: *Front Cover Assembly (9101111A)*

Item	Part Number	Quantity	Description	Reference
1	401510	2	Screw, BHCS, 4-40 UNC x 1/4"	
2	402020	4	Screw, FHCS, 6-32 UNC x 3/8"	
3	402210	2	Screw, SHCS, 6-32 UNC x 1/4"	
4	402510	2	Screw, BHCS, 6-32 UNC x 1/4"	
5	402530	2	Screw, BHCS, 6-32 UNC x 1/2"	
6	404510	4	Screw, BHCS, 10-32 UNF x 1/4"	
7	438314	1	Inkwell Door Handle	
8	615533	1	Actuator, Magnetic	
9	630006	1"	Reflective Tape	
10	9101110	2	Hinge, Mini Lift-off, In-line	
11	9101111	1	Front Safety Cover	
12	9101663	1	Tabber Right Side Cover	
13	9101664	1	Panel Stiffener	
14	9101686	1	Front Cover Magnetic Catch	

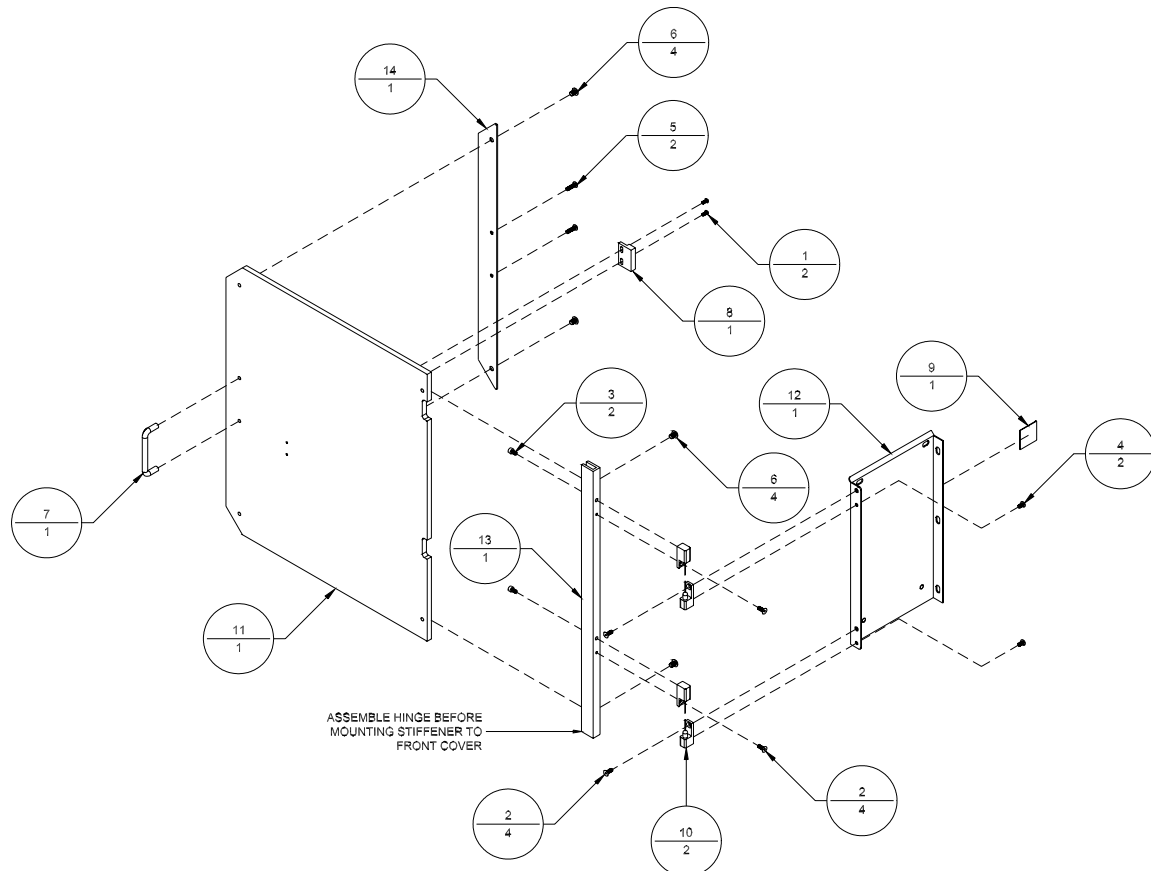
Figure A-37: *Front Cover Assembly (9101111A)*

Table A-37: *Brush Pivot Assembly (9101112A)*

Item	Part Number	Quantity	Description	Reference
1	404520	2	Screw, BHCS, 10-32 UNF x 3/8"	
2	436300	1	Spring Pin, 3/16" Dia. X 1 3/4" Long	
3	9101116A	1	Brush Assembly	
4	9101626	1	Brush Pivot Shaft	

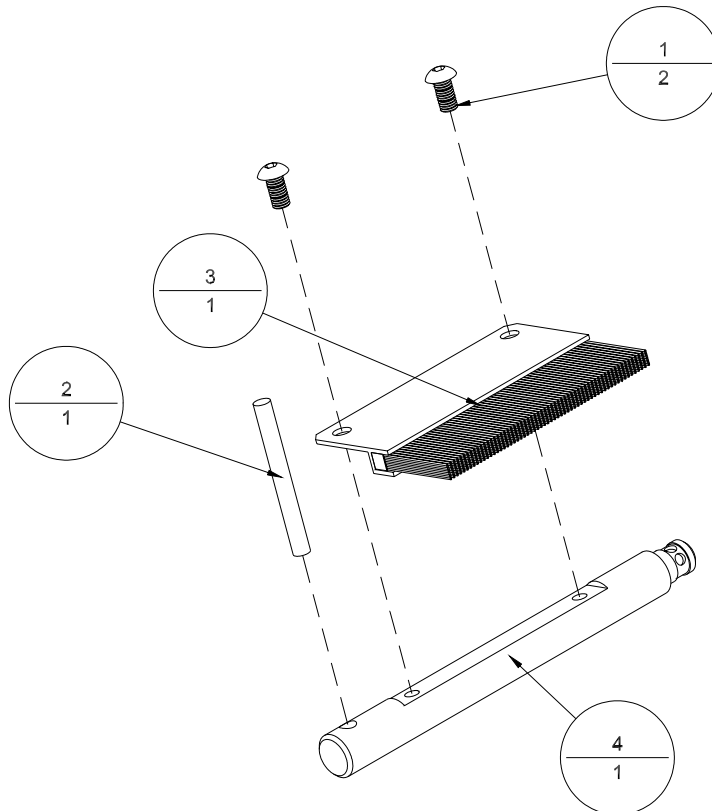
Figure A-38: *Brush Pivot Assembly (9101112A)*

Table A-38: *Stepper Motor Driver Cover Assembly (9101113A)*

Item	Part Number	Quantity	Description	Reference
1	401310	4	Screw, PHMS, 4-40 UNC x 1/4"	
2	402310	4	Screw, PHMS, 6-32 UNC x 1/4"	
3	606013	1	Cable, #22-3, Shielded (8" Long)	
4	606013	1	Cable, #22-3, Shielded (15" Long)	
5	606020	5	Wire, #18, Black, Hookup (18" Long)	
6	606022	1	Wire, #18, Red, Hookup (18" Long)	
7	606023	1	Wire, #18, Green, Hookup (18" Long)	
8	606025	1	Wire, #18, Orange, Hookup (18" Long)	
9	606029	2	Wire, #18, White, Hookup (18" Long)	
10	606311A	1	System Support Interface Cable (Atlas)	
11	609000	4	Shrink Wrap, 3/16" I.D. (1" Long)	
12	609107	9	Terminal, Fork, #4, Red	
13	609112	2	Terminal, Fork, #10, Blue	
14	615062	1	Female Connector, 2 Pin, BLA2	
15	615063	1	Female Connector, 3 Pin, BLA3	
16	9101073	1	Stepper Motor Driver, 2 Phase	
17	9101113	1	Step Motor Driver Cover	
18	9101114	4	Hex Spacer, 6-32 UNC x 2"	
19	9101123	1	Stepper Motor Driver, 5 Phase	
20	9101133	1	Tabber Interface Board	
21	9101275	1	Tabber CPU Board	
22	9101672	4	Screw, BHCS, M3 x 6	

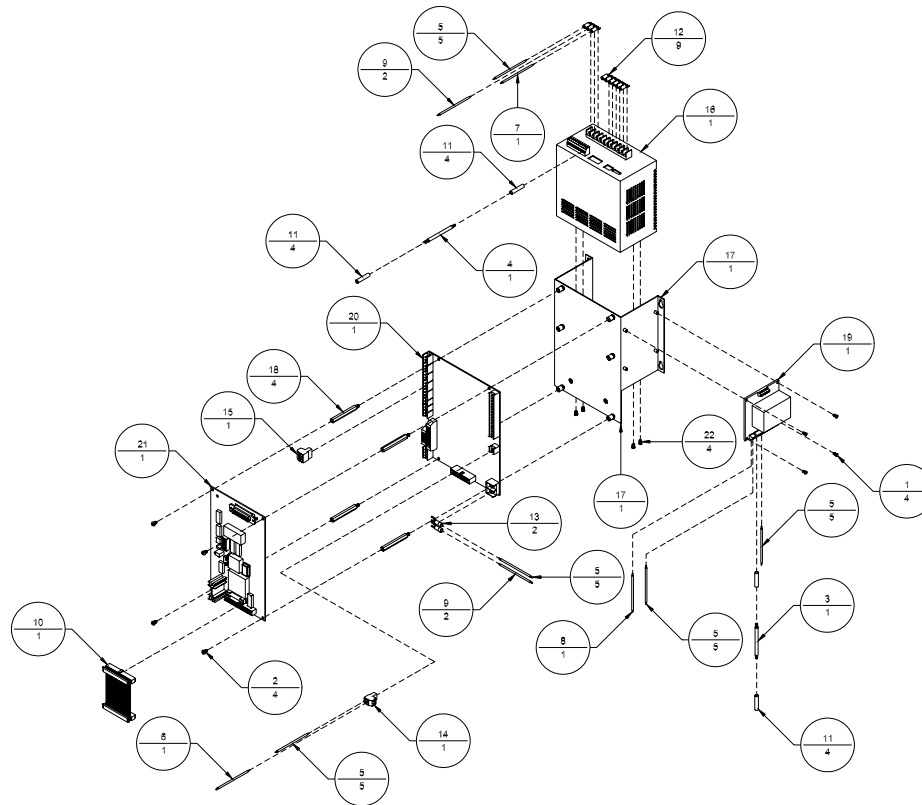
Figure A-39: *Stepper Motor Driver Cover Assembly (9101113A)*

Table A-39: Keypad Mounting Rail Assembly (9101121A)

Item	Part Number	Quantity	Description	Reference
1	402020	6	Screw, FHCS, 6-32 UNC x 3/8"	
2	405520	3	Screw, BHCS, 1/4-20 UNC x 3/8"	
3	405530	2	Screw, BHCS, 1/4-20 UNC x 1/2"	
4	606324	1	Serial Extension Cable, 3 Ft, 25 Cond.	
5	9100222	3	Shim Stock	
6	9100360	1	Endcap (10 series)	
7	9101057A	1	Tabber Keyboard Assembly	Page A-40
8	9101121	1	Tabber Keyboard Rail Mounting Bracket	
9	9101122	1	Tabber Sliding Rail	
10	9101124	1	Bearing Profile, Keypad Mount	
11	9101125	3	Bearing Pad, Keypad Mount	
12	9101126	1	Double T-Nut	

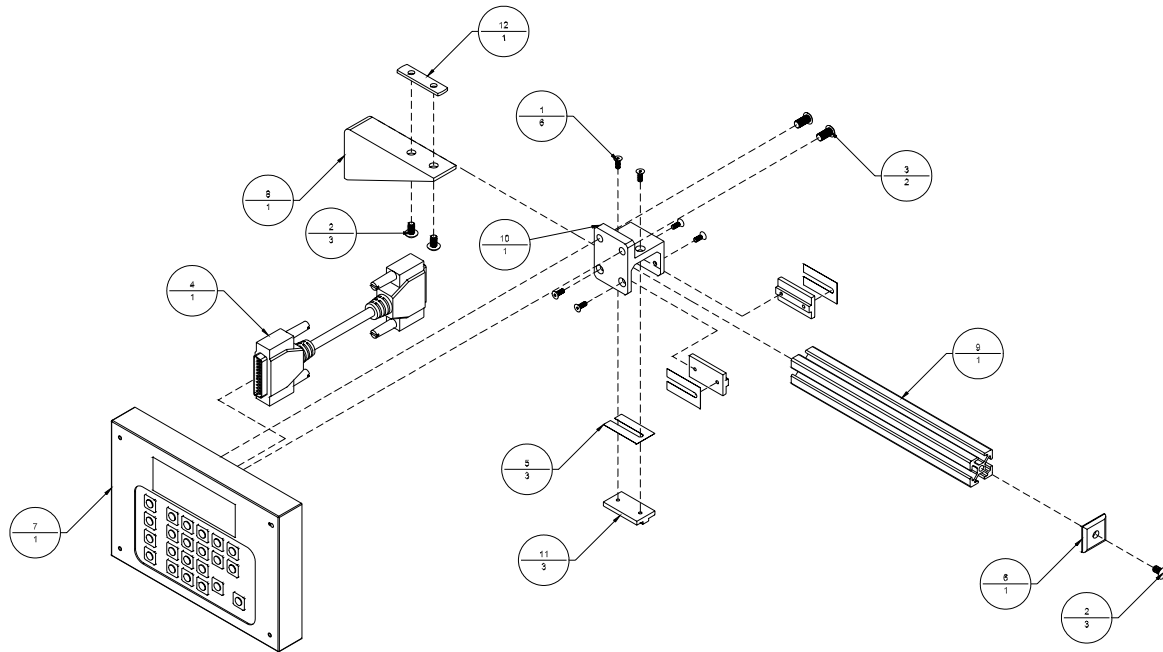
Figure A-40: Keypad Mounting Rail Assembly (9101121A)

Table A-40: *Rewind Disc Assembly (9101130A)*

Item	Part Number	Quantity	Description	Reference
1	404020	4	Screw, FHCS, 10-32 UNF x 3/8"	
2	405830	2	Screw, SHSS, 1/4-20 UNC x 1/2"	
3	9101129	1	Rewind Hub	
4	9101130	1	Rewind Tab Retaining Plate	

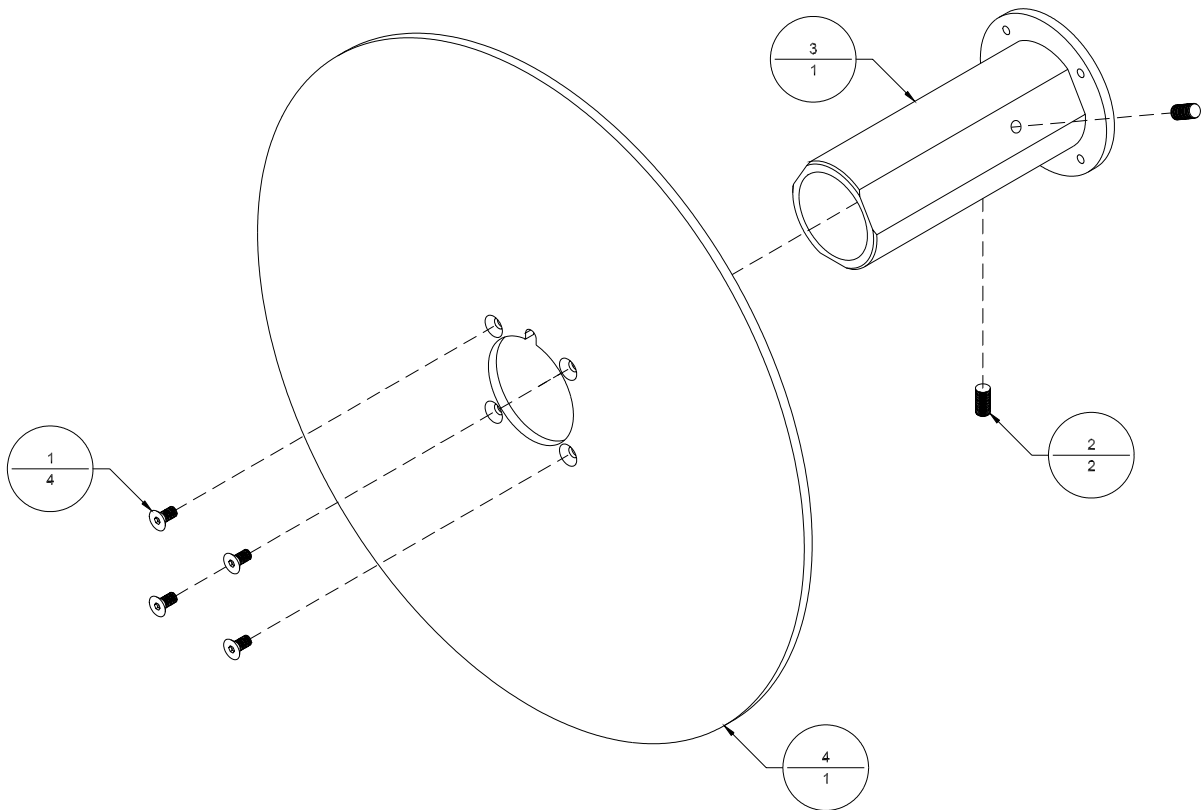
Figure A-41: *Rewind Disc Assembly (9101130A)*

Table A-41: *Unwind Disc Assembly (9101145A)*

Item	Part Number	Quantity	Description	Reference
1	404020	4	Screw, FHCS, 10-32 UNF x 3/8"	
2	404030	2	Screw, FHCS, 10-32 UNF x 1/2"	
3	405850	2	Screw, SHSS, 1/4-20 UNC x 3/4"	
4	9101144	1	Unwind Hub	
5	9101145	1	Unwind Tab Retaining Plate	
6	9101149	1	Tab Retaining Plate	
7	9101150	1	Unwind Hub Guide	

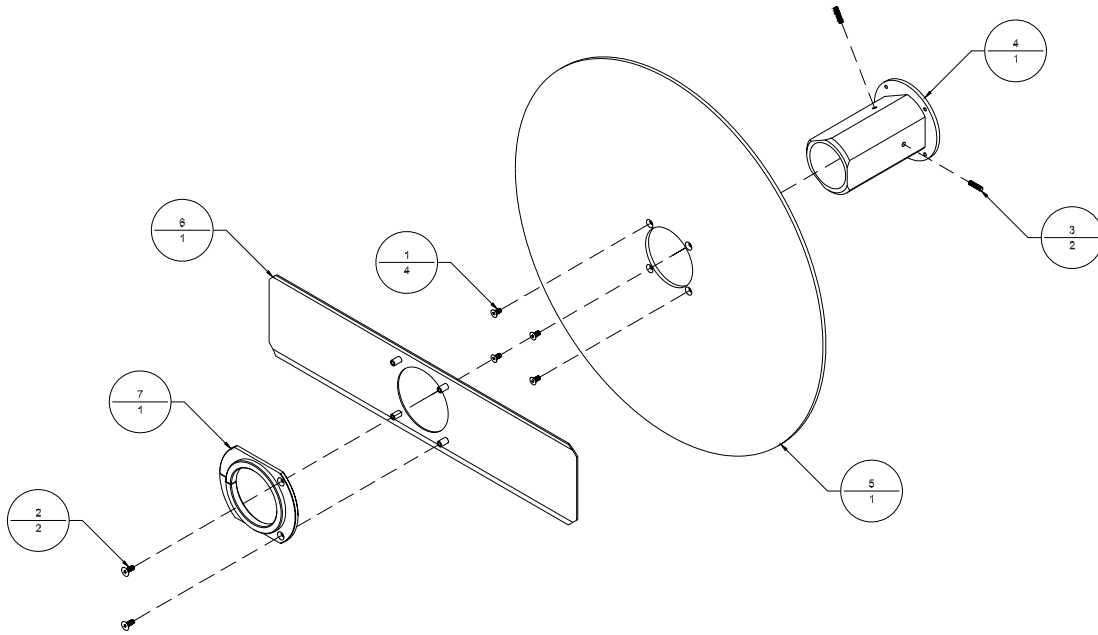
Figure A-42: *Unwind Disc Assembly (9101145A)*

Table A-42: *Oscillating Idler Assembly (9101233A)*

Item	Part Number	Quantity	Description	Reference
1	404810	2	Screw, SHSS, 10-32 UNF X 1/4"	
2	437075	2	Retaining Ring, 3/4" I.D. External	
3	440020	1	Washer, 3/8" I.D.	
4	9100749	2	Rubber Washer, 3/8" I.D. X 1" X 1/8"	
5	9101109	1	Linear Bearing	
6	9101232	1	Oscillating Idler Shaft	
7	9101233	1	Oscillating Idler Slide Block	
8	9101234	2	Oscillating Idler Mount Block	
9	9101258	1	Oscillating Idler Roller Spring	

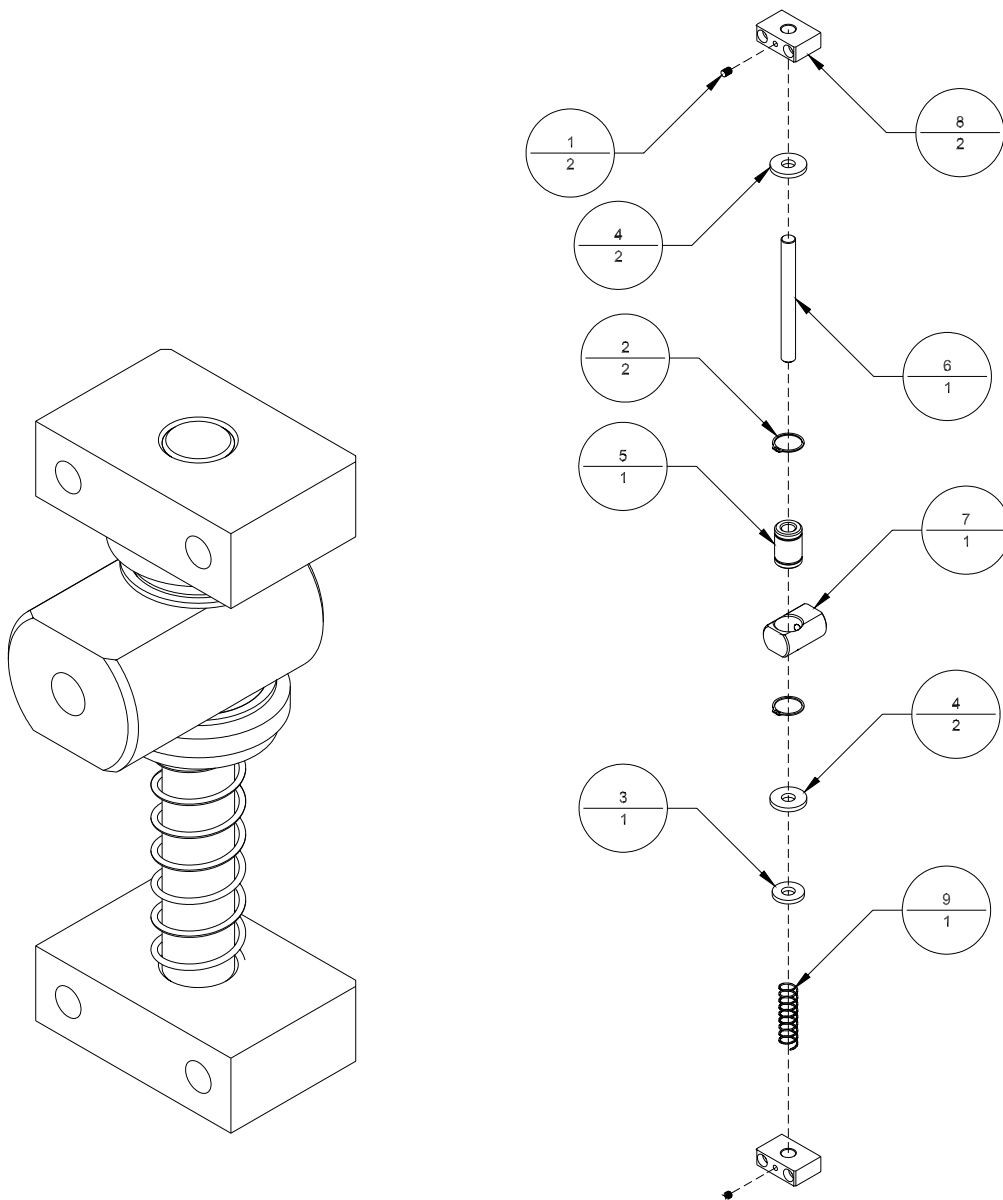
Figure A-43: *Oscillating Idler Assembly (9101233A)*

Table A-43: *Tabber Back Cover Assembly (9101244A)*

Item	Part Number	Quantity	Description	Reference
1	401330	4	Screw, PHMS, 4-40 UNC X 1/2"	
2	403510	4	Screw, BHCS, 8-32 UNC X 1/4"	
3	405520	2	Screw, BHCS, 1/4-20 UNC X 3/8"	
4	420007	1	Nut, 8-32 UNC	
5	420008	2	Nut, 10-32 UNF	
6	603300	1	Circuit Breaker Switch, 5 A, 1 Pole, 115 VAC	
7	606000	2	Wire #16, Black, Hookup (10" Long)	
8	606005	1	Wire #16, Green, Hookup (10" Long)	
9	606005	1	Wire #16, Green, Hookup (15" Long)	
10	606009	1	Wire #16, White, Hookup (10" Long)	
11	606020	1	Wire, #18, Black, Hookup (10" Long)	
12	606022	1	Wire, #18, Red, Hookup (10" Long)	
13	609102	2	Marrette, Black	
14	609110	5	Connector, Push-on, Blue	
15	609114	2	Ring Tongue Terminal, #10	
16	615140	1	Lashing Tie	
17	9100343	1	Fan, 12VDC	
18	9100674	1	Filter, Corcom, 10 A	
19	9100728	1	Tie Anchor Mount, #8 Screw	
20	9101244	1	Tabber Head Back Cover	
21	9101575A	1	Tabber Terminal Block Assembly	Page A-55
22	9101620	1	Mounting Bracket, Slide Rail	
23	9101627	1	Buskro Serial Number Label	
24	9101640	1	Handle, Panel Snap Style	

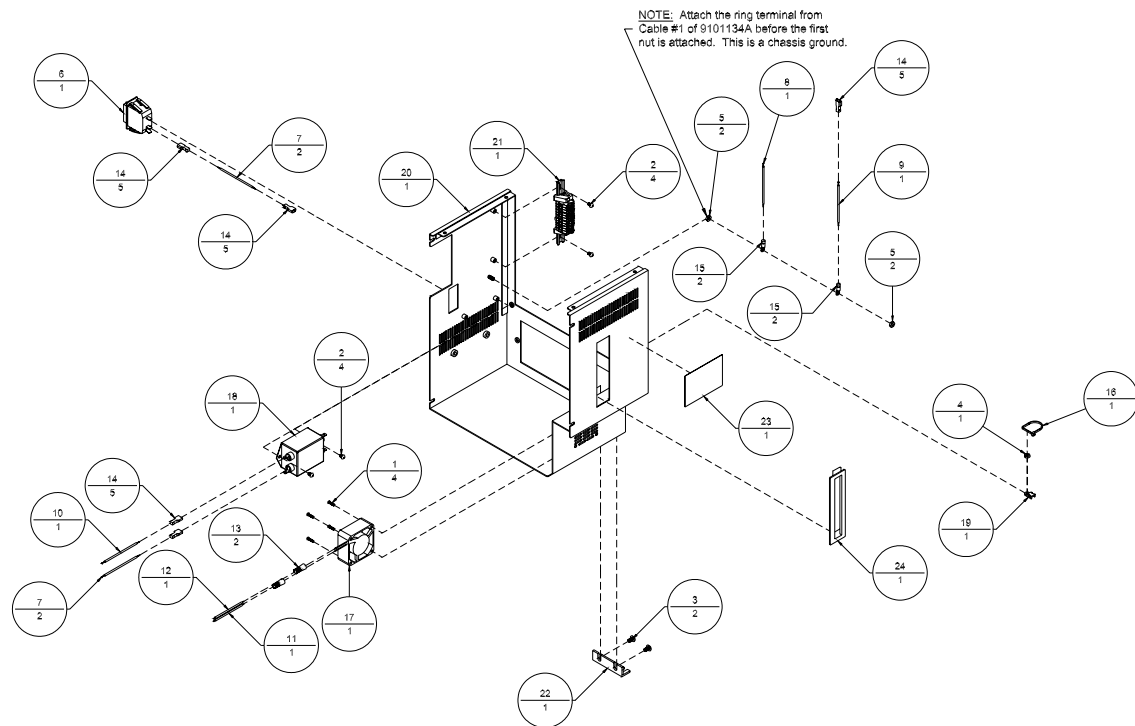
Figure A-44: Tabber Back Cover Assembly (9101244A)

Table A-44: Peel Point Assembly (9101264A)

Item	Part Number	Quantity	Description	Reference
1	401010	4	Screw, FHCS, 4-40 UNC x 1/4"	
2	606014	24"	Cable, #22-4, Shielded	
3	9100724	1	Plug, Preh, Locking, 3 Pin	
4	9101072	1	AlGaAs Infrared Emitting Diode	
5	9101074A	1	Peel Point	
6	9101104	2	Peel Point Top Cover	
7	9101264	1	Sidelooker Phototransistor	
8	9101669	4	Shrink Wrap, 1/16" I.D., 125 C, 500V (1" Long)	
9	9101670	2	Shrink Wrap, 1/4" I.D., 125 C, 500V (3" Long)	
10	9101671	1	Shrink Wrap, 1/2" I.D., 125 C, 500V (3" Long)	

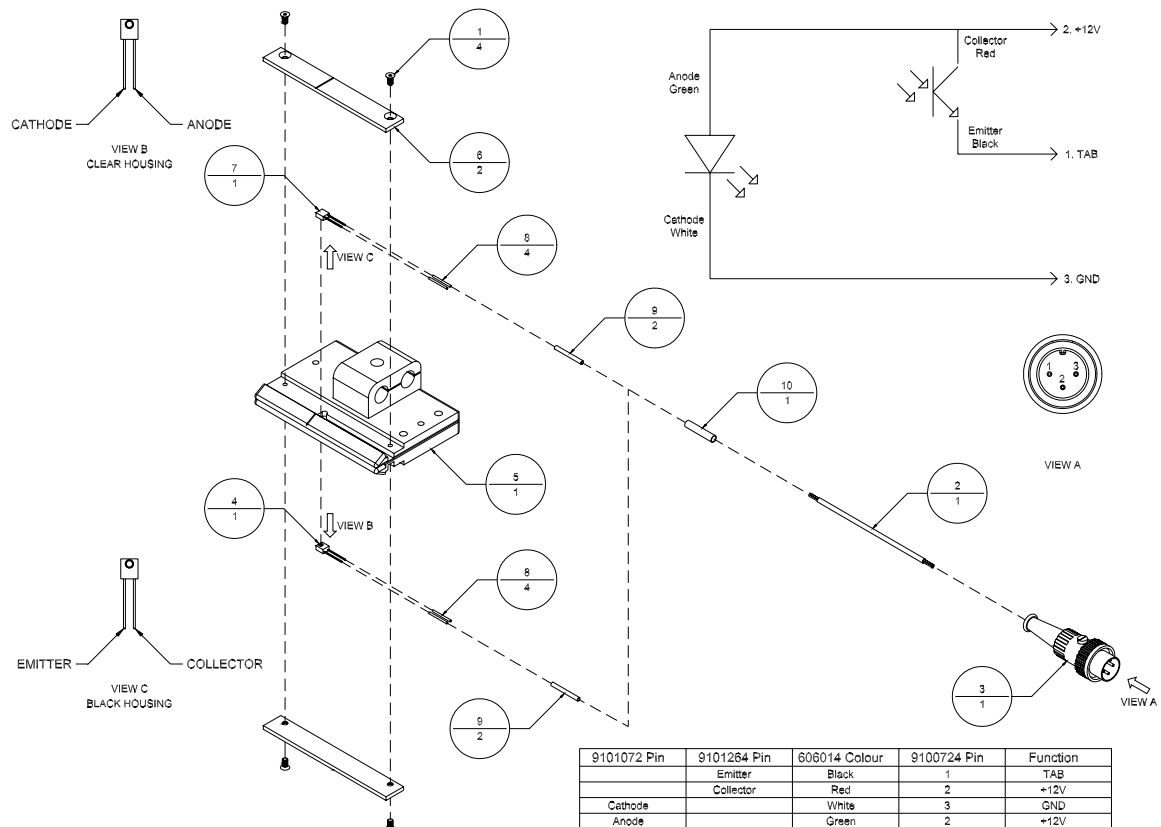
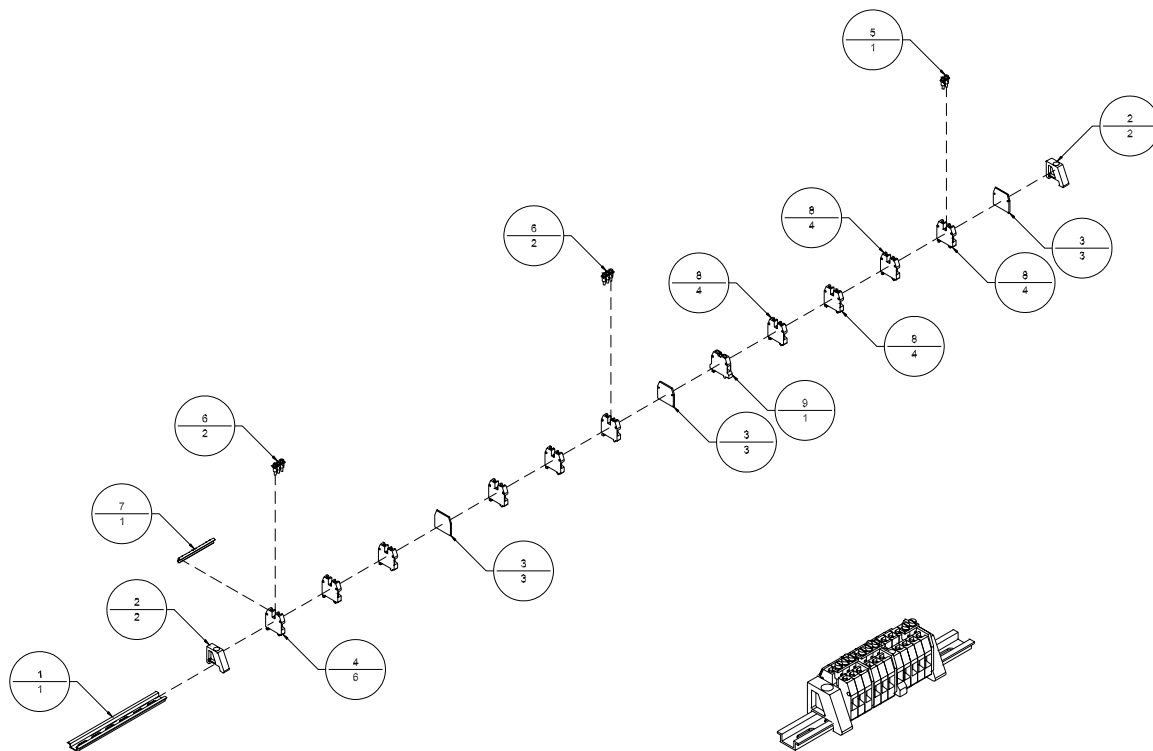
Figure A-45: Peel Point Assembly (9101264A)

Table A-45: *Terminal Block Assembly, BK731 (9101575A)*

Item	Part Number	Quantity	Description	Reference
1	9101570	5"	Terminal Block Rail	
2	9101573	2	End Stop, Terminal Block, EW 15	
3	9101574	3	End Plate, Terminal Block, AKZ 2.5	
4	9101575	6	Terminal Block AKZ 2.5	
5	9101576	1	Jumper, AKZ 1.5/AKZ 2.5, Q2	
6	9101580	2	Jumper, AKZ 1.5/AKZ 2.5, Q3	
7	9101662	1	Terminal Block Label, DEK5	
8	9101688	4	Terminal Block, AKZ 2.5, Blue	
9	9101689	1	Ground Block, AKE 2.5	

Figure A-46: *Terminal Block Assembly, BK731 (9101575A)*

List of Figures

Figure B-1: BK730 Tabber Base Electrical SchematicB-1

Figure B-2: BK730 Tabber Base Wiring - Page 1 of 5B-2

Figure B-3: BK730 Tabber Base Wiring - Page 2 of 5B-3

Figure B-4: BK730 Tabber Base Wiring - Page 3 of 5B-4

Figure B-5: BK730 Tabber Base Wiring - Page 4 of 5B-5

Figure B-6: BK730 Tabber Base Wiring - Page 5 of 5B-6

Figure B-7: BK731 Tabber Head Wiring - Page 1 of 6.....B-7

Figure B-8: BK731 Tabber Head Wiring - Page 2 of 6.....B-8

Figure B-9: BK731 Tabber Head Wiring - Page 3 of 6.....B-9

Figure B-10: BK731 Tabber Head Wiring - Page 4 of 6.....B-10

Figure B-11: BK731 Tabber Head Wiring - Page 5 of 6.....B-11

Figure B-12: BK731 Tabber Head Wiring - Page 6 of 6.....B-12

Figure B-13: Tabber CPU BoardB-13

Figure B-2: BK730 Tabber Base Wiring - Page 1 of 5

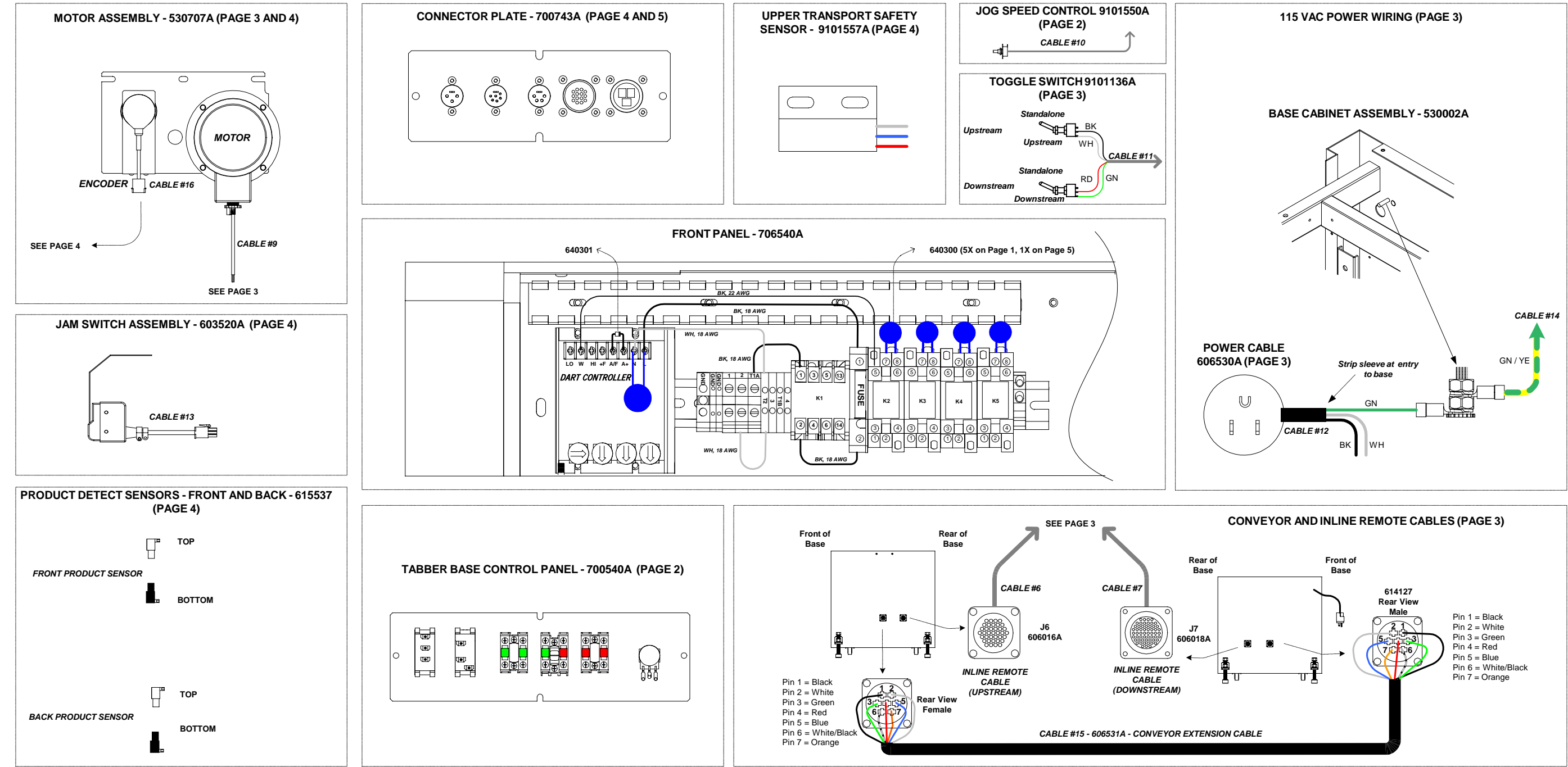


Figure B-3: BK730 Tabber Base Wiring - Page 2 of 5

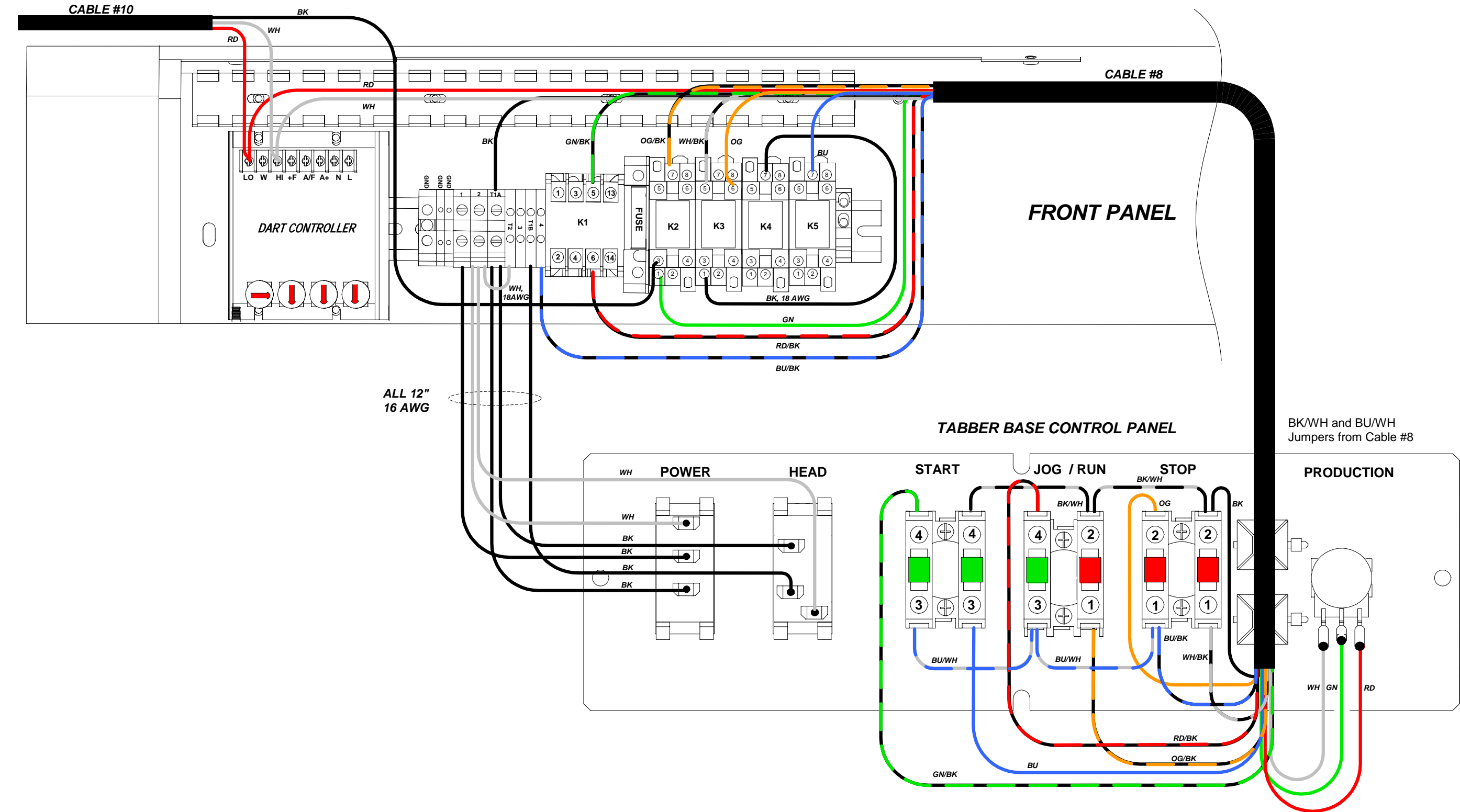


Figure B-4: BK730 Tabber Base Wiring - Page 3 of 5

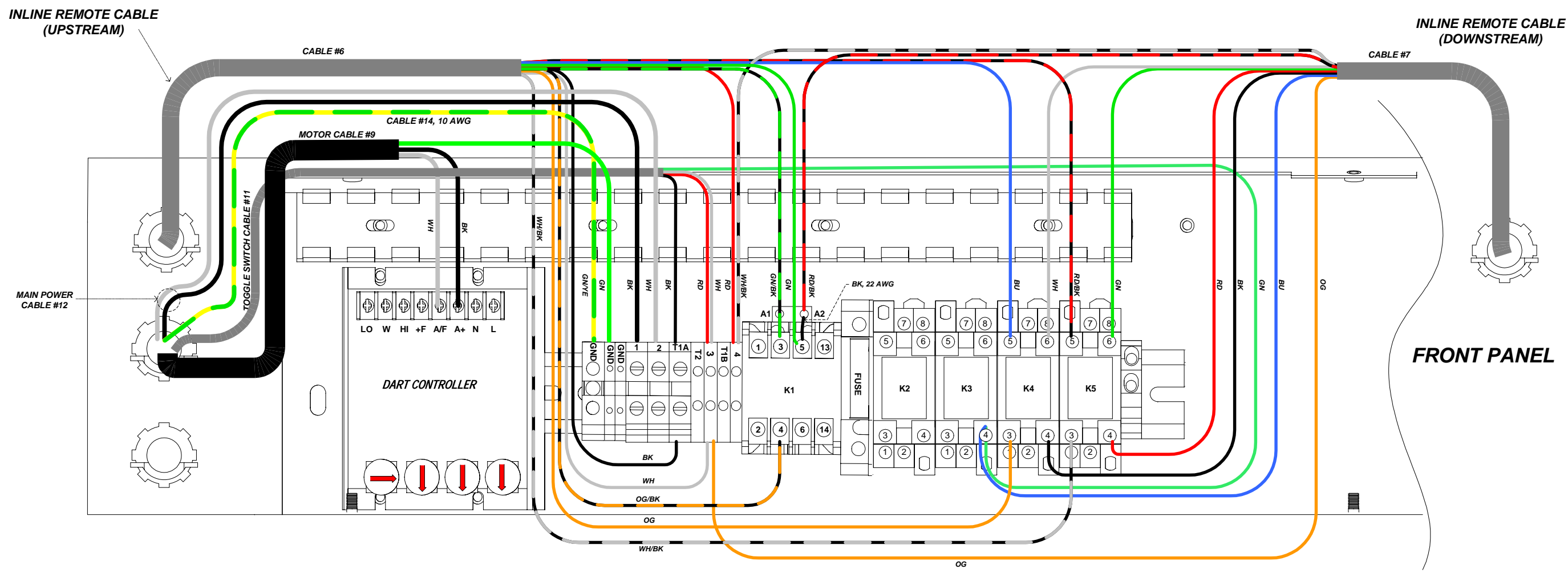


Figure B-5: *BK730 Tabber Base Wiring - Page 4 of 5*

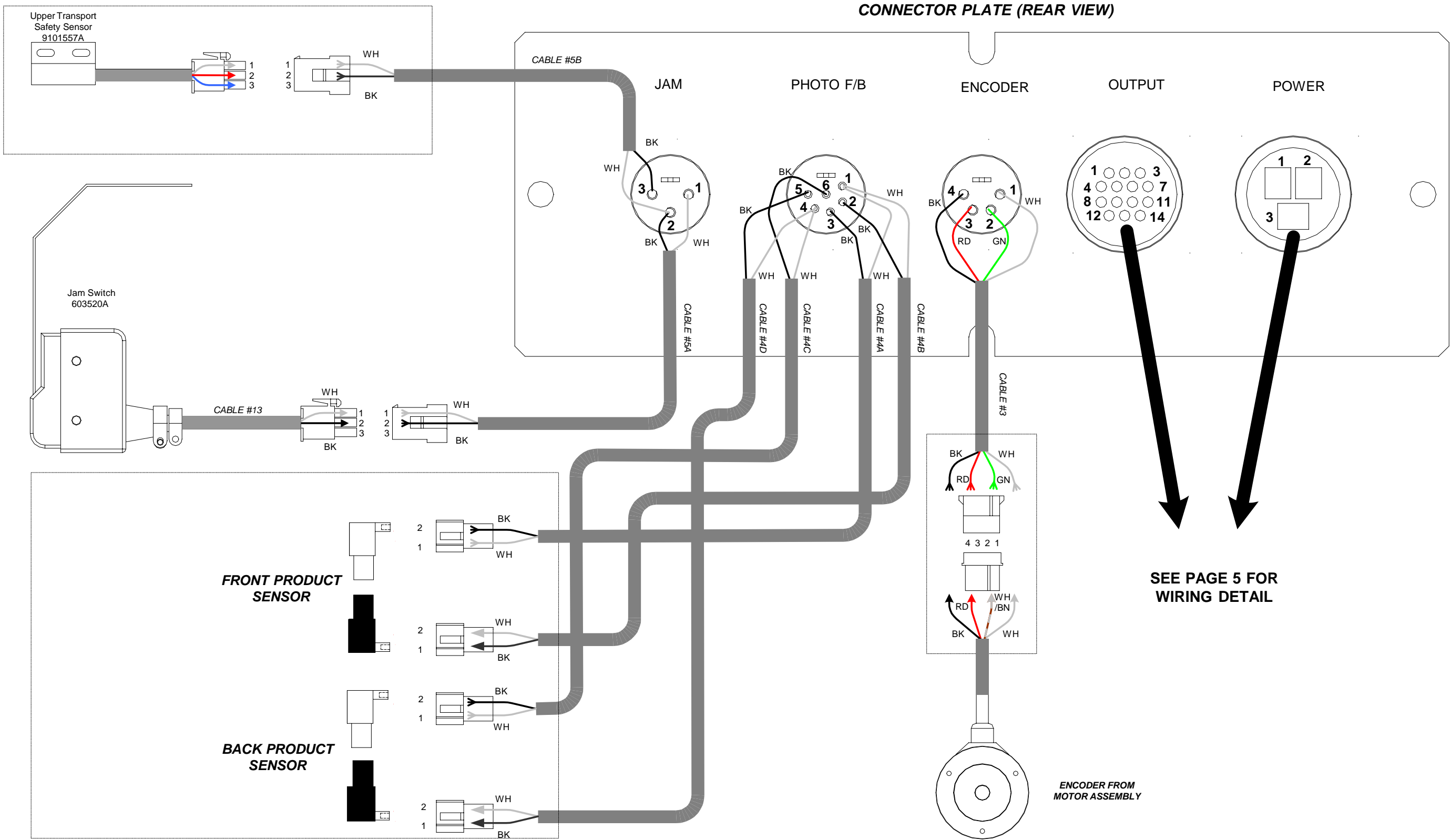


Figure B-6: *BK730 Tabber Base Wiring - Page 5 of 5*

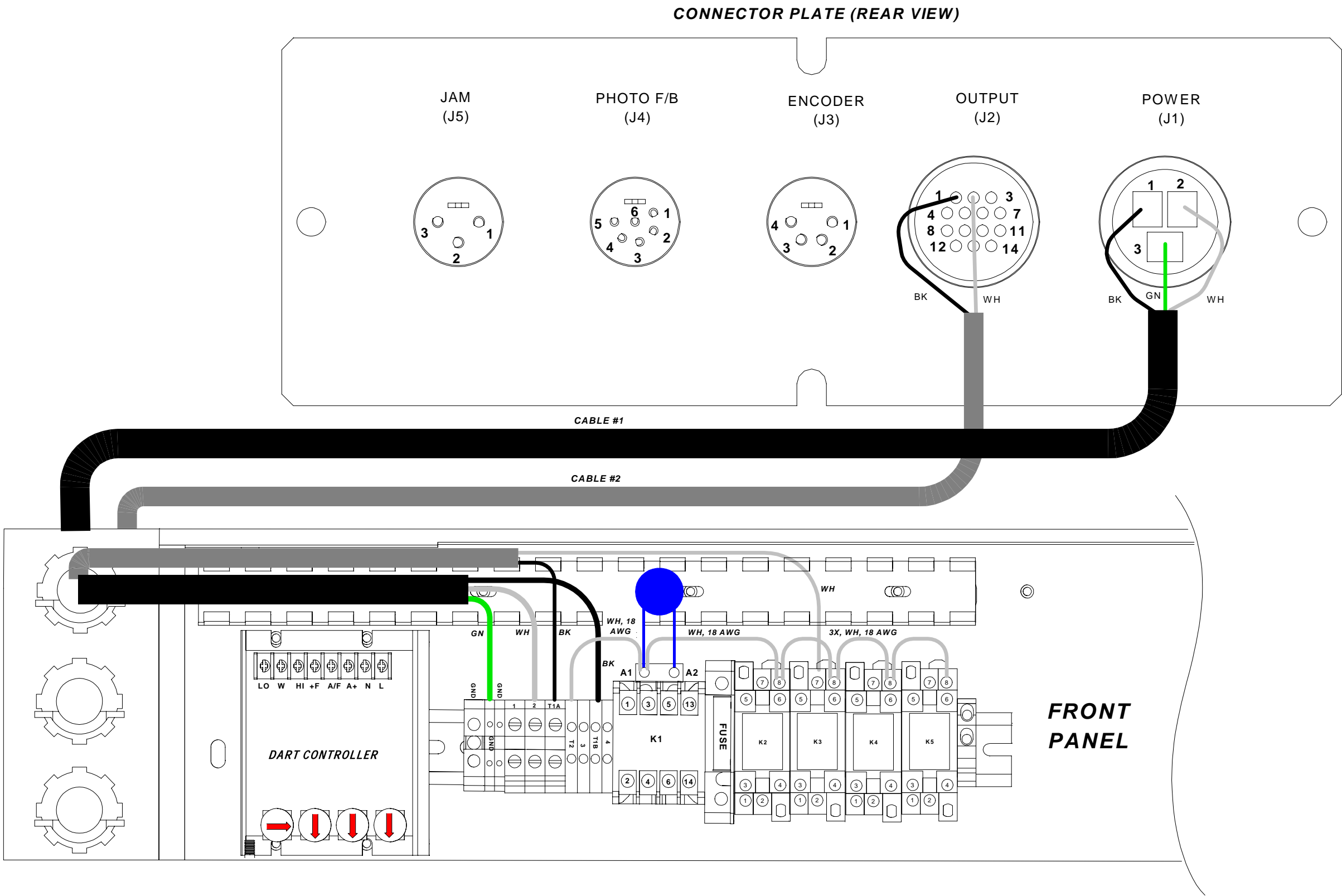


Figure B-7: BK731 Tabber Head Wiring - Page 1 of 6

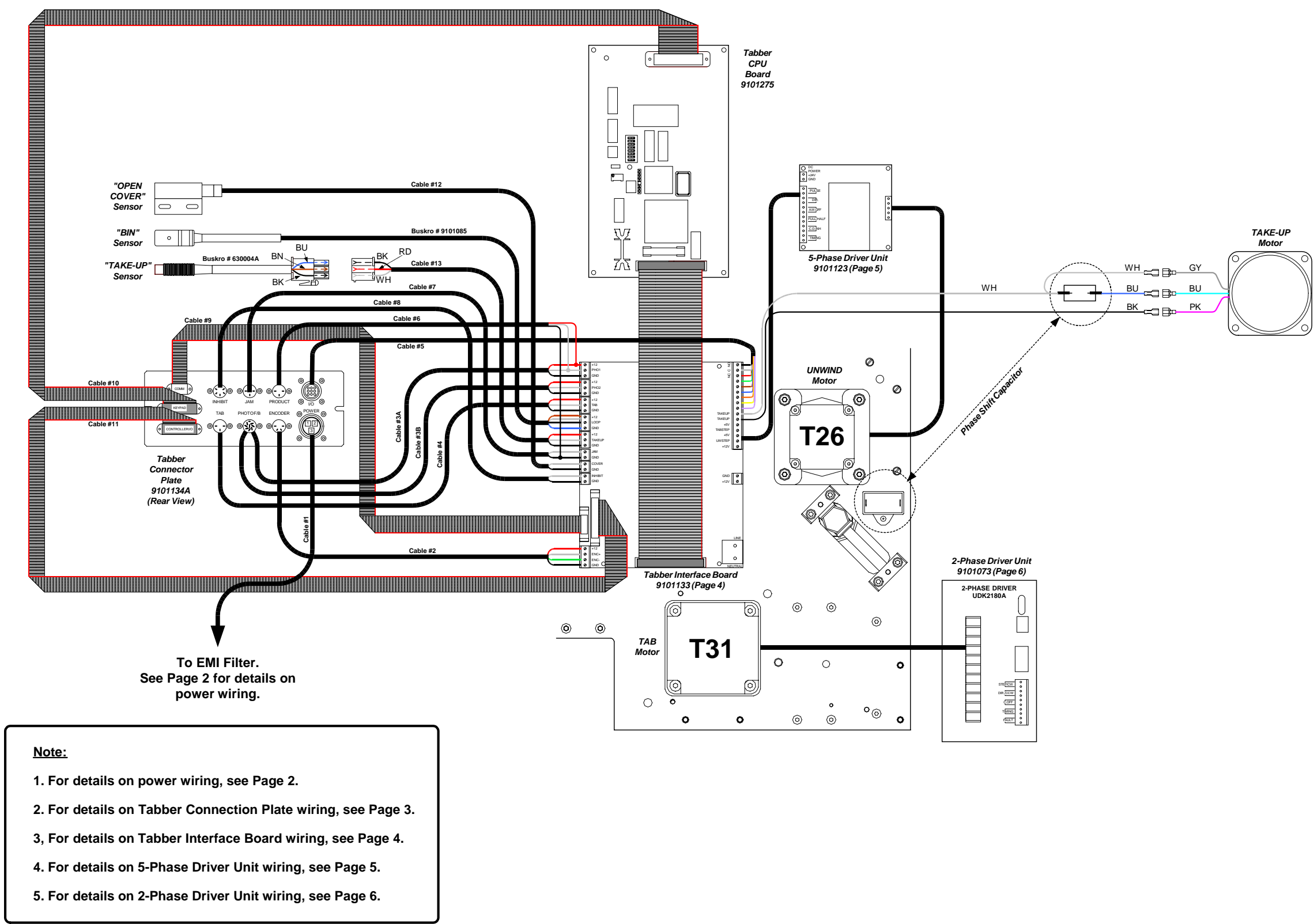


Figure B-8: BK731 Tabber Head Wiring - Page 2 of 6

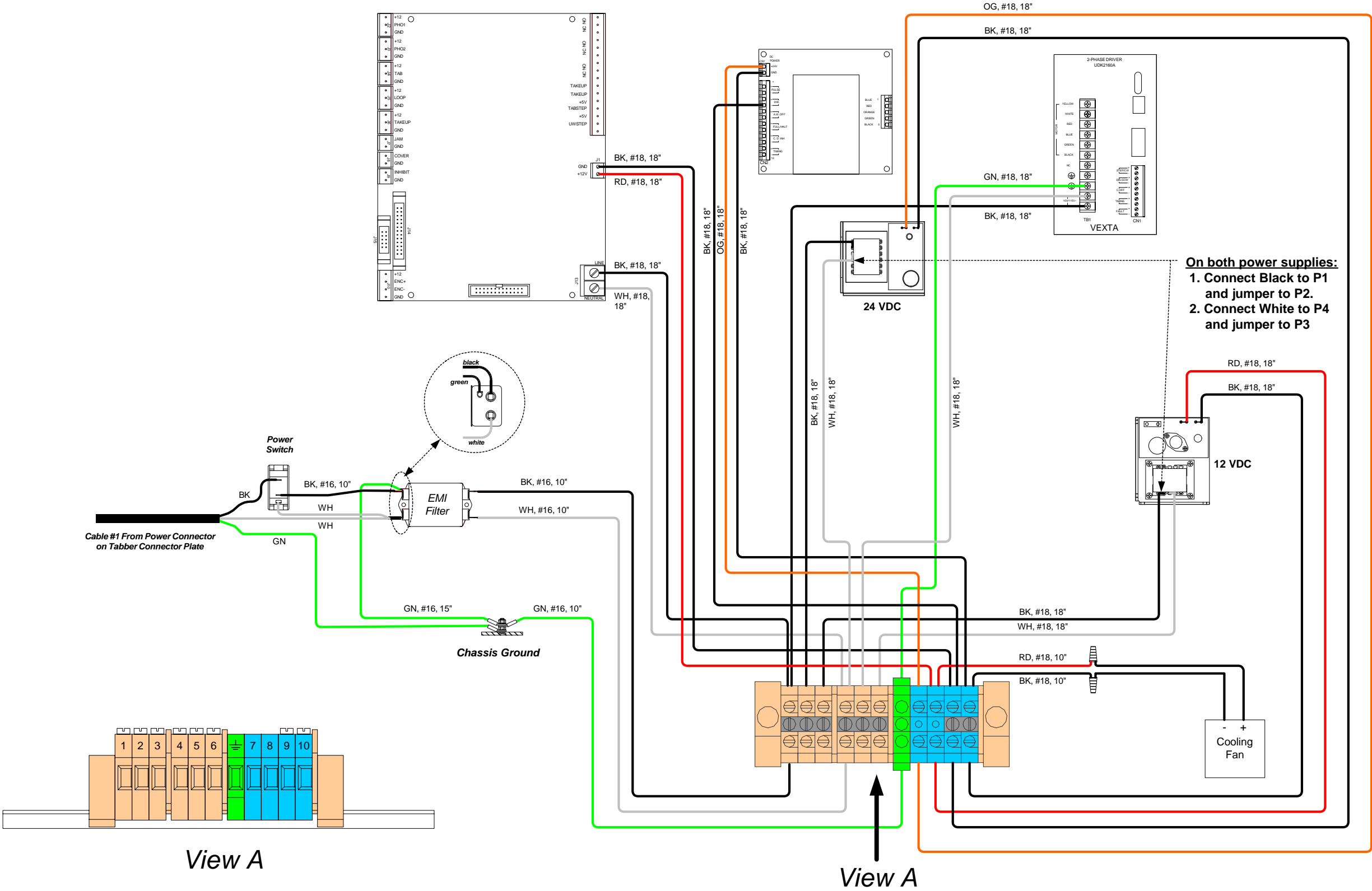


Figure B-9: BK731 Tabber Head Wiring - Page 3 of 6

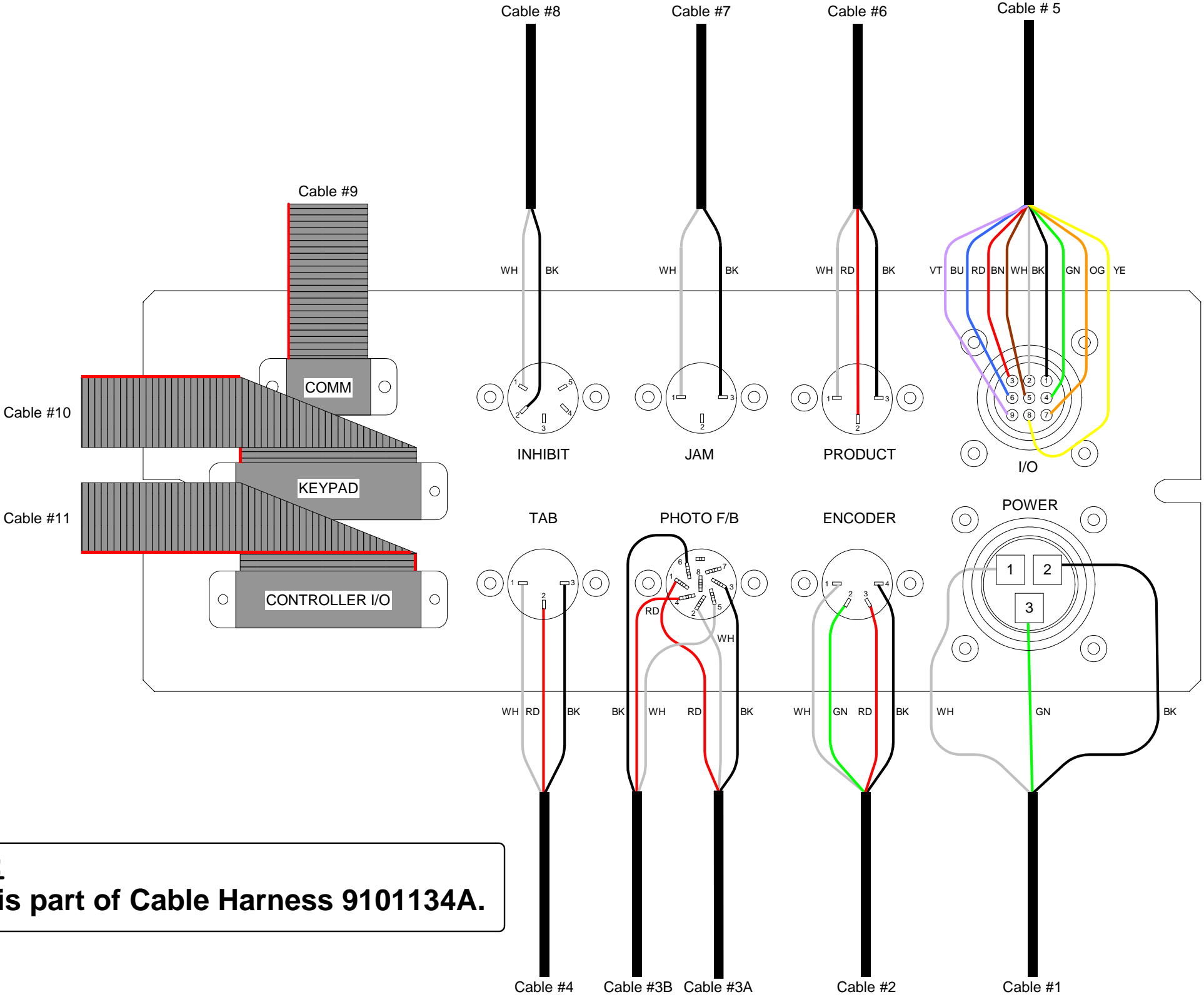


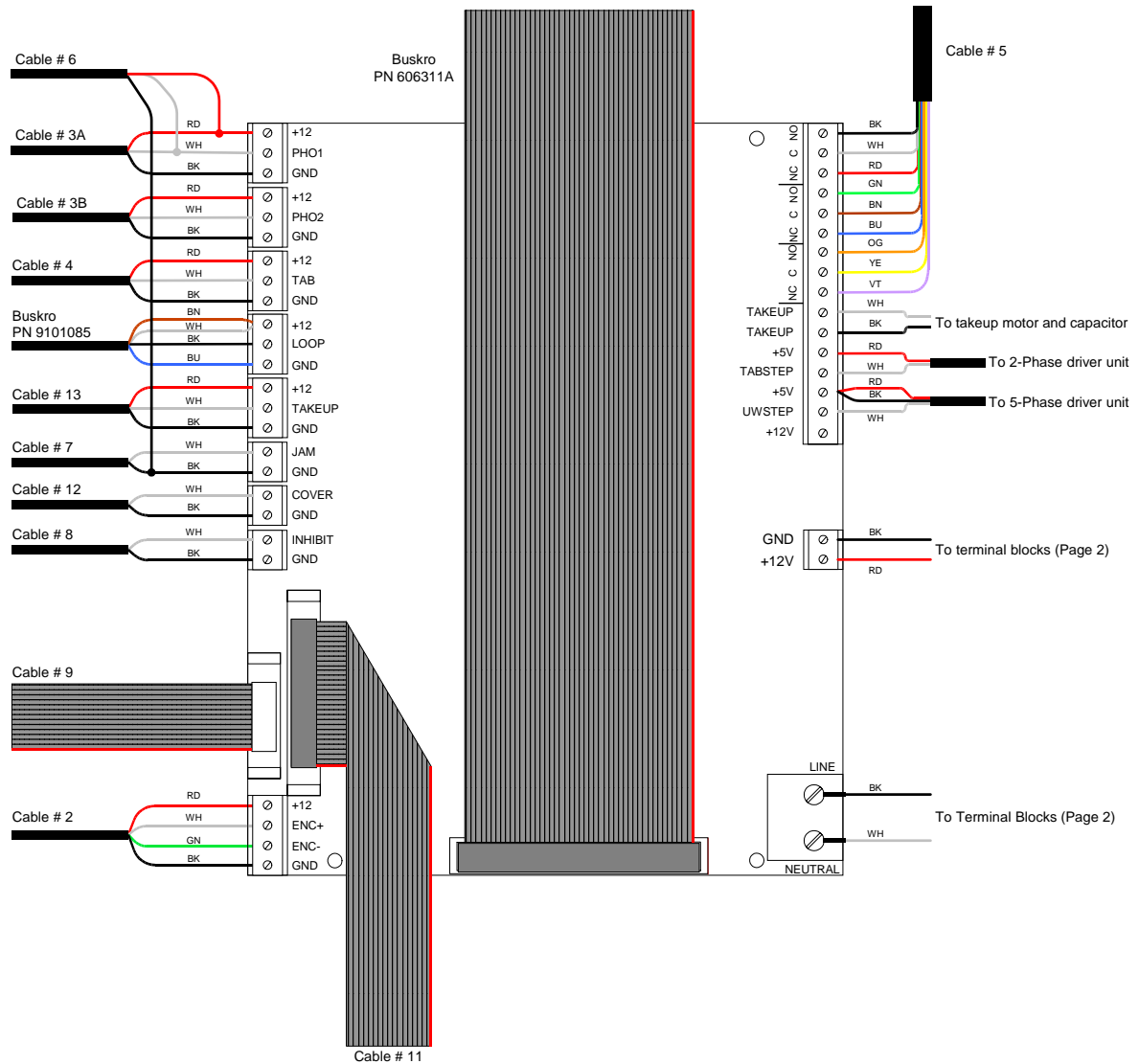
Figure B-10: *BK731 Tabber Head Wiring - Page 4 of 6*

Figure B-11: *BK731 Tabber Head Wiring - Page 5 of 6*

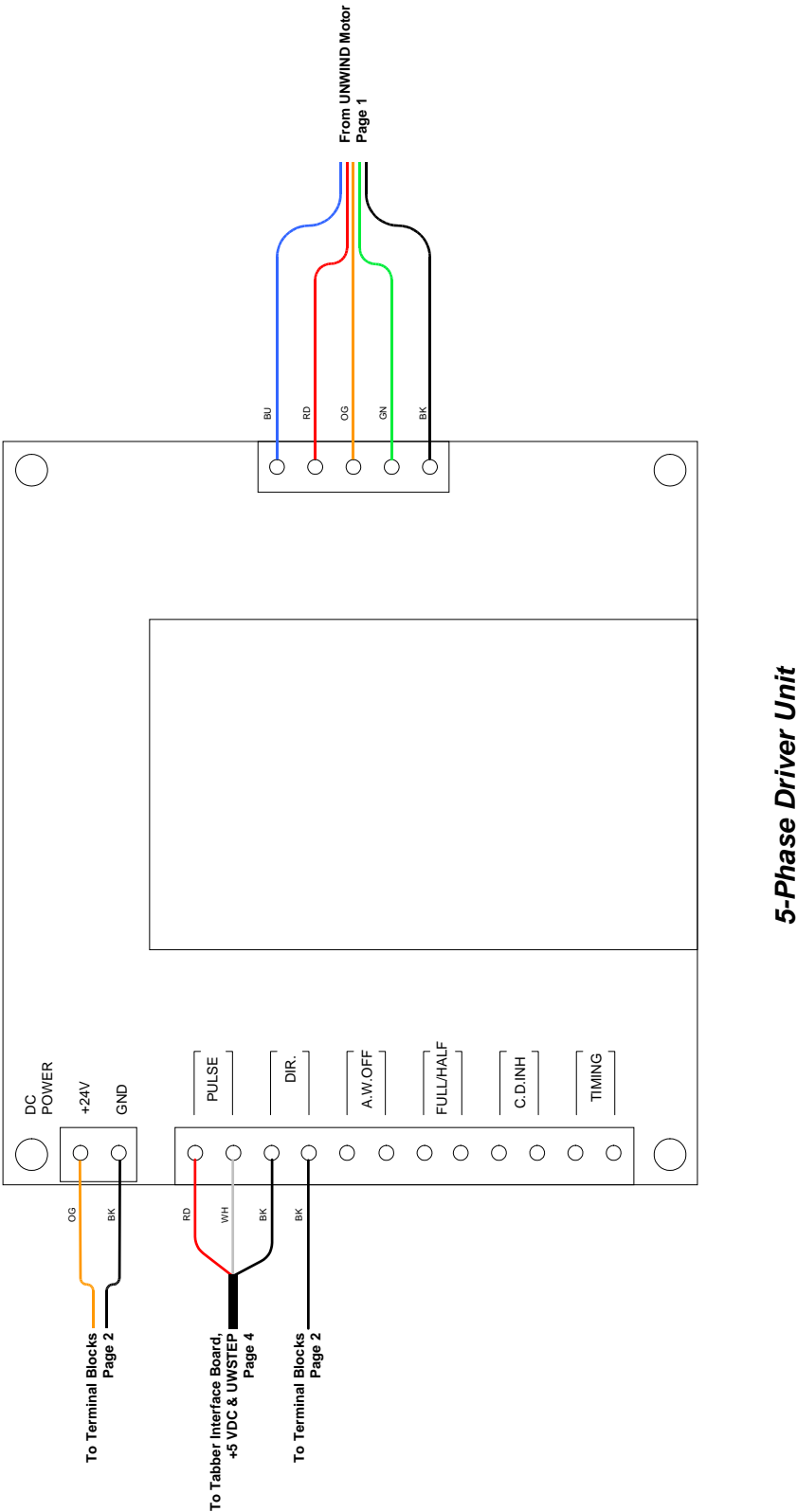


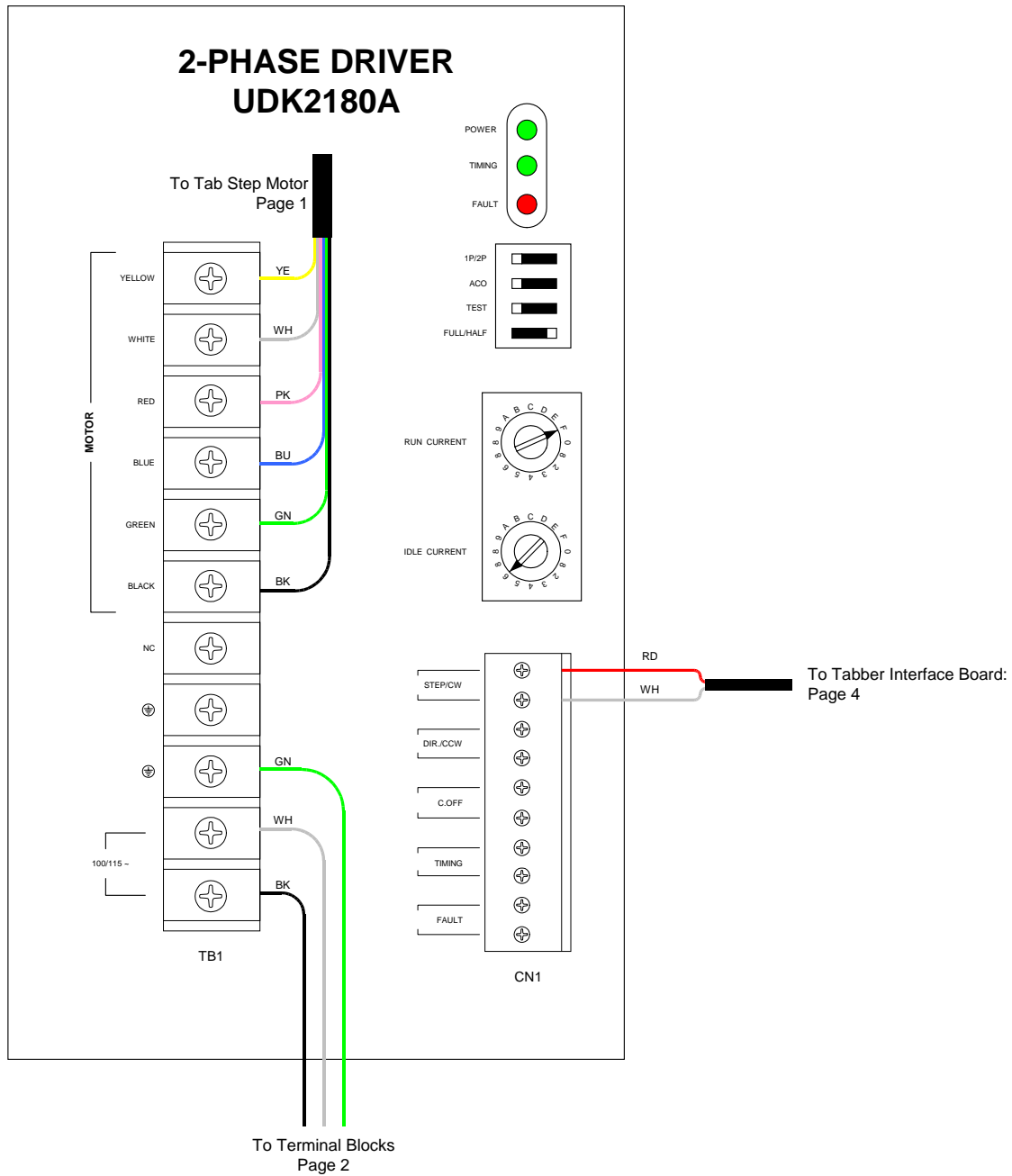
Figure B-12: *BK731 Tabber Head Wiring - Page 6 of 6*

Figure B-13: *Tabber CPU Board*

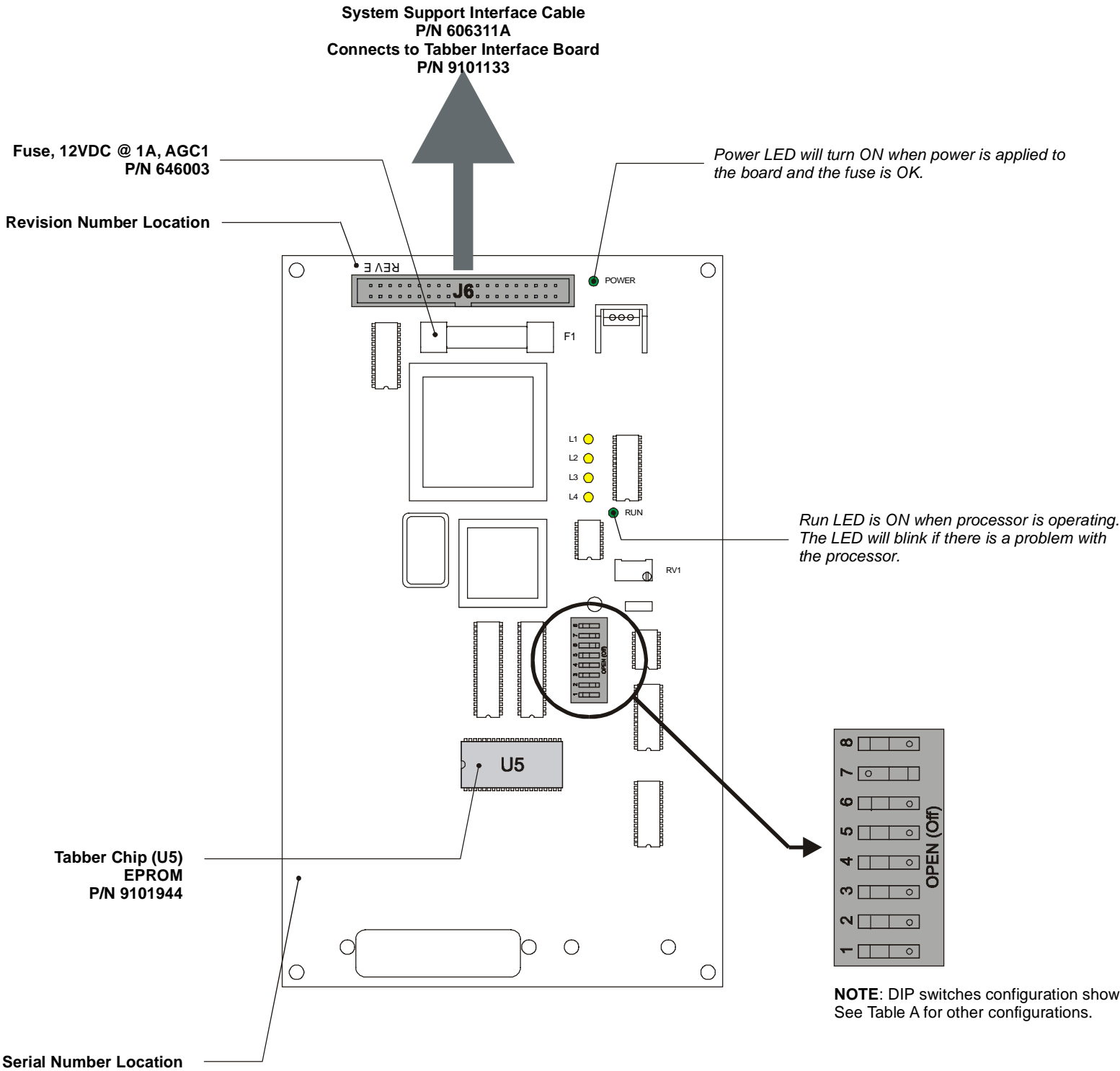


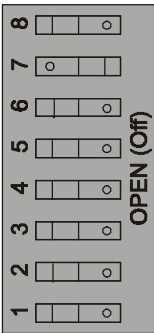
Table A - Tabber CPU Board Dip Switch Assignments

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
3 - 6	Off	Future Use
2	On	Standard Encoder, 660 DPI (for BK71B base)
	Off	Standard Encoder, 600 DPI (BK730 Tabber)
1	On	Stop output relay de-energized (for BK71B base)
	Off	Stop Output Relay Energized (for standard BK730 base)

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: DIP switches configuration shown are set for BK730 Tabber.
See Table A for other configurations.