Model
706
Labeler
Service Manual

A15590100A
(3/01).00

METTLER TOLEDO®

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Part / Model Number:	**Date:**
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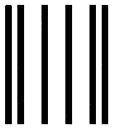

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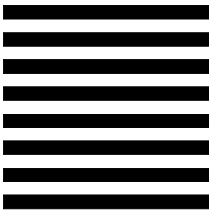

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METTLER TOLEDO, Training Dept., 1900 Polaris Parkway, Columbus, Ohio 43240

FCC Notice

This device complies with Part 15 of the FCC Rules and the Radio Interference Requirements of the Canadian Department of Communications. Operation is subject to the following conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Publication Revision History

Part Number	Date	Revisions
15590100A (.01)	**6/00**	Updated format and addresses.
A15590100A	**3/01**	Added updated information for Mega/Max Wrappers, etc.

PRECAUTIONS

READ this manual BEFORE operating or servicing this equipment.

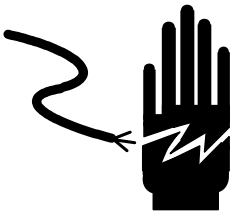
FOLLOW these instructions carefully.

SAVE this manual for future reference.

DO NOT allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.

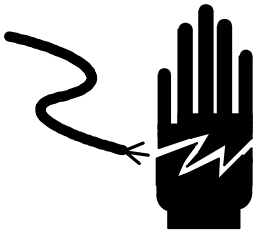
ALWAYS DISCONNECT this equipment from the power source before cleaning or performing maintenance.

CALL METTLER TOLEDO for parts, information, and service.



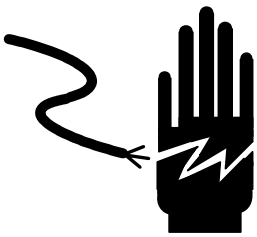
WARNING

ONLY PERMIT QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.



WARNING

FOR CONTINUED PROTECTION AGAINST SHOCK HAZARD CONNECT TO PROPERLY GROUNDED OUTLET ONLY. DO NOT REMOVE THE GROUND PRONG.



WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE REMOVING THE FUSE OR SERVICING.

CAUTION

BEFORE CONNECTING/DISCONNECTING ANY INTERNAL ELECTRONIC COMPONENTS OR INTERCONNECTING WIRING BETWEEN ELECTRONIC EQUIPMENT ALWAYS REMOVE POWER AND WAIT AT LEAST THIRTY (30) SECONDS BEFORE ANY CONNECTIONS OR DISCONNECTIONS ARE MADE. FAILURE TO OBSERVE THESE PRECAUTIONS COULD RESULT IN DAMAGE TO OR DESTRUCTION OF THE EQUIPMENT OR BODILY HARM.

CAUTION

OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.

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1 General Description

Introduction

The METTLER TOLEDO Model 706 Labeler comes in two versions:

- Tall version (706-0001 and 706-0002) is designed for the SOLO® automatic wrappers.
- Short version (706-1001 and 706-1002) designed for use with a hand wrapper and belt sealer.

The Model 706 Labeler (Figure 1-1) automatically positions trays for weight/price and DayGlo label application on the same unit. Microprocessor controlled stepper drive-motors are used for positioning accuracy and reliability.

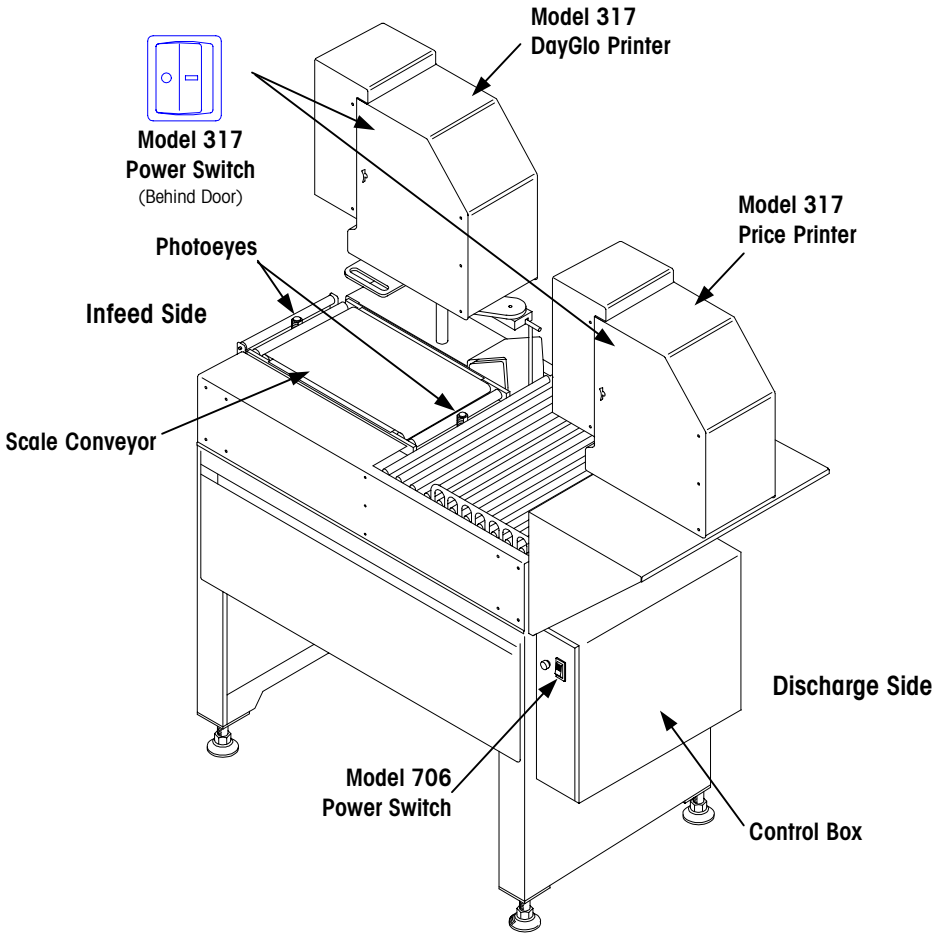


Figure 1-1: Model 706 Major Components

Overview

The Model 706 Labeler utilizes two photoeyes, three stepper motors, and one AC double-head vacuum pump. The two Model 317 Printers (Price and DayGlo) and the Model 8361 Controller are powered through the Model 706 Labeler, but wired separately, so the Model 706 Labeler can be powered down and the 317 Printers and the 8361 Controller will still operate. Figure 1-2 shows other major components on the Model 706 Labeler.

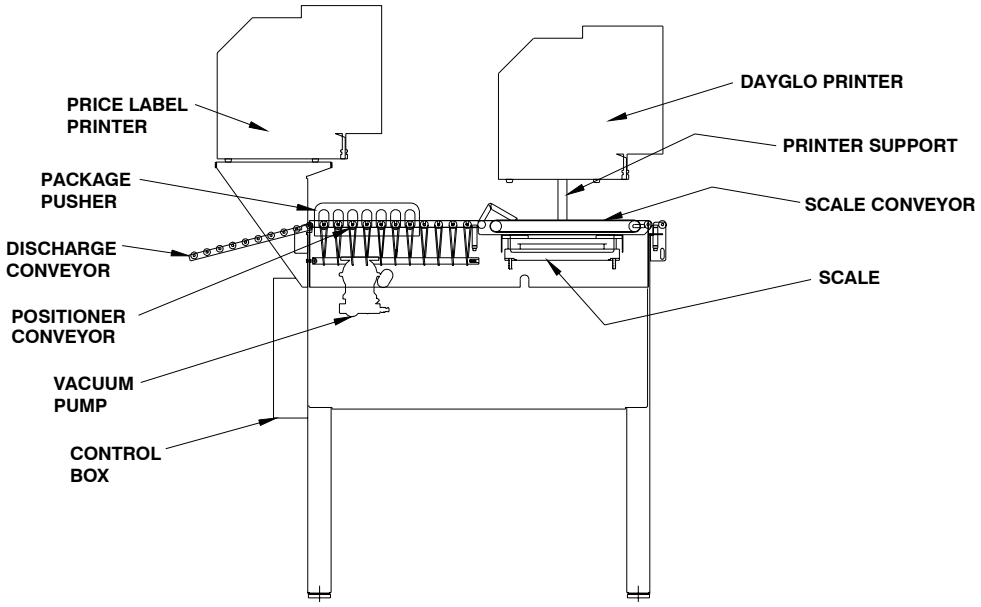


Figure 1-2: Model 706 Labeler Components

The Model 706 Autolabeler utilizes a software setup and diagnostic feature that can be reconfigured and checked on the Model 706 Control PCB. The controls can be set up for specific applications and can test all the functional hardware. An error log is recorded and can be printed with the Model 8361 Controller and the Model 317 Price Label Printer.

Photoeyes

The Model 706 Labeler uses two +24V photoeyes to control its operation. The function of these photoeyes is:

Photoeye #1 = Infeed Photoeye. When the leading edge of the package crosses this photoeye the scale conveyor and the vacuum pump are turned on. This photoeye senses the trailing edge of the package for placement of the DayGlo label and weighing. If the DayGlo label printer is disabled or not installed then the package will stop for weighing only. DayGlo label placement depends on the following software setting in the Model 706 Control:

F3 - Package stop position for DayGlo Label.

Photoeye #2 = Positioner Photoeye. This photoeye senses the leading edge of the package to position it for a price label. The placement depends on the following software settings in the Model 706 Control:

F4 - Package Stop Position

F5 - Rear Pusher Stop Position

F6 - Front Pusher Stop Position

F7 - Label Placement

Stepper Motors

The Model 706 Labeler is equipped with three stepper motors. The functions of these stepper motors are as follows:

Scale Stepper Motor - conveys the package to the DayGlo label application position (if DayGlo printer is used), and conveys the package into position for weighing.

Positioner Stepper Motor - conveys the package to the price label application position and conveys the package off the labeler.

Pusher Stepper Motor - pushes the package into position for price label application.

Miscellaneous

Each roller on the positioner conveyor is driven independently from a common drive shaft powered by a stepper motor.

The pushers move independently from a common stepper motor by means of a roller chain with an actuating pin which engages slots in the pusher mounting blocks.

Vacuum is provided to the DayGlo and price label applicators independently from a double-head pump.

A 10-inch gravity conveyor at the discharge end of the labeler is used to guide packages into a rotocart or onto an accumulation table.

A foam rubber wheel, located above the ten-roller gravity conveyor is used to smooth labels on the packages.

Peripherals

Two printing positions are available on the Model 706 Labeler:

1. **Price Label Printer with Applicator (317-2001-000)**
   - Primary Label Printer
   - Located above the positioner conveyor
   - Labels are applied at one of the four corners of the package, approximately one inch from the outer edge (depending on the setup).
   - Label positioning from one edge is accomplished by using the positioner photoeye (PE #2) to locate the leading edge of the package and driving an additional given number of steps to the applicator location.
   - Packages are further positioned and straightened by pushing the package a preset number of steps into position under the applicator.
2. **DayGlo Printer with Applicator (317-3001-000)**
   - Optional Secondary Label Printer
   - Located on a moveable mount above the scale conveyor
   - Labels are applied to the package when the package is stopped on the scale to be weighed.
   - The label position is determined by stopping the conveyor a given number of steps after the infeed photoeye (PE #1) has been cleared.
   - The label position is further determined by the position of the DayGlo Printer over the scale conveyor on the moveable mount.

The Model 706 Labeler comes equipped with a standard 50 lb capacity 8270-2000 scale fitted with a conveyor belt. The scale base is bolted rigidly to the Model 706 Labeler frame.

2 Specifications

Factory Numbers

The Factory order numbers for the Model 706 Labeler are as follows:

706-ABCD

A = 0 = 706 for Fully Automatic System
1 = 706 for Semi-Automatic Hand Wrap System

B = Not currently used

C = Not currently used

D = 1 = 317 Label Printer
2 = 317 Label Printer and 317 DayGlo Printer

Agency Approval

ETL Approved

Environmental Requirements

The Model 706 Labeler environmental operating range is +5° to +35°C (+41° to +95°F) at 10 to 95% relative humidity, non-condensing. The shipping and storage temperature range is 0° to +66°C (+32° to +150°F) at 10 to 95% relative humidity, non-condensing. The labeler is designed for use in prepackaging backroom environments. This unit is not intended for wash-down operation, nor for operation in environments of extreme dust, heat, cold, or humidity. The integral control box is designed to prevent moisture from dripping onto the controls. No NEMA rating applies.

Product Specifications

Dimensional Information

The Model 706 Labeler occupies approximately 8.75 square feet of space. The complete system of Model 706 Labeler, 645 Solo Plus Wrapper, 8361 Controller, 8270 Scale, and 317 Printers require less than 27 square feet of space.

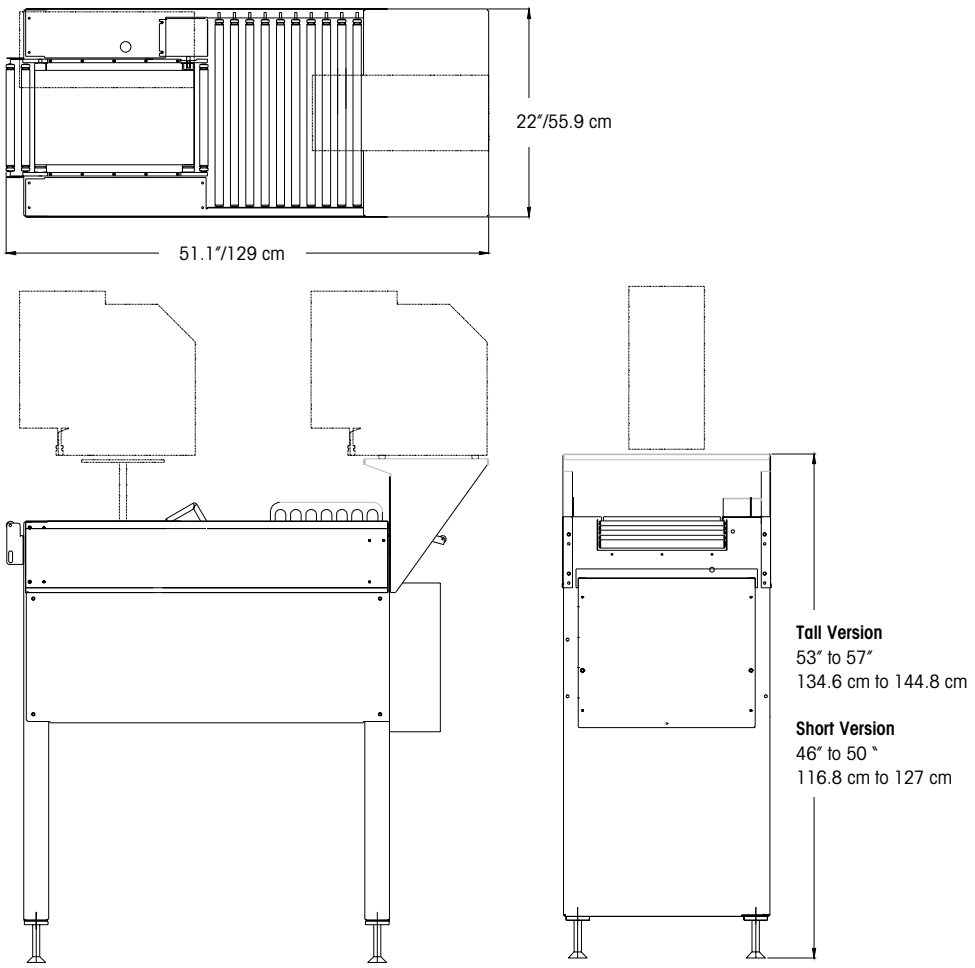


Figure 2-1: Dimensional Views

Packs/Minute

The maximum package rate is 26 packs per minute in normal operation when applying price label only. The rate is 24 packs per minute when applying price and DayGlo labels. In high-speed mode, the rate is up to 31 packs per minute.

Maximum Tray Size

The maximum tray size is 15-3/4 in. Lg. x 10-5/8 in. W. x 5-1/2 in. H.

Minimum Tray Size

The minimum tray size is 4-3/4 in. Lg. x 4 in. W. x 3/8 in. H.

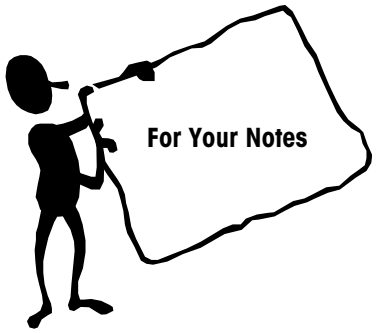
Power Requirements

The Model 706 Labeler requires 115 VAC, 60 Hz., single-phase power at 0.5 kVA, 5 AMP nominal to operate. The circuit must be well regulated, transient free, dedicated, and properly grounded.

The Model 706 Control Board and stepper motors operate at 48 VDC. A 115 - 48 volt universal transformer is used. An optional transformer assembly (925-0374-000) is available for 115/220 VAC, 50 Hz., and 230 VAC, 60 Hz., operation.

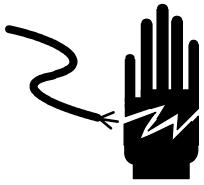
Physical Construction

The Model 706 Labeler maintains a high quality appearance due to the brushed stainless steel support structure and side covers. The components were selected to resist corrosion.


For Your Notes

3 Safety Features and Precautions

Cleaning Precautions



⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Before cleaning or servicing this unit, disconnect AC power by pressing the power switch to OFF position (Figure 3-1) and unplugging the AC line cord from the outlet. Failure to observe these precautions could result in bodily harm as the machine may operate unexpectedly. Unplugging the AC line cord for the 706 Labeler will remove power from the 317 Printer(s) and the 8361 Controller.

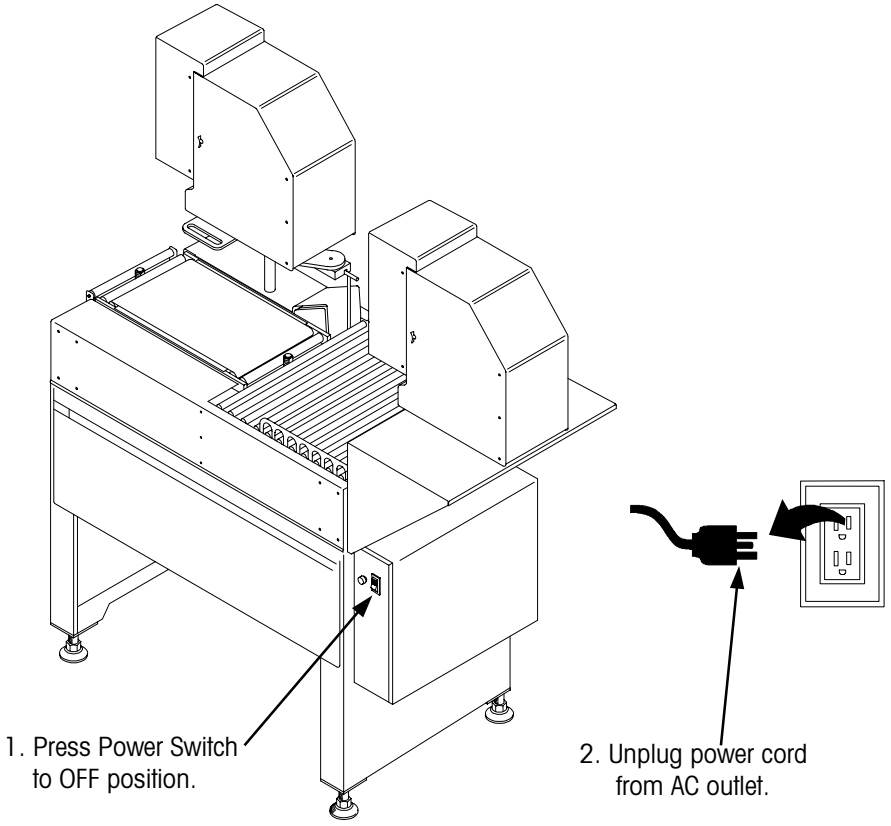
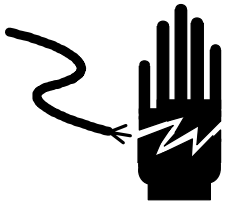


Figure 3-1: Disconnect Power Before Servicing

General Precautions

Do not allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.



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CAUTION

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4 Setup and Operation

Unpacking

Remove the shipping crate from the Model 706 Labeler and carefully inspect for any damage. Two shipping holes are provided at the bottom of each leg next to the levelers for mounting the Model 706 Labeler to a pallet. Unbolt the labeler from the pallet and place it onto the floor.

⚠ WARNING

Use extreme caution when lifting and moving the labeler to the desired location. Do not attempt to lift and move the labeler by yourself. Physical injury or damage to the equipment could occur.

The Model 706 Labeler is shipped with the Model 8270-2000 Scale installed. The printers and price label printer shelf are shipped separately in boxes on the pallet. Remove the printer(s) from the box and carefully inspect them for any damage before installation.

All the necessary cabling is installed at the factory. The Model 317 Printer(s) and the Model 8361 Controller need to be installed and connected in the field.

Installation with the Model 645 Wrapper

To install the Model 706 Labeler with the Model 645 Solo Plus or Solo XL Wrapper perform the following steps:

- First move the Model 645 Wrapper to the operating location.
- Level and adjust the Model 645 Wrapper height per the Model 645 Service Manual.
- Remove the two ABS side covers from the sealing belt support on the Wrapper and discard the mounting screws.
- Assemble the two side braces included in the connector bracket KOP and the ABS side covers on the sealing belt support using the four (4) M5 X 16 Phillips-Head capscrews provided. The braces extend out 3 3/8 in. from the sealing belt support on the Solo Plus. The braces extend out 7 1/8 in. from the sealing belt support on the Solo XL (See Figure 4-1).
- Position the Model 706 Labeler so the infeed photoeye is aligned in the center of the sealing belt of the Model 645 Wrapper (See Figure 4-1).
- Attach the Model 706 Labeler to the Model 645 Wrapper by inserting the retaining bar included with the connector bracket KOP through the side braces and the slotted

holes in the infeed bracket of the Model 706 Labeler. Secure with the set collars provided (See Figure 4-1).

- Loosen the lock nuts on the Model 706 Labeler adjustable leveling feet with a 15/16 in. Wrench (See Figure 4-2).
- Adjust the height of the Model 706 Labeler by turning the leveling feet using a 1/2 in. open-end wrench in the flattened portion at the bottom of the levelers. The Labeler infeed roller height should be 1/16 in. - 1/8 in. below the sealing belt of the Model 645 Wrapper.
- Remove the scale conveyor motor cover.
- Unplug the scale motor harness and ground strap. Remove the scale conveyor by lifting it straight up off the overload pads.
- With the Model 706 Labeler raised to the proper height, adjust the leveling feet until the bubble level on the scale indicates level and tighten the locking nuts on the leveling feet.

Note: On some units the 25 pin D-connector shell must be removed to route the cable. Re-install the shell after routing.

- Reinstall the scale conveyor.
- Route the Model 706 interface cable and the cables for the Model 8361 controller through the holes in the end frames of the 645 Wrapper.
- Connect the Model 706 interface cable to the 25 pin connector of the Model 645 Wrapper (see Figure 4-3).

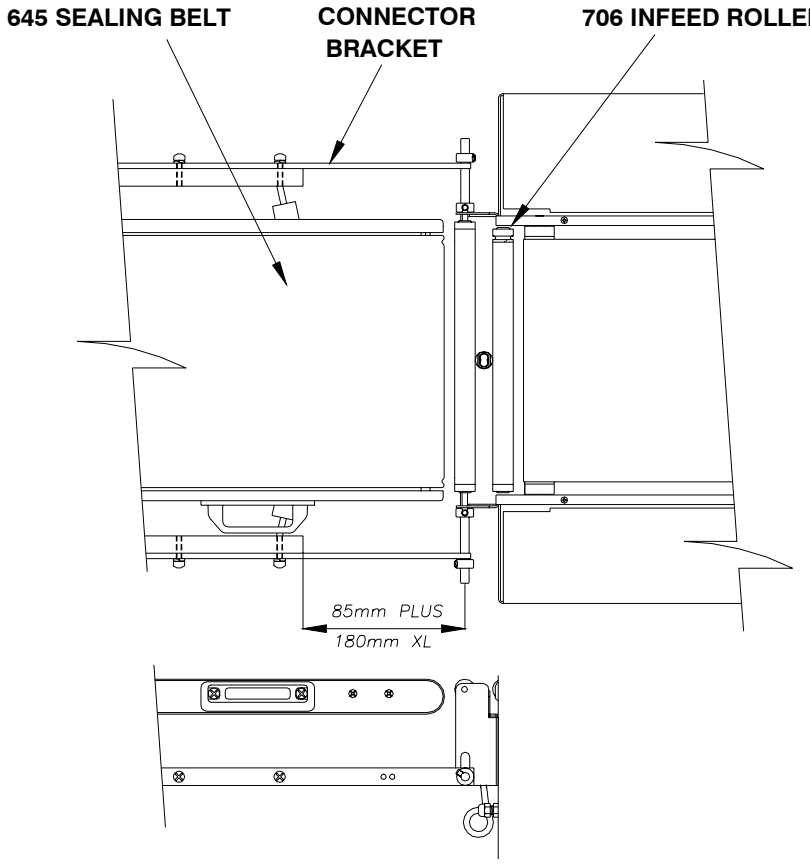


Figure 4-1: Model 645 Wrapper/Model 706 Labeler Connection

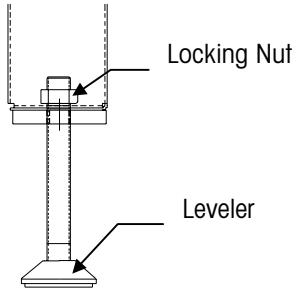


Figure 4-2: Model 706 Labeler Leveler

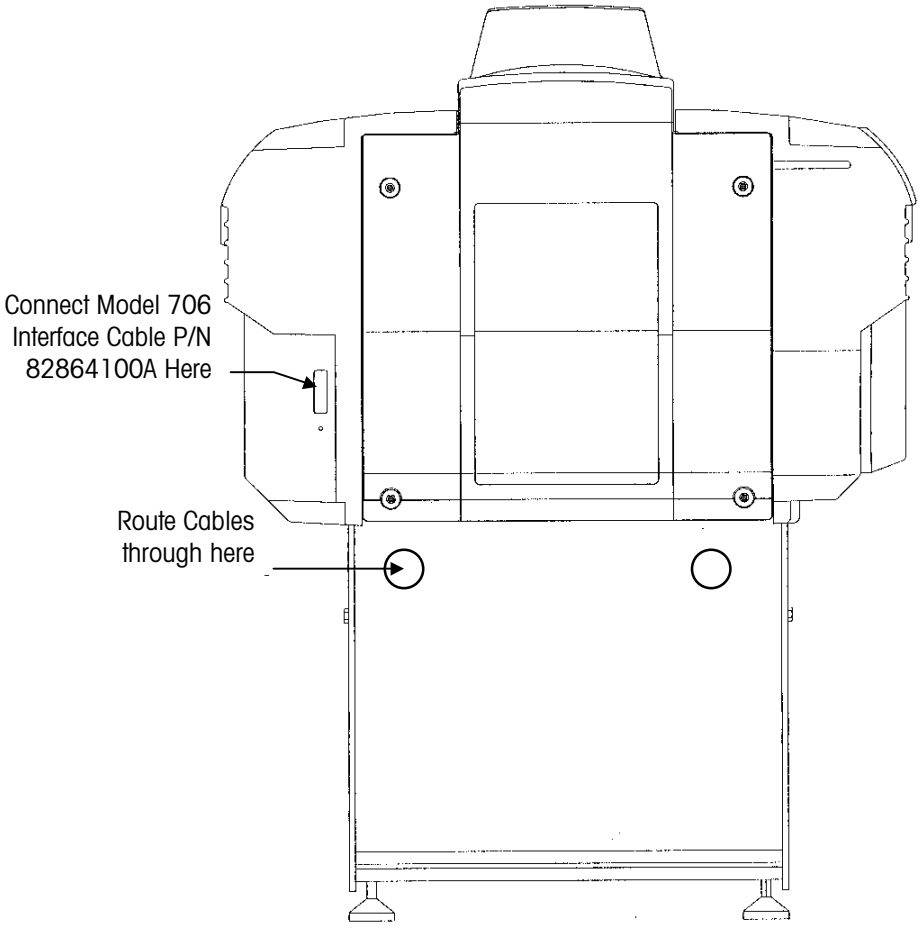
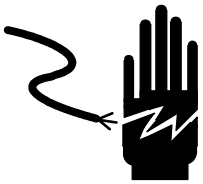


Figure 4-3: Model 706 to Model 645 Interface Cable Connection

Semi-Automatic Installation



WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Attach the legs to the infeed end of the Model 623 Belt Sealer (Figure 4-4).

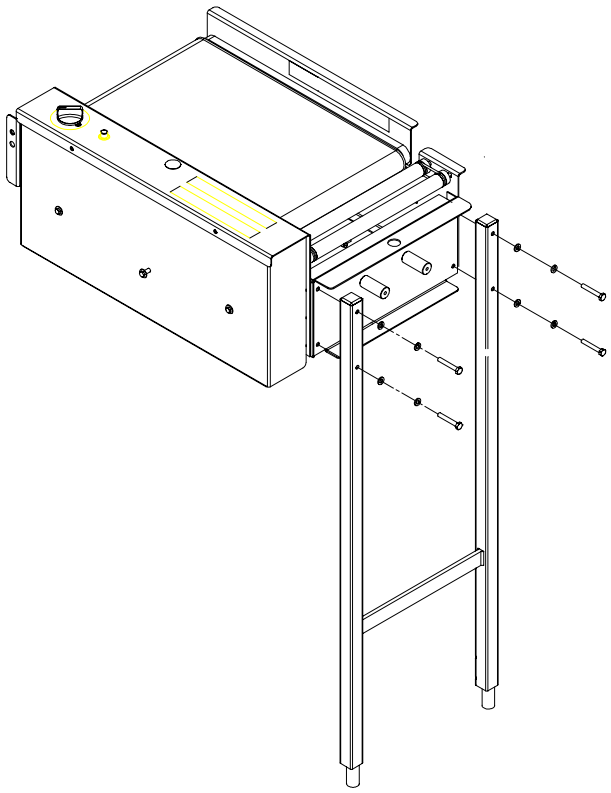


Figure 4-4: 623 Belt Sealer

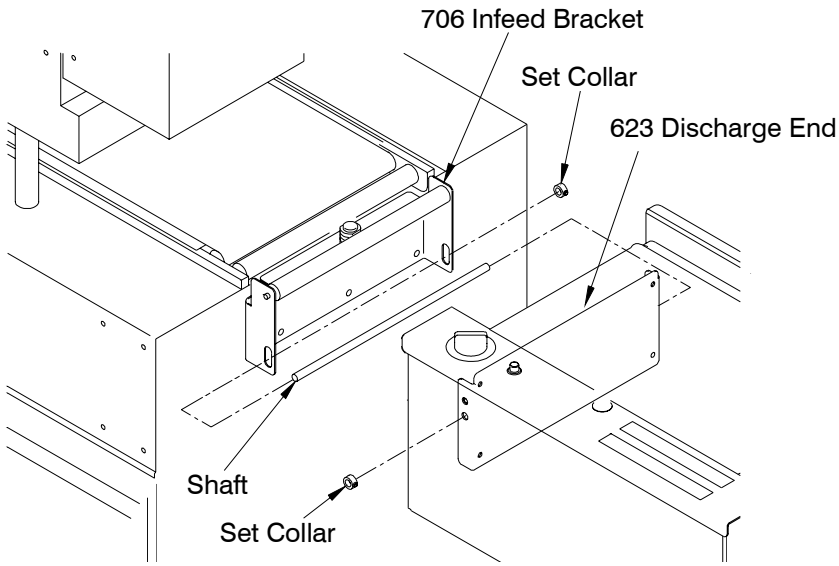


Figure 4-5

Attach the discharge end of the Model 623 Belt Sealer to the infeed bracket of the Model 706 using the shaft and set collars provided (Figure 4-5).

Adjust the height of the Model 623 Belt Sealer by loosening the two setscrews in each leg and extending the feet.

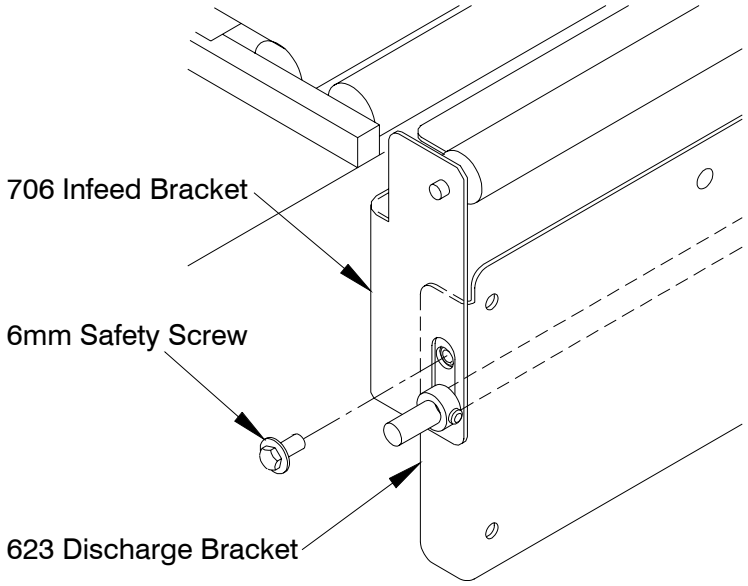


Figure 4-6

Install the 6mm-safety screw through the infeed bracket of the Model 706 and into the discharge bracket of the Model 623 Belt Sealer (Figure 4-6).

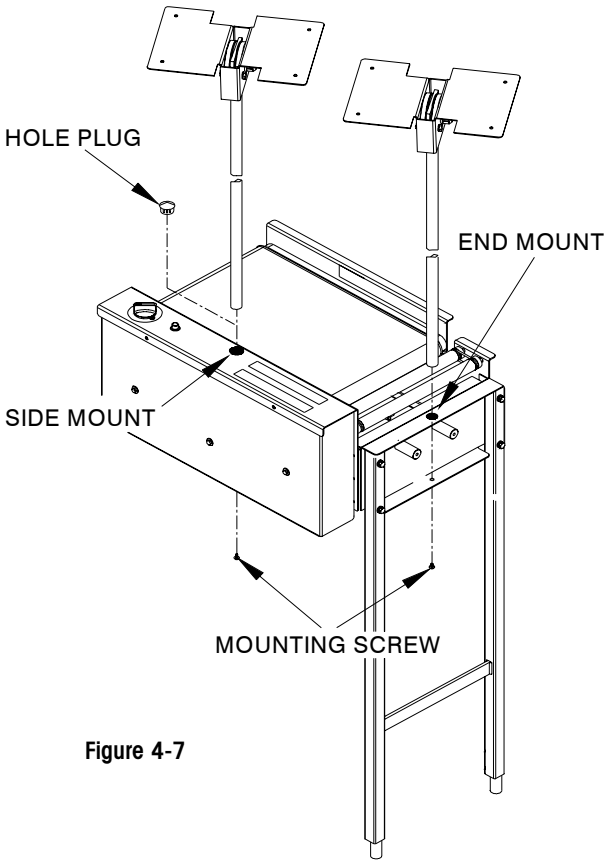


Figure 4-7

Install the scale controller mount in the preferred location (end or side). See Figure 4-7.

Route the belt sealer to autolabeler interface cable through the infeed end panel of the Model 706 and into the back of the Model 706 control box.

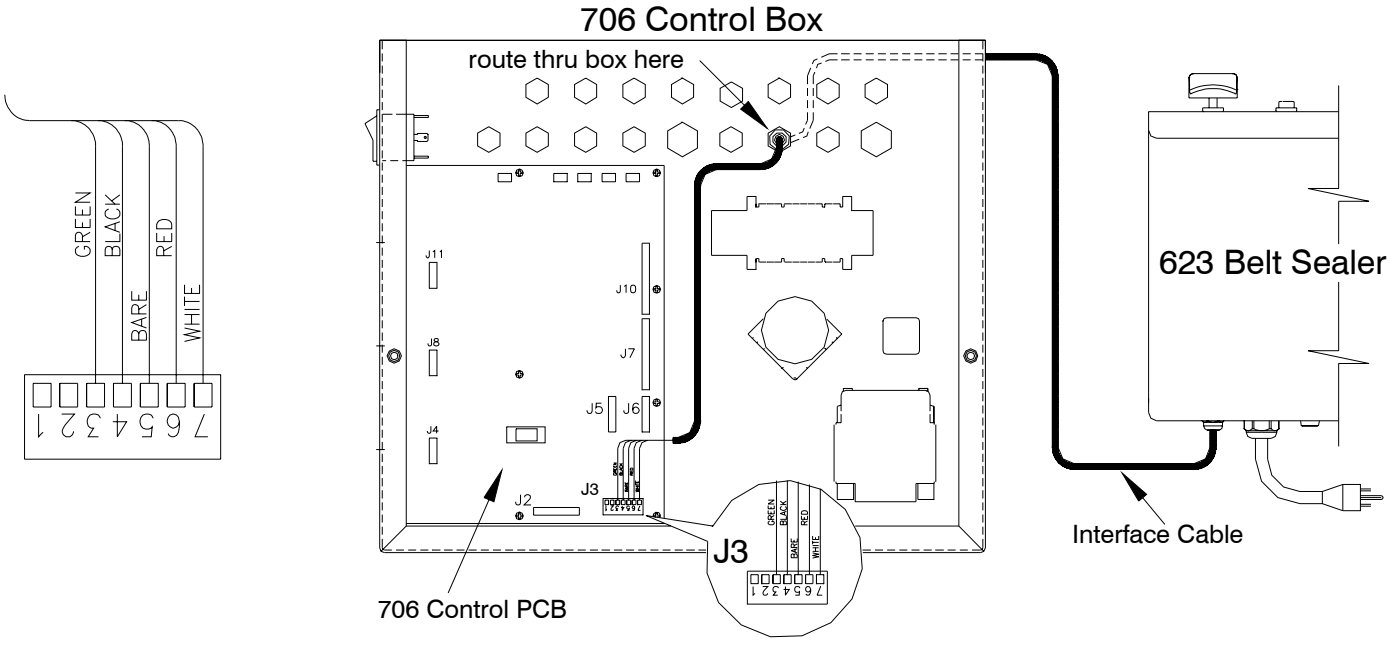


Figure 4-8

Wire the interface cable as shown in figure 4-8.

Attach the 661-1012 hand wraps in the selected locations using the standoffs provided.

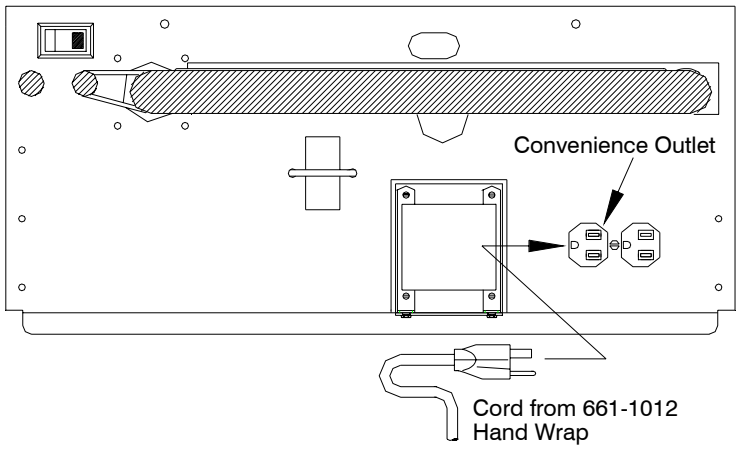


Figure 4-9

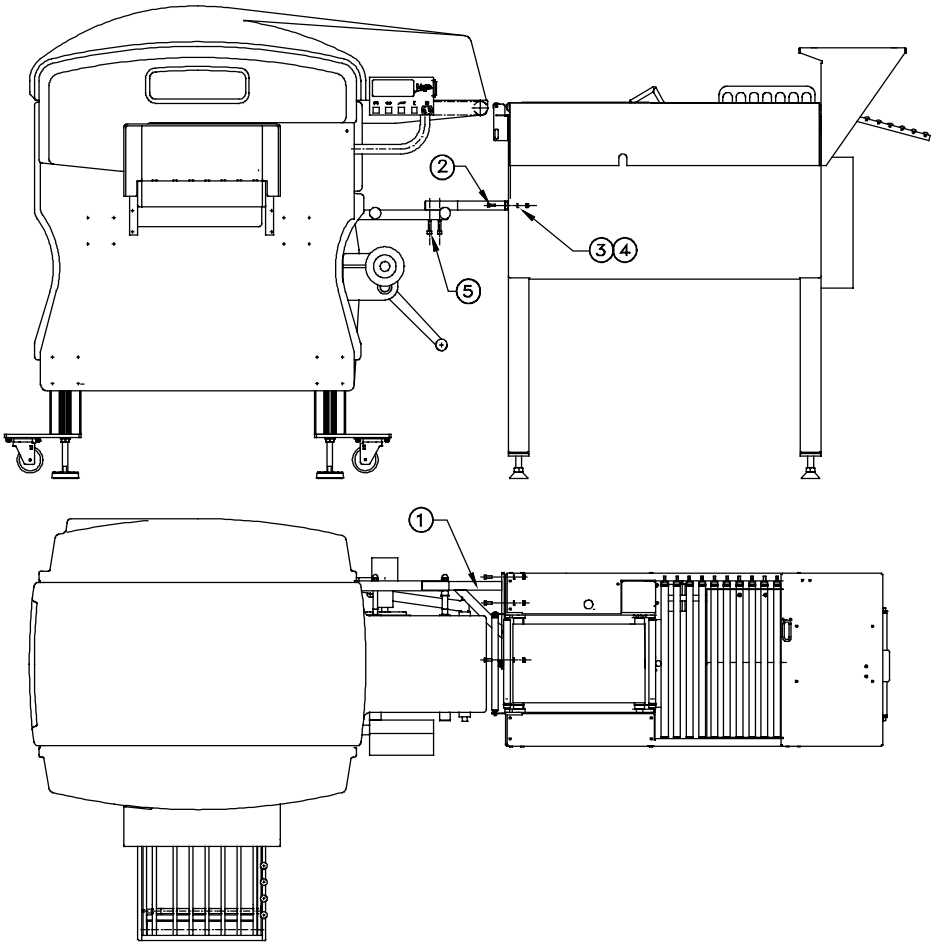
Plug the 661-1012 hand wraps into the convenience outlet located on the underside of the Model 623-belt sealer (Figure 4-9).

Installation on Mega/Max Wrapper

WARNING

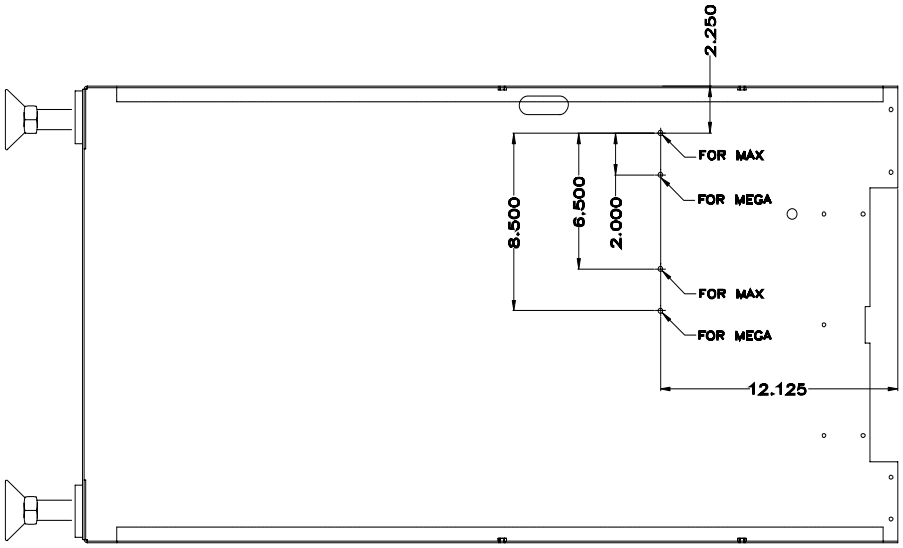
DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Level the Mega/Max Wrapper and attach the connecting bracket 83078100A as shown below. Level the Model 706 so the scale belt is at the same height as the wrapper sealing belt.

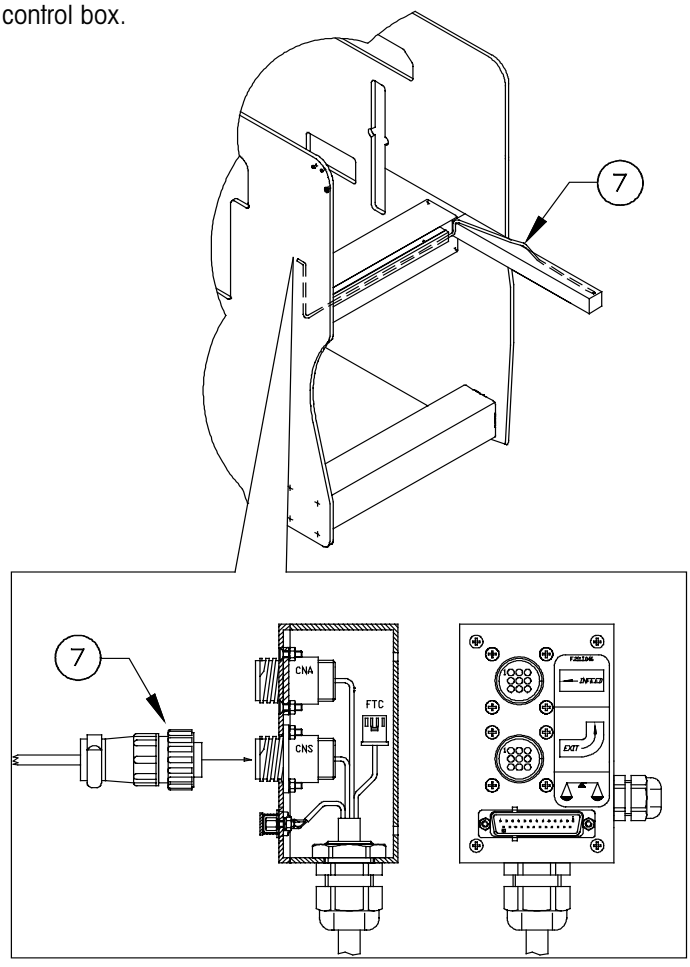


Item	Part Number	Description	Qty
1	83078100A	Connecting Bracket	1
2	82714100A	M6 x 16 Socket Head Capscrew	3
3	82709700A	M6 Flat Washer	3
4	82709200A	M6 Nylock Nut	3
5	82825200A	M8 x 30 Socket Head Capscrew	2

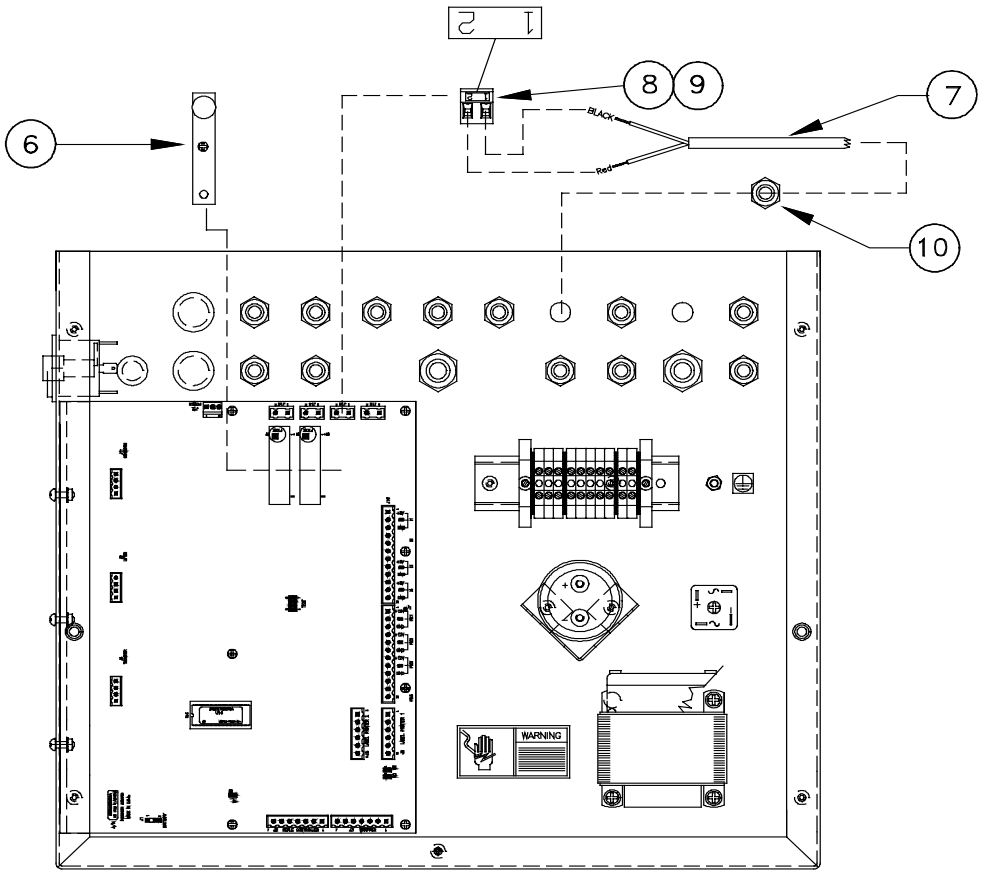
Using the hardware provided, attach the bracket to the side frame of the Model 706. If no holes are present, add holes as shown below.



Plug the Interface Cable (7) 83066800A into the socket labeled "Exit" on the Mega/Max junction box located in the wrapper on the sealing belt side, as shown below. Route the interface cable in the wrapper as shown and behind and under the Model 706. Remove the plug from one of the small holes in the back of the Model 706 control box. Using the supplied cord grip (Item 10 on the next page), feed the 83066800A Interface Cable (7) into the control box.



Using the terminal strip (8) provided (p/n 14708000A), connect the red wire in pin 2 and the black wire in pin 1. Plug the terminal strip into J15 on the Control Board as shown below. Plug the solid-state relay (p/n 13636800A) into K3 on the Control Board and tighten the screw to secure it to the board.



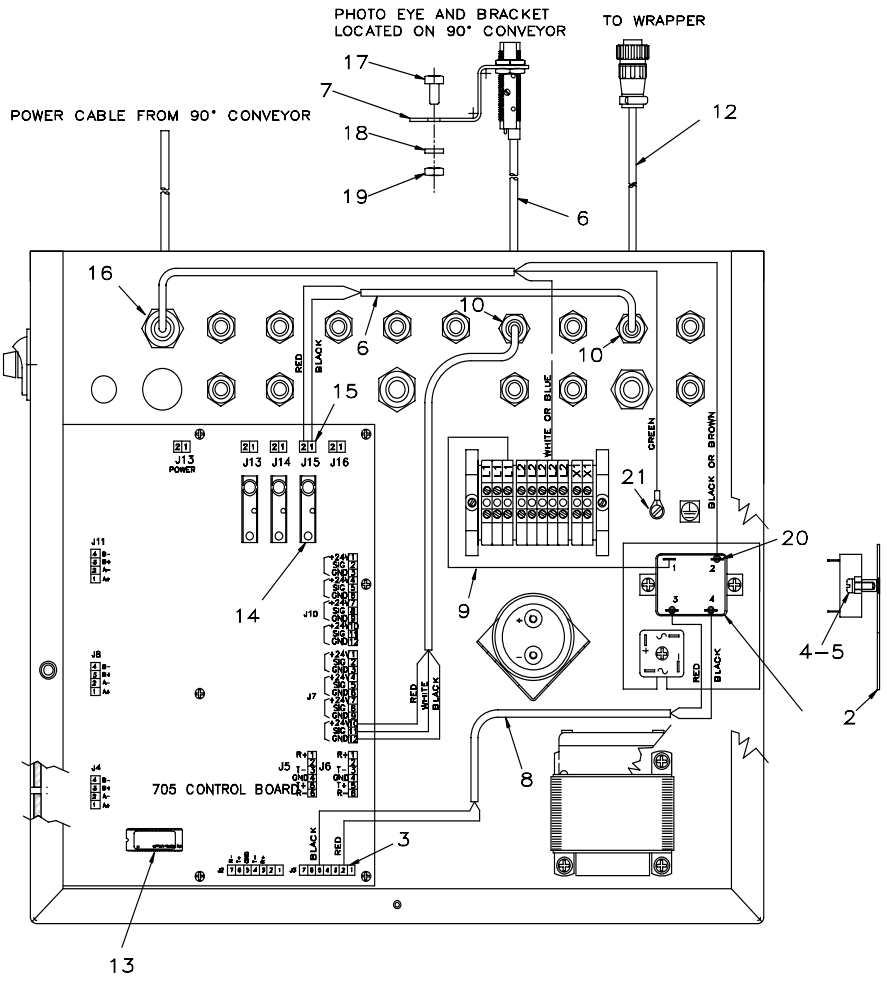
Item	Part Number	Description	Qty
6	13636800A	Solid State Relay	1
7	83066800A	Interface Cable	1
8	14708000A	Terminal Strip	1
9	82176600A	Marker, Terminal Strip	1
10	81976100A	Cord Grip	1

The Model 706 must be placed in the High-Speed mode (F_0=1) when used with the Mega or Max Automatic Wrapper. Refer to the Softswitch Setup section in this chapter for details.

Installation with Power 90 Conveyor

Install the hardware and wiring in the Model 706 Control Box as shown below.

ITEM	QTY	DESCRIPTION	PART
1	1	SOLID STATE RELAY	82990800A
2	1	RELAY MOUNTING PLATE	83218800A
3	2	CONNECTOR–7 PIN J3	11924100A
4	2	LOCKWASHER M4	82710800A
5	2	PHILLIPS HEAD SCREW M4 X 8MM	82715200A
6	1	PHOTO EYE EXTENDED	83237500A
7	1	PHOTO EYE MOUNTING BRACKET	83218900A
8	1	SSR CABLE	83237700A
9	1	POWER CABLE	83237600A
10	2	CORD GRIP	81976100A
11	4	TIE WRAP	
12	1	WRAPPER STOP CABLE	83066800A
13	1	EPROM	E82976400A
14	1	DC RELAY	13636800A
15	1	CONNECTOR 2 PIN J15	14708000A
16	1	CORD GRIP–LARGE	A82474600A
17	1	HEX HEAD CAP SCREW 1/4–20X1/2"	R0275700A
18	1	LOCK WASHER 1/4"	R00413050
19	1	HEX NUT 1/4"	R00434050
20	1	1/4" FEMALE CONNECTOR	10502800A
21	1	RING LUG CONNECTOR	81369000A



Refer to the Softswitch Setup section for details setting the softswitch to your application.

Power 90 Sequence of Operation

When a package exits the wrapper and blocks the photoeye on the Power 90, the Model 706 will turn on the solid-state relay to start the Power 90. The stop signal to the wrapper is turned on and a 1.5 second timer is started. After the timer has expired, one of two things happen:

If the scale is clear, the stop signal to the wrapper is turned off and the Power 90 continues to run. The Power 90 logic then resets to the beginning of the sequence.

- If the scale is busy, the stop signal is left on and a variable time delay (selected in softswitch F_41) starts. At this point one of the following will happen:
- If the time times out before the scale clears, the Power 90 will shut off until the scale clears. At that time the stop signal to the wrapper is turned off and the Power 90 logic resets to the beginning of the sequence.

If the scale clears before the timer times out, the stop signal to the wrapper is turned off and the power 90 continues to run. The Power 90 logic resets to the beginning of the sequence.

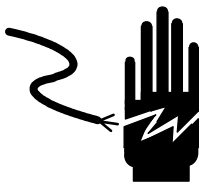
When the Power 90 transfers a package to the scale conveyor, a two second timer starts. If no package blocks the photoeye on the Power 90 within the two seconds, the Power 90 will shut off.

If a package is removed from the Power 90, the Power 90 logic will time out and automatically reset to the beginning of the sequence.

The Model 706 still functions as a normal autolabeler. This allows packages to be hand fed onto the scale conveyor without the need to run them through the wrapper or across the Power 90 first.

Printer Installation

To allow easy access for label replacement, the printer(s) are mounted with the label access door facing the operator of the Model 706 Labeler/645 Wrapper system.



⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

DayGlo Printer

- Remove the printer feet.
- Mount the DayGlo printer on the moveable printer mount using three 5\16 x 1″ flat head socket cap screws and three spacers between the mount and the printer base. Two of the mounting screws go into the threaded holes for the front two printer feet. The third screw goes into a drilled and threaded hole in the middle of the printer base (See Figure 4-4).

Note: The applicator faces the 645 Wrapper.

- Place the nuts on the mounting screws inside the printer case and tighten.
- Remove the four M4 x 8 Phillips screws from the applicator cover, then remove the cover for access to the applicator.
- Remove the three M4 x 8 Phillips screws on the left-hand side door for access to the printer control boards.
- Route the cables and vacuum hose through the cable guide supplied (Refer to Figure 4-4).

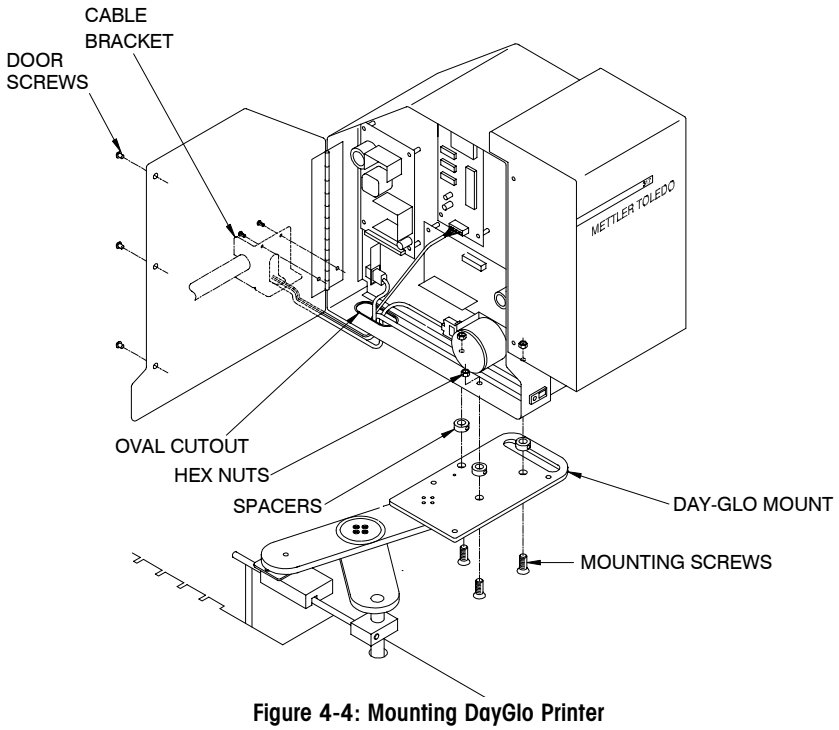


Figure 4-4: Mounting DayGlo Printer

- Route the serial I/O cable with the 25-pin connector through the oval cutout in the bottom of the printer. Plug the cable into the 25-pin serial I/O harness connector (B in Figure 4-5). Tighten the screws. Secure the cable with the line clamp that is provided on the base of the printer.
- Route the AC power cord, the communication line, and the vacuum hose through the oval cutout (Figure 4-4) in the bottom of the printer.
- Plug the AC power cord into the power inlet (C in Figure 4-5); secure the cord with the line clamp that is provided on the base of the printer.
- Connect the communication line into TB2 (A in Figure 4-5) of the Applicator Control Board; secure the cable with the line clamp that is provided on the base of the printer.

Note: Make sure the connector is plugged in properly and not upside down. Pin 1 is located on the right side of the connector.

Model 706 Connection to 317
White Wire to J5 Pin 1
Green Wire to J5 Pin 2
Red Wire to J5 Pin 3
Black Wire to J5 Pin 4
Bare Wire to J5 Pin 5

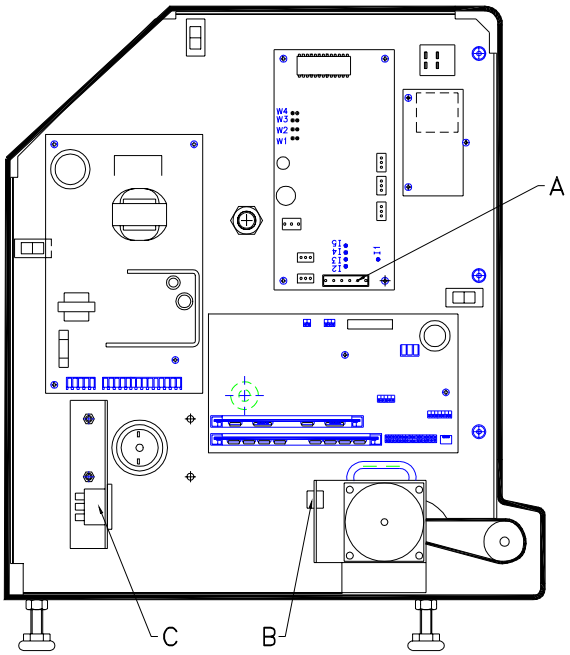


Figure 4-5: Connecting Cables to Model 317

- Route the vacuum line through the hole in the front of the printer (A in Figure 4-6), above the label-feed button and attach it to the bottom of the Applicator Valve Assembly (C). Exercise care when routing the hose past the Optical Coupler (B).

Note: Check that all lines are installed properly and are clear of the scale conveyor system and any other moving parts.

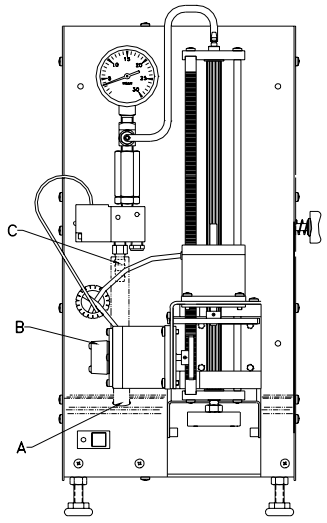


Figure 4-6: Connecting Vacuum Hose

- Mount the Cable Bracket (Figure 4-4) on the back of the DayGlo printer using the existing M4 x 8 Phillips screws. One is located at the bottom of the back side cover hinge and the other holds the center support to the back panel.
- Reinstall the applicator cover, close the printer door, and secure with the M4 x 8 Phillips screws removed earlier.
- Dress the harness with plastic conduit.

Price Label Printer

Note: The applicator faces the DayGlo printer.

- Install the printer shelf onto the labeler using the four M6 x 12 Hex flanged capscrews.
- Place the printer on the shelf and align the printer feet with the four holes in the printer shelf (Figure 4-7). The applicator should be positioned toward the DayGlo printer.

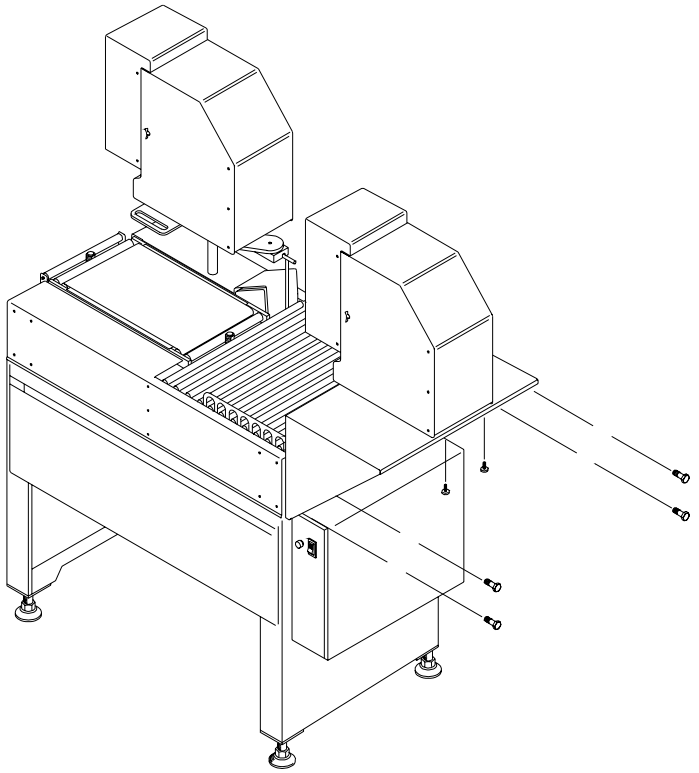


Figure 4-7: Installing Price Label Printer

- Remove the four M4 x 8 Phillips screws to the applicator cover, then remove the cover for access to the applicator.
- Remove the three M4 x 8 Phillips screws on the left-hand side door for access inside the printer (Figure 4-4).
- Route the serial I/O cable with the 25-pin connector through the oval cutout in the printer shelf and through the oval cutout in the bottom of the printer (Figure 4-4). Plug the cable into the 25-pin serial I/O harness connector (B in Figure 4-5). Tighten the screws. Secure the cable with the line clamp that is provided on the base of the printer.

- Route the AC power cord and the communication line through the same cutout and into the printer.
- Plug the AC power cord into the power inlet (C in Figure 4-5); secure the cord with the line clamp that is provided on the base of the printer.
- Connect the communication line into TB2 of the Applicator Control Board (A in Figure 4-5); secure the cable with the line clamp that is provided on the base of the printer.
- Route the vacuum line through the hole in the front of the printer and then through the hole above the label-feed button and attach it to the bottom of the applicator valve assembly.
- Screw in the four hold-down bolts from the bottom of the printer shelf up through the printer feet and tighten (Figure 4-7).
- Reinstall the applicator cover, close the printer door, and secure with the screws provided.

Note: Make sure the connector is plugged in properly and not upside down. Pin 1 is located on the right side of the connector.

Note: Check that all lines are installed properly and are clear of the scale, conveyor system and any other moving parts.

Field Installation of DayGlo Kit

When upgrading the Model 706 Labeler from a Factory Number X001 to X002, a Model 706 KOP-DayGlo Printer Option (# 0925-0406-000) is required. This kit adds the secondary printer to the system.

Note: Refer to the instruction sheet provided with the DayGlo KOP and the wiring diagram in Chapter (7) seven for the proper installation. Refer to the "Parts" section in the back of this manual for a list of parts included in the DayGlo KOP.

Prepack Controller Connections

Model 8361 Prepack Controller

With the wrapper, the Model 706 Labeler, and the Model 317 Printer(s) installed, mount the Model 8361 Controller to the wrapper as described in the Controller Mount Kit.

Connect the Model 706 Labeler interface cable to C in Figure 4-8, the Model 8270 Scale cable to D, and Model 317 DayGlo Printer cable to A, and the Model 317 Standard Printer cable to B on the rear of the Model 8361 Controller, as shown in Figure 4-8. Connect the power cord to the AC power inlet (E). The cables are identified by labels on the connector shells.

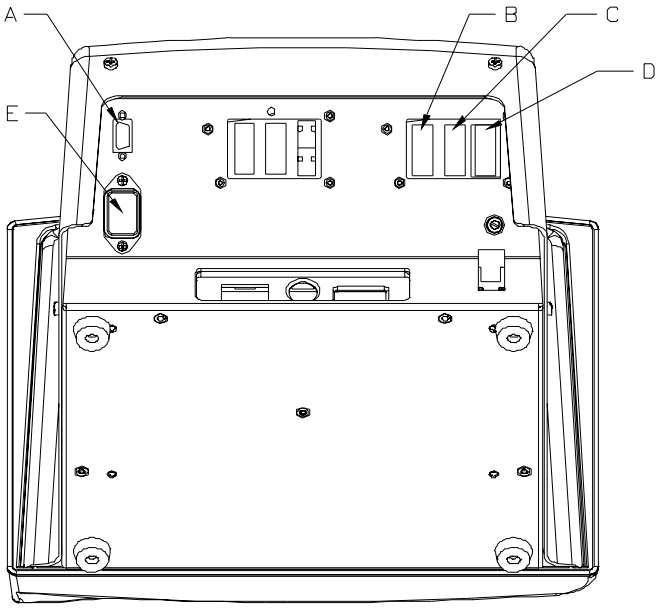


Figure 4-8: Model 8361 Controller Connections

A - Model 317 DayGlo Printer

B - Model 317 Label Printer

C - Model 706 Labeler

D - Model 8270 Scale

E - Power Inlet

50 Hz. Transformer Option (0925-0374-000)

Install the 50 Hz transformer using the following steps:

- Bolt the transformer to existing holes in the rear leg of the Model 706 Labeler using the M6x12 fasteners supplied (See Figure 4-9).
- Cut the Model 706 power cord to the proper length and terminate per the schematic (See Figure 4-10).
- Install the jumpers on the transformer for the correct voltage per the wiring schematic (See Figure 4-10).
- Install the power supply cord (user supplied) per the wiring schematic (See Figure 4-10).
- Install the correct amperage fuse for the voltage being used per the wiring schematic (See Figure 4-10).

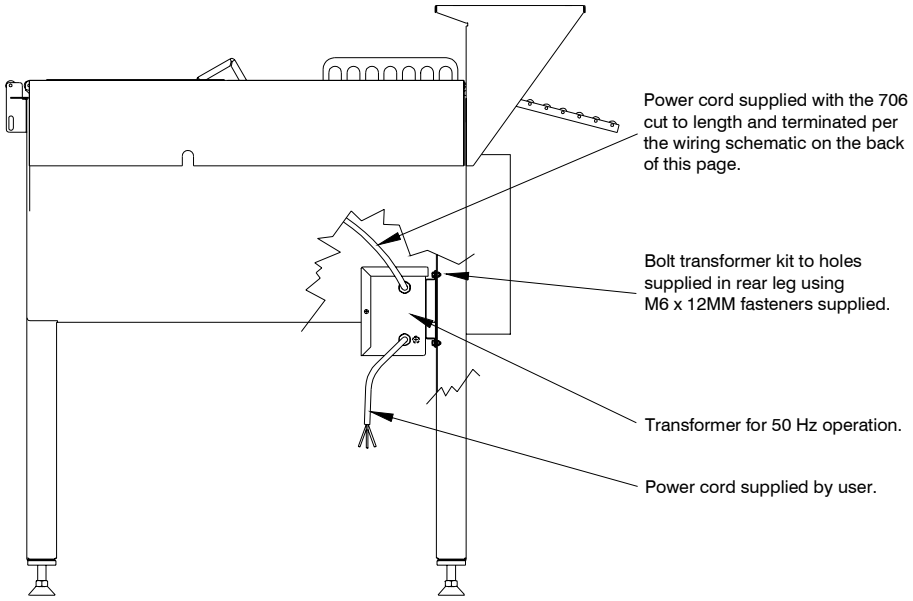


Figure 4-9: 50 Hz Transformer Mounting

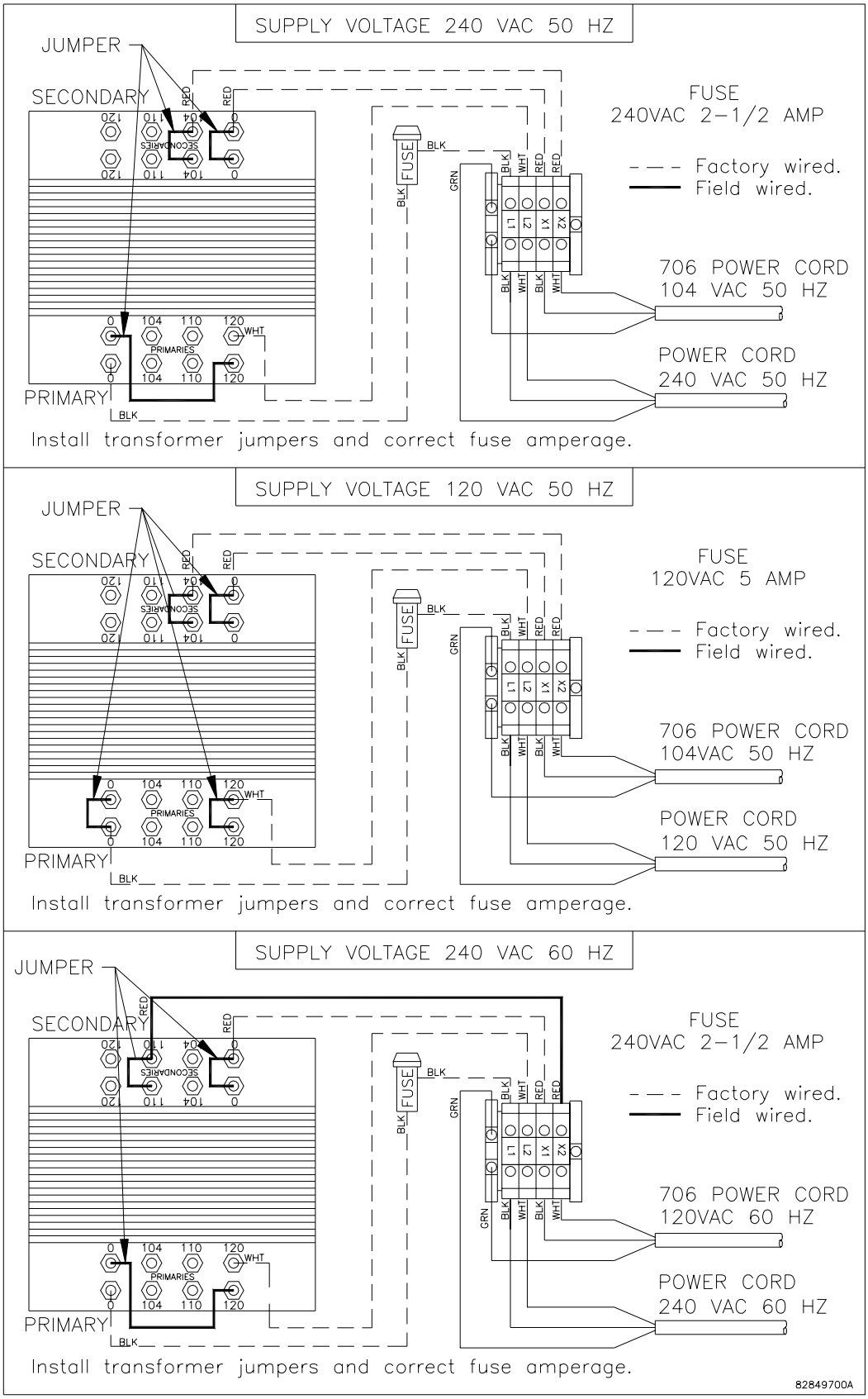


Figure 4-10: 50 Hz Transformer Wiring Diagram

Jumper Settings

The jumper settings on the Model 706 Control PCB are as follows:

W1 Off - Normal Operation

On - Setup/Test Mode

W2 and **W3** - Both on

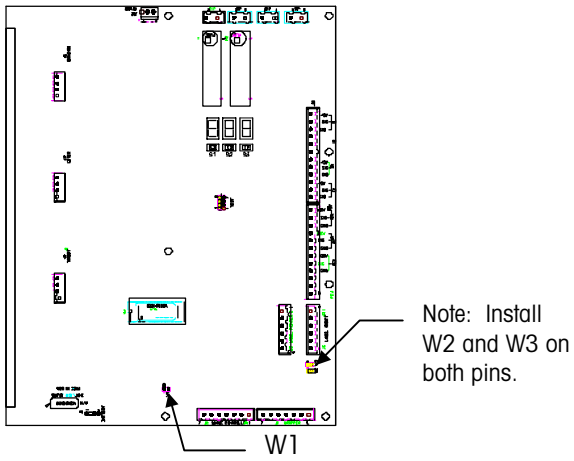


Figure 4-11: Circuit Board Jumper Settings

Power Up

With all the peripherals properly installed and connected, turn all power switches to the off position, then plug the AC power cord of the Model 706 Labeler into a 115 VAC wall outlet. Power up the labeler, printer(s) and the controller by turning on the power switch for each individual unit. The labeler is powered up by pressing the power switch to the on position as shown in Figure 4-12. **NOTE:** To turn on the other peripherals used in the system, refer to the appropriate technical manual.

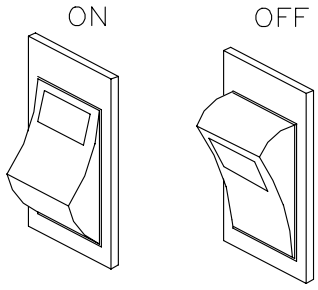
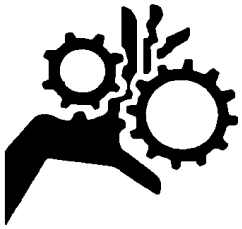


Figure 4-12: Power Switch

Self Test



⚠ WARNING

During self-test, the Conveyors and Pushers will cycle. Do not place materials on the conveyors during this test. Keep hands clear of the machine during the test.

During power up the Model 706 Labeler performs several internal checks before the labeler is operable. The Labeler will cycle 1,2,3 and then display "**_OP**" on the 3-digit LED display located on the control PCB. The following checks are performed during these steps:

- Step 1 performs a ROM check
- Step 2 performs a RAM check
- Step 3 initializes the hardware, reads data from NOVRAM and checks the battery-backed RAM.

If all the conditions are met then the Model 706 Labeler will display "**_OP**" for normal operation. The unit will then check the three photoeye inputs to make sure the photoeyes are clear. If not, the appropriate error message is displayed on the LED display and on the screen of the Model 8361 Controller. The applicator control PCB for both printers will reset to reinitialize the applicators. Finally, the package pushers will go through a homing sequence to make sure they are in the fully retracted position.

To indicate that the Model 706 is communicating with the 645 wrapper the display DS1 will light one segment at a time in a figure 8 pattern. The Model 645 wrapper must be powered up to communicate with the Model 706.

If a checksum error is detected for the NOVRAM, error "**E_4**" will be displayed for one second on the display. The factory default setup values will be loaded, and the Model 706 Labeler will display "**_OP**" and continue to operate.

If a checksum error is detected for the battery-backed RAM, error "**E_5**" will be displayed for one second on the display. The battery-backed RAM will be re-initialized and the Model 706 Labeler will display "**_OP**" and continue to operate. The only data in the battery-backed RAM is the error log.

Softswitch Setup

The **SETUP** mode allows programming soft switches to configure certain items in the labeler. The softswitch settings are retained in NOVRAM (non-volatile RAM memory) once they have been saved. The softswitches must be programmed to configure the labeler for specific applications and functionality with the printers. The 3-digit LED display, located on the Control PCB, will show the setup status of the labeler. Refer to Figure 4-13 below.

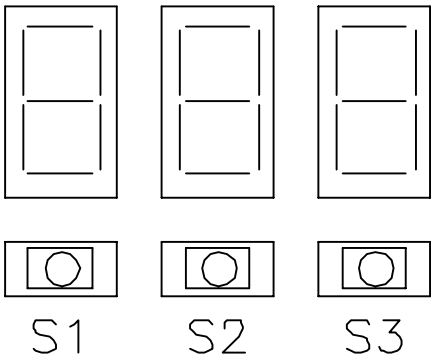


Figure 4-13: Three-Digit LED Display

To enter the setup mode, when "**_OP**" is displayed:

- Jumper **W1** on the control PCB and the display will change from "**_OP**" for normal operation to "**_SU**" for setup. **NOTE:** The Model 706 Labeler also has the capability of going into a test mode **(tst)** and a error log mode **(Log)** by toggling S1 with "**_SU**" displaying on the LED's. These two features are described in the troubleshooting chapter of this manual.
- Press and release switch 3 (S3) on the control PCB.
- The display shows "**F_1**" for function 1 setting.
- When the display shows a "**F_X**" setting (where X = 1-10), press switch 3 to see the status of that particular setting. **Ex: F_4 = 128**
- To change the setting, press the button directly below the digit to be changed**. Ex: To change F_4 =128 to F_4 = 130, press S3 twice, then S2 once.**
- Press switches 1 and 3 simultaneously to switch to the next "**F_X"** setting.
- To toggle quickly between "**F_X**" settings without seeing the status of those settings, press switch 1 with "**F_X**" displaying.
- When the switch settings are complete, press switches 1 and 3 to save changes. The display will show "**SAV**" when saving these changes.
- Remove the W1 jumper to get out of setup. The applicator control PCB for both printers will reset to reinitialize the applicators. The labeler will reinitialize the hardware and test the ROM, RAM, NOVRAM, and battery backed RAM before returning back to "**_OP**."

Softswitch Settings

Note: The Model 8361 Controller and the Model 706 Labeler both have to be set up for DayGlo labels in order for the DayGlo printer to print. If the second printer (DayGlo) is disabled in the Model 8361 Controller, the system will not recognize the setting for "F_1" on the Model 706 Labeler. If the Model 706 Labeler is programmed for price-label printer only, the system ignores the setting for DayGlo labels in the Model 8361 Controller.

The soft-switch settings must be programmed to set up the labeler for applications with or without a DayGlo printer and to setup the label placements on either printer. To change these selections see the previous section "Softswitch Setup."

SSW	Description
F_0	**Speed Selection** 000 = Normal Operation (default) 001 = High Speed Operation (Required for Mega/Max)
F_1	**Printer configuration** 000 = Price-Label printer only 001 = Price-Label and DayGlo printer (default)
F_2	**Operating mode** 000 = Normal Mode (default) 001 = Test Mode (cont. Run) 002 = Factory Test Mode
F_3	**Package stop position for DayGlo Label** 0-255 **(default is 128)**
F_4	**Package stop position for Data Label** 0-255 **(default is 64)**
F_5	**Rear Pusher Stop Position** 0-200 **(default is 200)**
F_6	**Front Pusher Stop Position** 0-200 **(default is 200)**
F_7	**Label Placement** 000 = Upper left 001 = Upper right (default) 002 = Lower left 003 = Lower right 004 = Rear Pusher Only 005 = Front Pusher Only
F_8	**Error Message Language** 000 = English (default) 001 = Spanish
F_9	**Display DayGlo Errors** 000 = No DayGlo Errors Displayed 001 = DayGlo Errors Displayed on Controller Screen (default)
F_10	**Label Turn Mode** 0 = Normal (default) 1 = Inverted
F_11	**Package Stop Position for Data Label Turn Mode** 0-255 (default is 64)
F_12	**Alternate Label Mode** 000 = Lower Right, Not Turned 001 = Lower Right, Turned
F_13	**Package Stop Position for Data Label Alternate Mode** 0-255 (default is 64)
F_20	**Model 702 Operating Mode** 000 = Disabled (default) 001 = Manual Application 002 = Selective Application

Note: When set to 1, F-10 inverts the Normal Label and Turn Label positions. This setting matches the placement used by the Model 606 Labeler.

F_21	**Model 702 Label Delay** 0-255 (default is 90)
F_30	**Model 623 Operation** 000 = Disabled (default) 001 = Enabled, One Pusher Label Placement 002 = Enabled, Two Pusher Label Placement
F_31	**Sealing Belt Dwell Time** 0-255 (default is 150)
F_40	**Power 90 Conveyor Operation** 000 = Disabled (default) 001 = Mega/Max System Enabled 002 = Exact Wrapper System Enabled
F_41	**Power 90 Position Limit** This setting determines where the package on the power turn will stop if it has to wait for the scale to clear. The higher the number, the closer it will stop to the scale. This is a time delay value entered in tens of milliseconds. For maximum throughput, it is best to stop the package as close to the scale as possible. 0-100 (default is 70)
F_42	**Power 90 Package Size Threshold** **(Mega/Max System Only)** This setting determines when a package is considered large. The Power 90 conveyor will stop the wrapper if there are 2 small or 1 large package on the Power 90 conveyor. The higher the number, the larger that a single package has to be before the Power 90 conveyor stops the wrapper. 0-70 (default is 50)

Label Placement

The settings for "**F_3**", "**F_4**" and "**F_11**" are the number of steps beyond the predetermined steps that the stepper motor will take before stopping the package at a specific location. The settings range from 0 - 255 with the default setting at the mid-point 128. For the DayGlo positioning (F_3), one step equals .010 inch. The maximum adjustment of the DayGlo label from "F_3" = 0 to "F_3" = 255 is 2.50 inches. For the price label positioning (F_4), one step equals .007 inch. The maximum adjustment of the price label (F_4 = 255), is 1.75 inches.

The settings for **"F_5"** and **"F_6"** are the number of steps beyond the predetermined steps that the stepper motor will take before stopping the package pushers at a specific position. The settings range from 0 - 200 with the default setting at 200. For the pusher positioning (F_5 and F_6), one step = .008 inch. The maximum adjustment of each pusher is 1.50 inches.

Label placement can be positioned in the upper right, in the upper left, in the lower right or in the lower left corner of the package. This depends on the setting of "**F_7**" in the Model 706 Labeler and if the label mode is turned or not turned in the Model 8361 Controller.

The Model 706 Labeler uses the leading edge of the package to determine label placement for all label positions.

The following figures use 2S and 8S trays as examples and show the direction they are entered into the Model 645 Wrapper. They also show the label placements on the package after they come off the Model 706 Labeler. The possible label placements are as follows:

EXAMPLE: "**F_7**" = 000 (Upper Left) in the Model 706 Labeler and the Model 8361 Controller is set for Label Mode Turned.

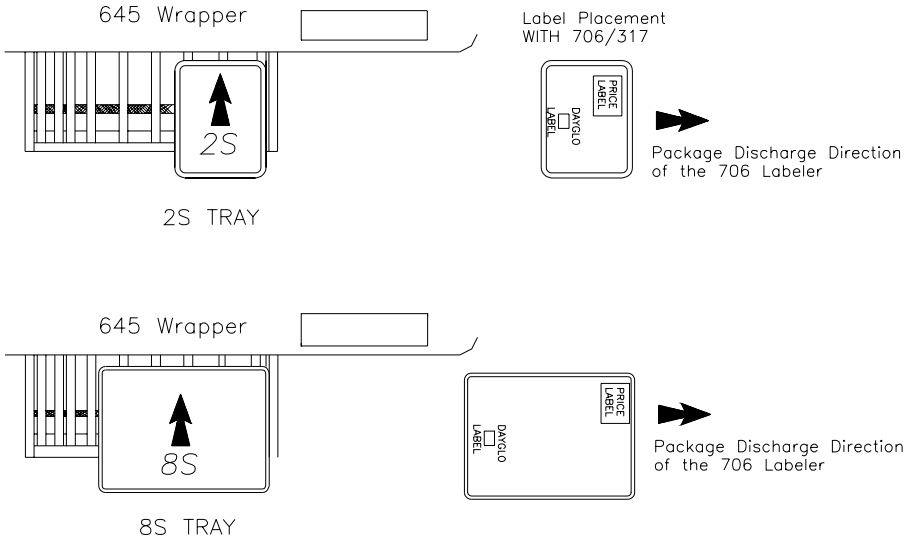


Figure 4-14

EXAMPLE: "**F_7**" = 000 (Upper Left) in the Model 706 Labeler and the Model 8361 Controller is set for Label Mode **Not** Turned.

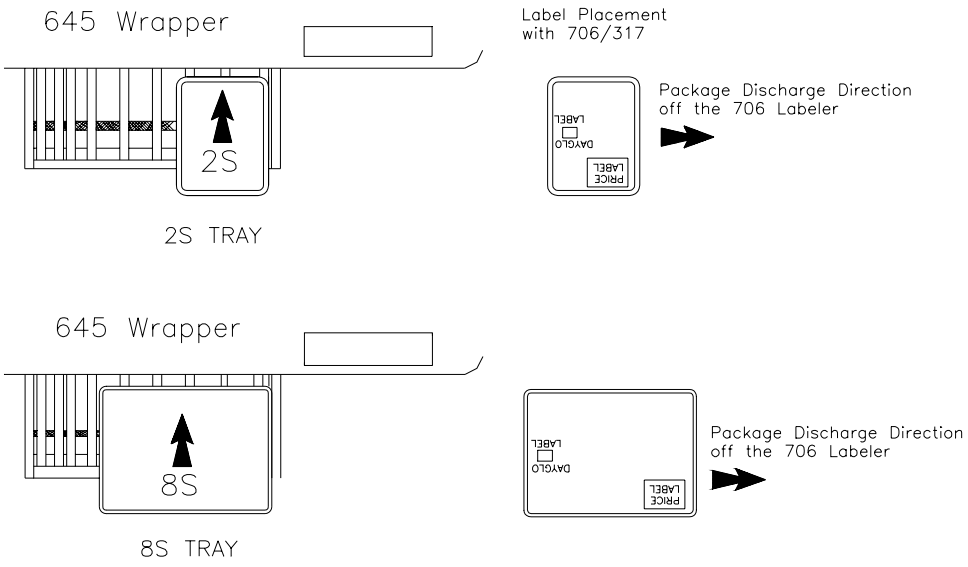


Figure 4-15

EXAMPLE: "**F_7**" = 001 (Upper Right) in the Model 706 Labeler and the Model 8361 Controller is set for Label Mode **Not** Turned.

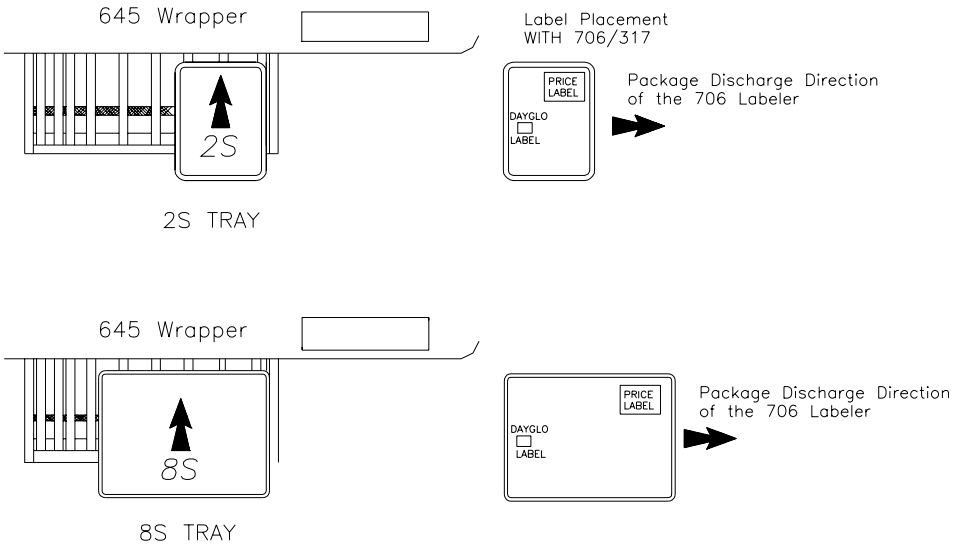


Figure 4-16

EXAMPLE: "**F_7**" = 001 (Upper Right) in the Model 706 Labeler and the Model 8361 Controller is set for Label Mode Turned.

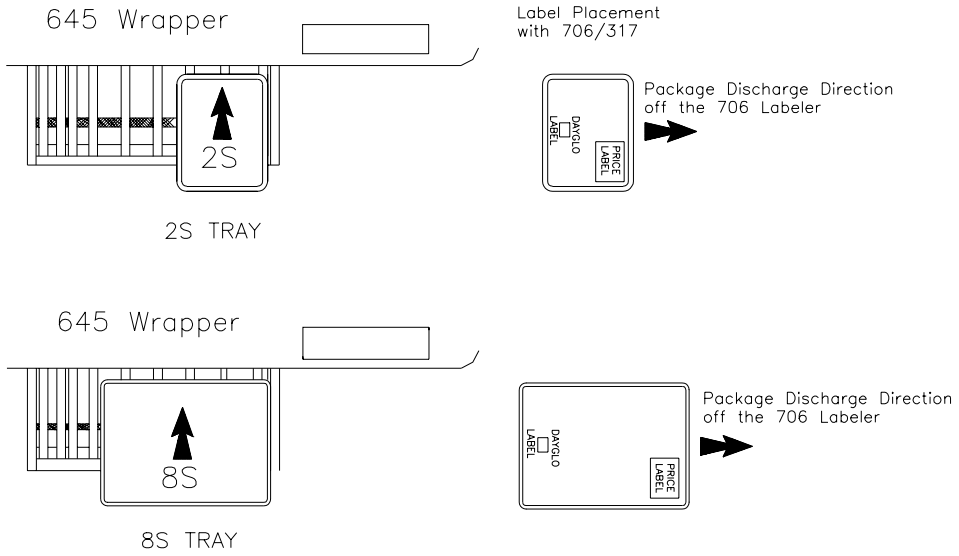


Figure 4-17

Example: "F_7" = 002 (Lower Left) in the Model 706 Labeler and the Model 8361 Controller is set for Label Mode **Not** Turned.

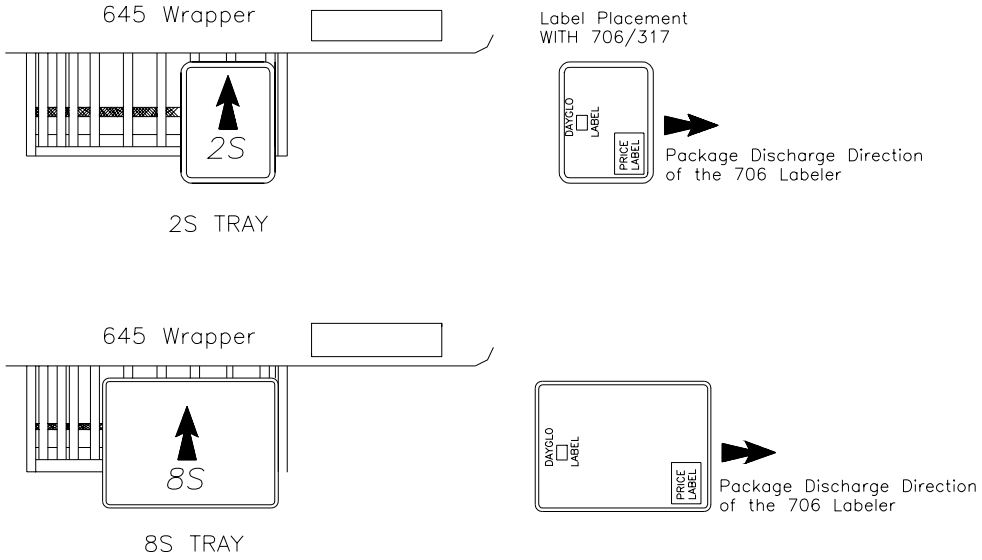


Figure 4-18

Example: "F_7" = 002 (Lower Left) in the Model 706 Labeler and the Model 8361 Controller is set for Label Mode Turned.

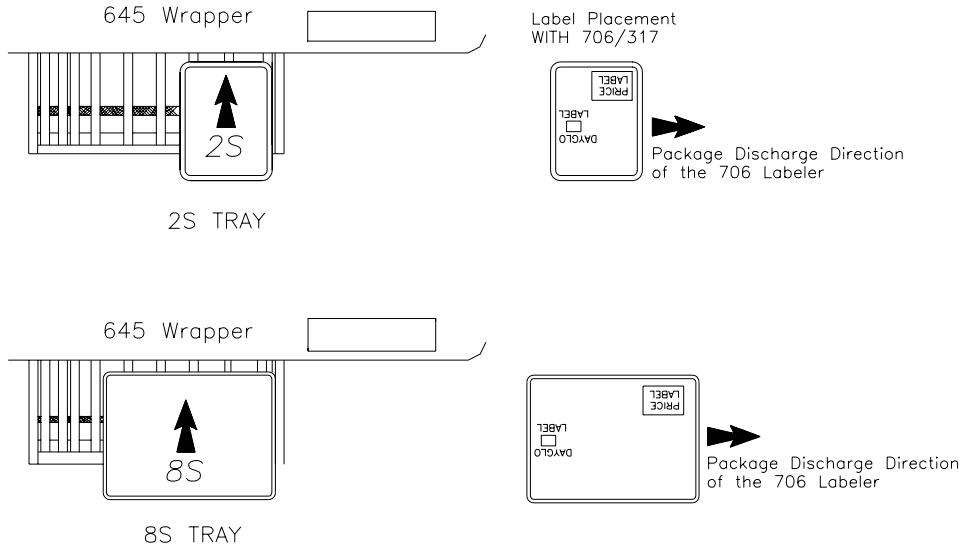


Figure 4-19

Example: "F_7" = 003 (Lower Right) in the Model 706 Labeler and the Model 8361 Controller is set for Label Mode **Not** Turned.

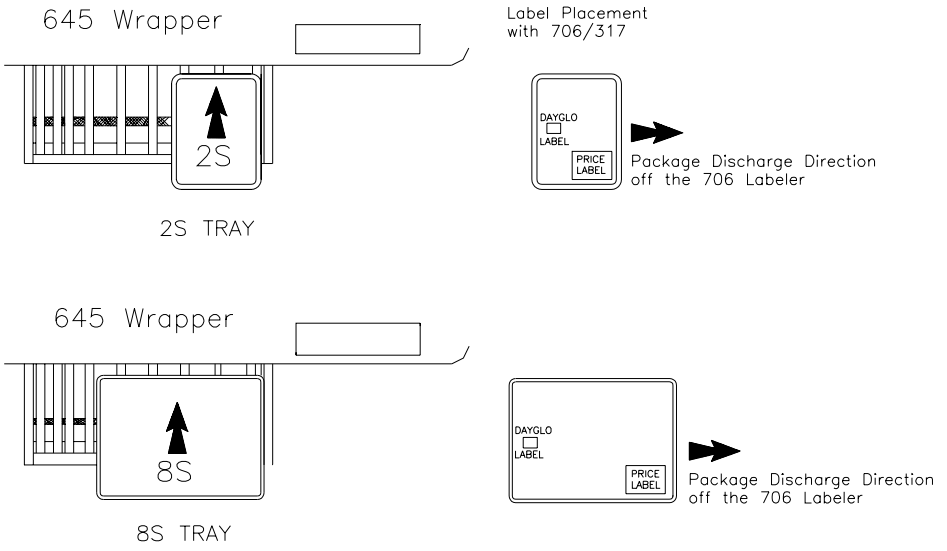


Figure 4-20

Example: "F_7" = 003 (Lower Right) in the Model 706 Labeler and the Model 8361 Controller is set for Label Mode Turned.

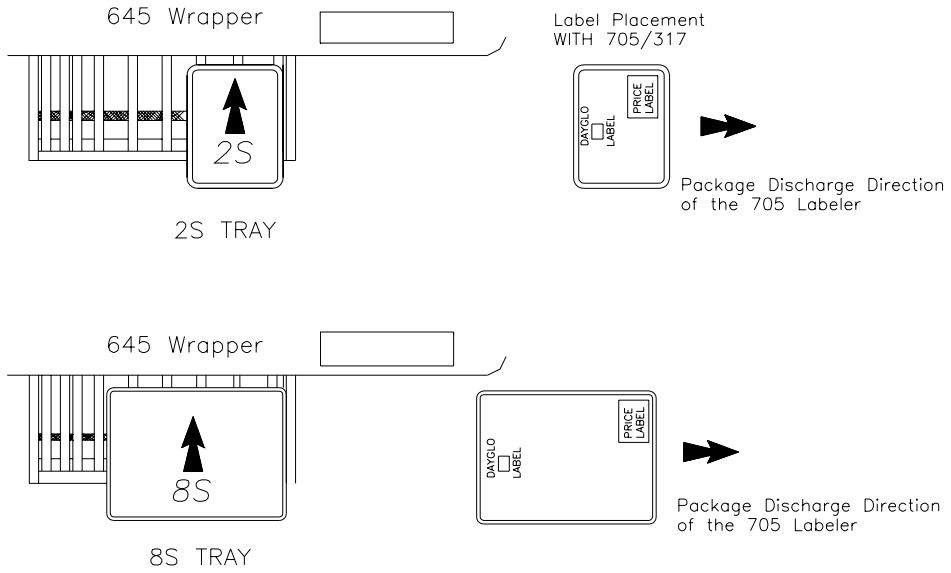


Figure 4-21

Calibration of Scale

Calibration of the Model 8270-2000 Scale is performed through the Prepack Controller. Before calibration is made, verify that the scale is level and the scale platter assembly is free of any binds. Make sure the wires to the scale conveyor motor are not coming in contact with any other cables or components so that the weighing accuracy is not affected. For information on calibrating the scale base, refer to the Prepack Controller Technical Manual.

The shift test should be performed after calibration. Test the Model 706 Labeler for repeatability and accuracy using various weight packages.

Sequence of Operation

Normal Mode (F2 = 0)

As the package is discharged from the Model 645 Wrapper, the front edge of the package moves onto the infeed roller and blocks the infeed photoeye (PE #1) between the infeed roller and second roller. The Model 706 Control PCB receives this signal from the photoeye, and powers the scale conveyor and vacuum pump. The Model 706 Labeler then signals the Prepack Controller to print a DayGlo label if it is selected in the PLU record. The pump stops after 10 seconds if another package doesn't block the photoeye. The scale conveyor transports the package to the scale. After the trailing edge of the package clears the infeed photoeye (PE #1), the package is positioned by stopping the stepper motor a given number of drive steps, which is determined in the "**F_3**" setting of the Model 706 Labeler. The Model 706 Labeler weighs the package and then signals the Model 317 DayGlo Printer to apply the DayGlo label.

If a DayGlo label is not required, the package is stopped and weighed after clearing the infeed photoeye (PE #1).

The Model 706 Labeler signals the Prepack Controller to capture a stable weight, and waits for the weigh complete signal back from the Prepack Controller. The Prepack Controller sends the label information to the Model 317 Printer. The Model 317 Printer prints the product label. The scale conveyor transports the package off the scale to the positioner conveyor. The package crosses the positioner photoeye (PE #2) to determine the leading edge location for positioning of the price label. Depending on the setup of label placement (F_7) and package stop position (F_4, F_5 and F_6), the positioner conveyor and pushers position the package for the price label. The Model 706 Labeler signals the 317 Primary Label Printer to apply the label. After the price label has been applied, the package is conveyed off the end of the positioner conveyor.

In some cases, such as with uneven packages, increased settling time on the scale will cause the Model 706 to lag behind the Model 645. This could lead to a situation where two packages are on the Model 706 scale platter at the same time. To eliminate this, the Model 706 software sends a stop command to the Model 645 causing the wrapper to momentarily pause while the weighing task is completed.

Test Mode (F2 = 1)

This mode is used to check label placement repeatability.

As the front edge of the package moves onto the infeed roller and blocks the infeed photoeye (PE #1) between the infeed roller and second roller, the Model 706 Control PCB receives the signal from the photoeye, and powers the scale conveyor and vacuum pump. The Model 706 Labeler then signals the Prepack Controller to print a DayGlo label if it is selected in the PLU record. The scale conveyor transports the package to the scale. The length of the package is measured as the package travels onto the scale. After the trailing edge of the package clears the infeed photoeye (PE #1), the package is positioned by stopping the stepper motor a given number of drive steps, which is determined in the "**F_3**" setting of the Model 706 Labeler. The Model 706 Labeler weighs the package and then signals the 317 DayGlo Printer to apply the DayGlo label.

If a DayGlo label is not required, the package is stopped and weighed after clearing the infeed photoeye (PE #1).

The Model 706 Labeler signals the Prepack Controller to capture a stable weight, and waits for the weigh complete signal back from the Prepack Controller. The Prepack Controller sends the label information to the Model 317 Printer. The Model 317 Printer prints the product label. The scale conveyor transports the package off the scale to the positioner conveyor. The package crosses the positioner photoeye (PE #2) to determine the leading edge location for positioning of the price label. Depending on the setup of label placement (F_7) and package stop position (F_4, F_5 and F_6), the positioner conveyor and pushers position the package for the price label. The Model 706 Labeler signals the Model 317 Primary Label Printer to apply the label.

After the price label has been applied, the package pushers center the package on the positioner conveyor. The package is conveyed back to the infeed photoeye (PE #1). The Model 706 then repeats the process with the scale conveyor positioning the package for weighing and DayGlo placement and so on. This process will continue repeating until the package is removed or the 706 is powered down.

Factory Test Mode (F2 = 2)

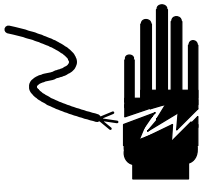
This mode is used at the factory to test the stepper outputs and to provide run time on the scale conveyor belt.

When the infeed photoeye (PE #1) is blocked each stepper motor is cycled for a predetermined number of steps beginning with the scale conveyor then the positioner conveyor and last the package pushers. The Model 706 will repeat this process until the positioner photoeye (PE #2) is blocked or the Model 706 is powered down.

5 General Maintenance, Cleaning, and Lubrication

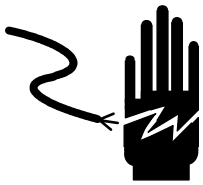
Maintenance

Before cleaning or servicing this unit, disconnect AC power by turning off the power switch on the side of the machine to the left of the control box, then unplug the AC line cord from the outlet. Failure to observe these precautions could result in bodily harm as the machine may operate unexpectedly. Unplugging the AC line cord for the Model 706 Labeler is necessary to remove power to the printer(s) and Prepack Controller.



WARNING

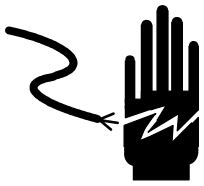
ONLY PERMIT QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.



WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Removing the Scale Base



⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Remove power from the machine by turning the power switch to off and unplugging the line cord before performing this service. Use the following procedure to remove the Model 8270 Scale Base from the Model 706 Labeler:

1) Unplug the scale conveyor motor connector and the motor ground wire.
2) Loosen the nuts from the two motor cover studs and remove the motor cover (the cover is slotted).
3) Lift the scale conveyor straight up off of the scale (see Figure 5-1).
4) Unbolt and remove the scale base from the scale support.
5) Disconnect the scale cable from the scale base.
6) Reinstall in reverse order.
7) Verify that the scale conveyor is level, the height matches the infeed and positioner rollers and the base does not rock before tightening. Adjustments are made with the nuts on the scale mounting studs.

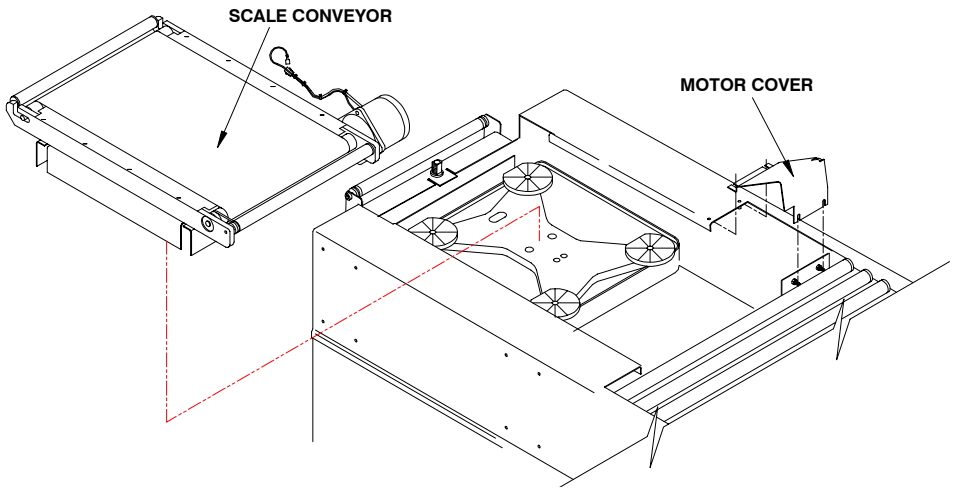


Figure 5-1: Removing the Scale Base

Adjusting The Scale Conveyor Belt Tracking

Use the following procedure to check and adjust the tracking of the scale conveyor belt.

1. Position the belt at the desired location on the pulleys. When correctly installed the edge of the belt should be approximately 1″ from the edge of the conveyor.
2. Make sure the edges of the belt are tight against the tapered drive pulley. If they are not tight, increase the tension equally on each side until they are tight (see figure 5-2). **Note: If the edges of the belt are not tight against the tapered drive pulley the belt will not track properly.**
3. Place the labeler in the high-speed conveyor test. Note: This is Test #3 on the PCB (refer to page 6-4 of the troubleshooting section).
4. Place a short mark on the conveyor belt 50mm from the edge of the conveyor bed (see figure 5-2).
5. Activate the high-speed belt test by blocking the infeed photoeye. Note: The belt will run for approximately 30 seconds and then stop.
6. Locate the previously made mark on the belt and measure the new position of the mark relative to the edge of the conveyor. If the mark has moved laterally from its previously marked position (50mm from the edge) by more than 0.5mm, adjust the front tracking set screw according to the chart below.

Position of mark after one cycle	Tracking adjustment
53 mm	1/2 turn clockwise
51.5 mm	1/4 turn clockwise
50.8 mm	1/8 turn clockwise
49.2 mm	1/8 turn counter-clockwise
48.5 mm	1/4 turn counter-clockwise
47 mm	1/2 turn counter-clockwise

7. Repeat the test and adjustment until the belt moves less than 0.5mm between cycles.
8. As a final check, run the high-speed test at least 10 times to ensure the belt tracking is stable.

Note: Blocking Photoeye PE2 while the conveyor belt is running will cause the drive motor to stop.

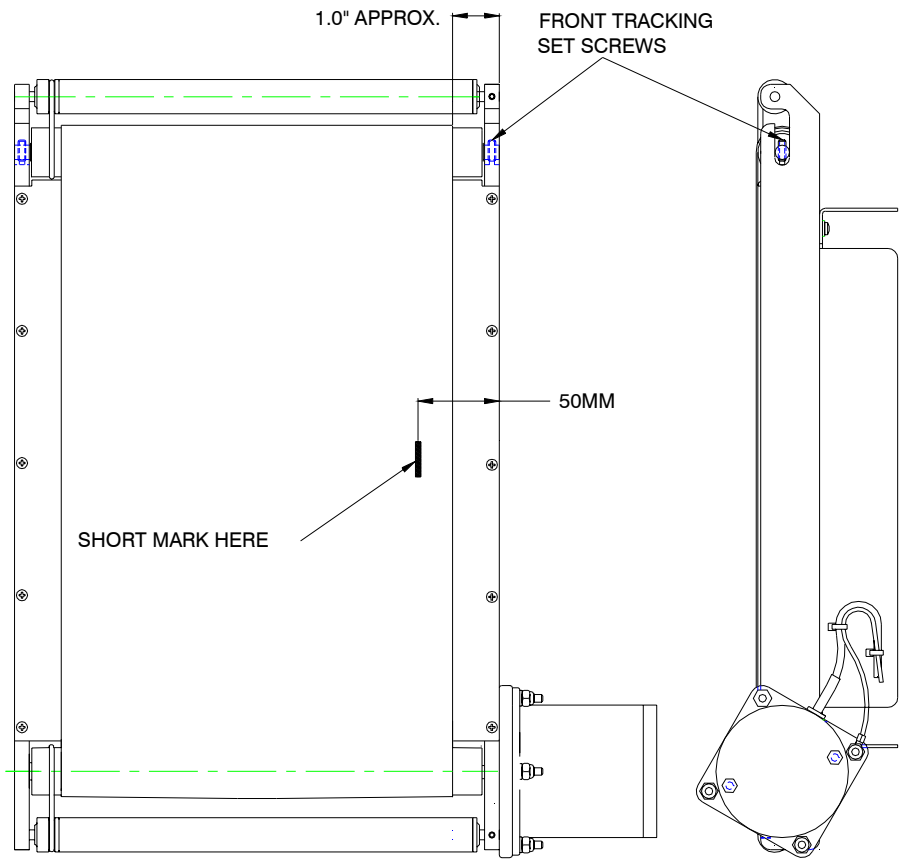
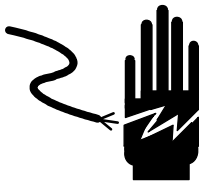


Figure 5-2: Adjusting Scale Conveyor Belt Tracking

Changing the Scale Conveyor Belt



⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Remove power from the machine by turning the power switch to off and unplugging the line cord before performing this service.

1. Remove the scale conveyor from the 706 Labeler (refer to section titled Removing Scale Base).
2. Release the tension on the scale conveyor belt by loosening the tensioning set screws on the infeed end of the scale conveyor (refer to figure 5-3).
3. Loosen the two setscrews located in the rear conveyor frame that hold the knurled roller shafts in place (refer to figure 5-3).
4. Remove the knurled rollers and shafts.
5. Remove the 7 capscrews (5 flat head and 2 pan head) from the front conveyor frame and remove the frame (refer to figure 5-3).
6. Remove the 2 roller drive belts from the rollers.
7. Slide the scale conveyor belt off the conveyor drive and conveyor idler rollers.
8. Reassemble in reverse order.
9. Adjust belt tracking following procedure in the previous section.

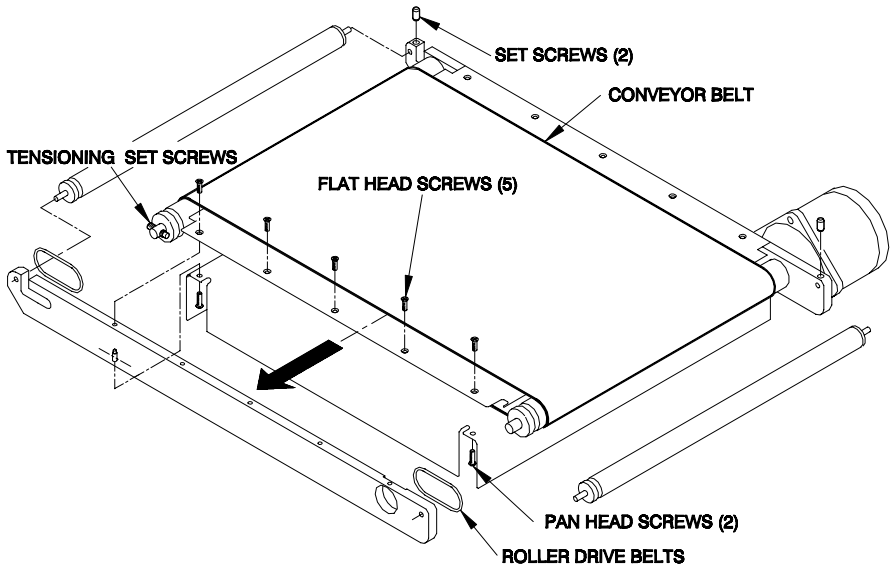
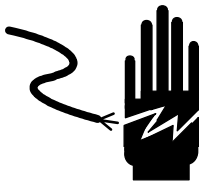


Figure 5-3: Conveyor Belt Replacement

Changing the Positioner Conveyor Rollers



⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Remove power from the machine by turning the power switch to off and unplugging the line cord before performing this service. The positioner conveyor rollers can be removed by lifting up on the belt end of the roller and disengaging the roller shaft on the opposite end from the carrier. Slide the belt out of the groove and off the roller assembly (refer to figure 5-4). When reinstalling make sure the notch on the shaft is hooked in the slot of the frame.

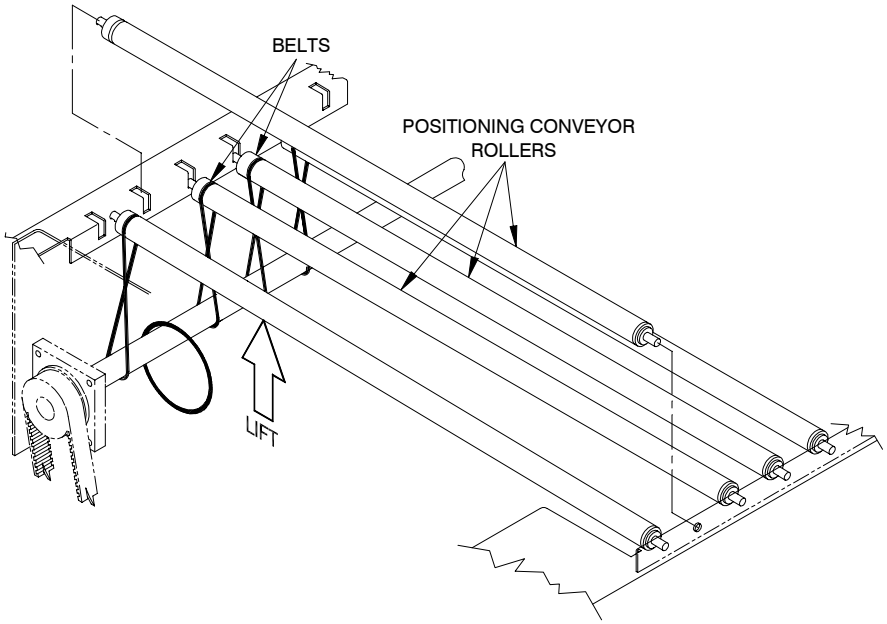
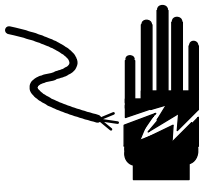


Figure 5-4: Positioner Conveyor Roller Replacement

Changing the Positioner Conveyor Belts



⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Remove power from the machine by turning the power switch to off and unplugging the line cord before performing this service.

1. Remove all the positioner rollers following the procedure described in the previous section.
2. Remove the Phillips cap screw from the discharge end of the positioner conveyor drive roller. Note: the cap screw is held in place by a nut located between the discharge leg and the end of the positioner conveyor drive shaft (refer to figure 5-5).
3. Remove the belts by sliding them off the end of the positioner conveyor drive shaft.
4. Reassemble in reverse order.

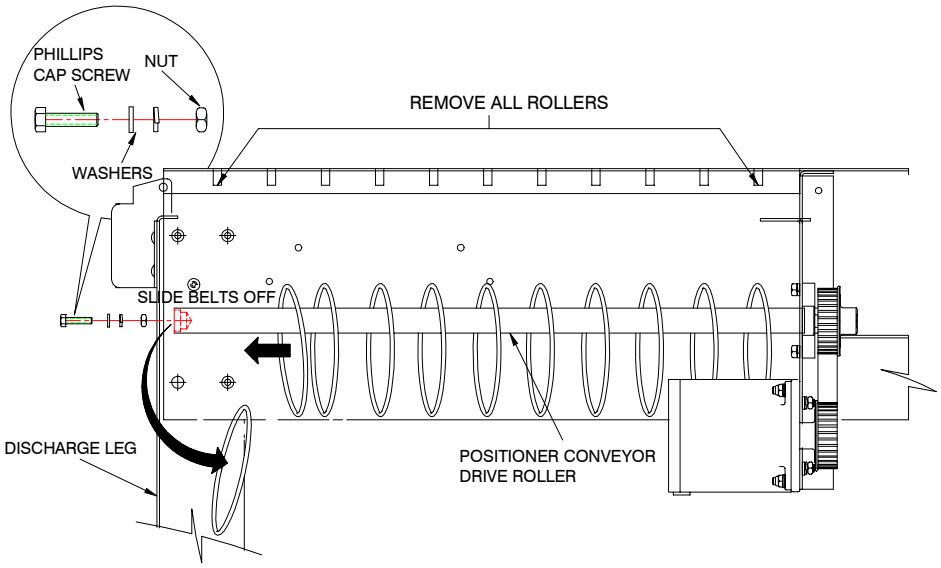
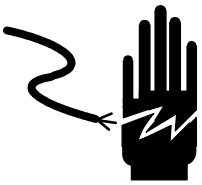


Figure 5-5: Positioner Conveyor Belt Replacement

Changing the Positioner Conveyor Drive Belt



⚠ WARNING

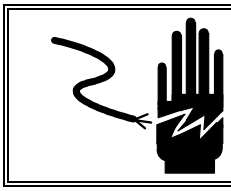
DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Remove power from the machine by turning the power switch to off and unplugging the line cord before performing this service. To change the conveyor drive belt, loosen the conveyor drive motor mount. Remove the drive belt from the drive pulley and the stepper motor pulley and replace.

After the drive belt is replaced, pull down on the drive motor by hand to tension the drive belt and tighten the drive motor mount.

Note: There should be 1/4 in. ± 1/8 in. deflection in the belt after the drive motor is tight. Using switch #1 (SW 1) in the normal operation mode, check for smooth tooth engagement when running the conveyor.

Positioner Pusher Replacement



WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE REMOVING THE FUSE OR SERVICING.

Note: The package pushers must be removed to access the pusher photo interrupt sensors.

Remove power from the machine by turning the power switch to off and unplugging the line cord before performing this service.

1. Remove the positioner rollers as described in previous sections.
2. Remove the 2 flat head cap screws from the front package pusher and remove the pusher (Refer to figure 5-6).
3. Remove the pusher spacer block.
4. Remove the 2 flat head cap screws from the rear package pusher and remove the pusher.
5. Reinstall in reverse order. Note: The pusher spacer block is installed under the front pusher.

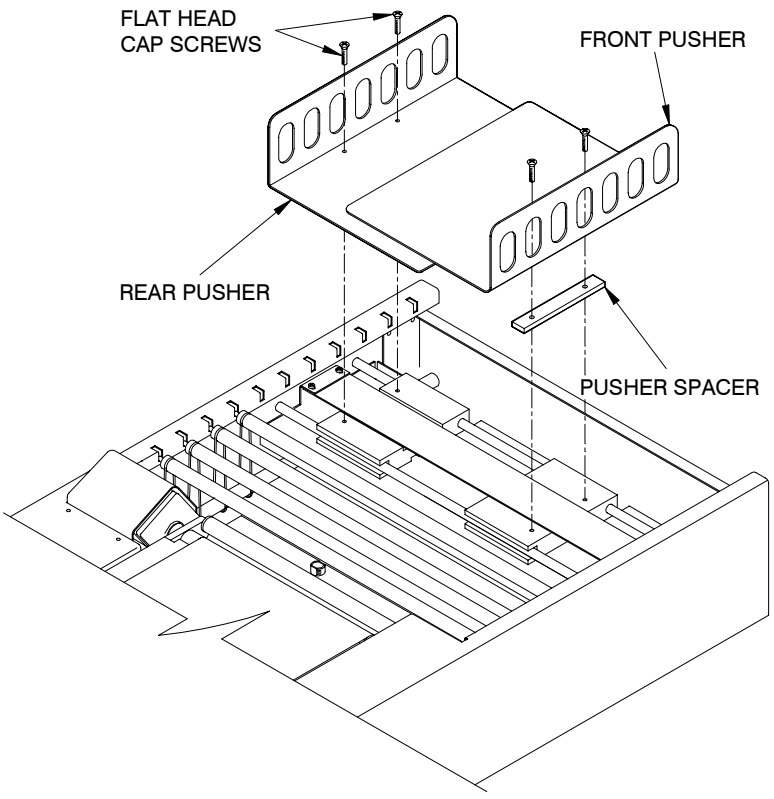


Figure 5-6: Positioner Pusher Replacement

Pusher Drive Chain Service

1. Remove the package positioner rollers and the package pushers as previously described.
2. Remove the 4 Hex head cap screws holding the pusher chain guard and remove the guard (Refer to figure 5-7).
3. Remove the 4 hex washer head cap screws from the ends of the pusher guide rods and remove the pusher guide rods and pusher guide blocks.
4. Loosen the 2 hex head cap screws on the pusher chain tensioner and slide the tensioner to free the chain.
5. Remove the pusher drive chain.
6. Reinstall chain with the engagement pins pointing up and adjust tension by moving the tensioner and tightening the cap screws.
7. Rotate the chain until the engagement pins of the chain are in the position shown on figure 5-7.
8. Reinstall the pusher guide rods and blocks. The rear guide block must engage the pin in the chain on the discharge end of the unit. The front guide block should be slid all the way out near the operator side panel.
9. Reinstall the chain guard.
10. Reinstall the package pushers and the package positioner rollers.

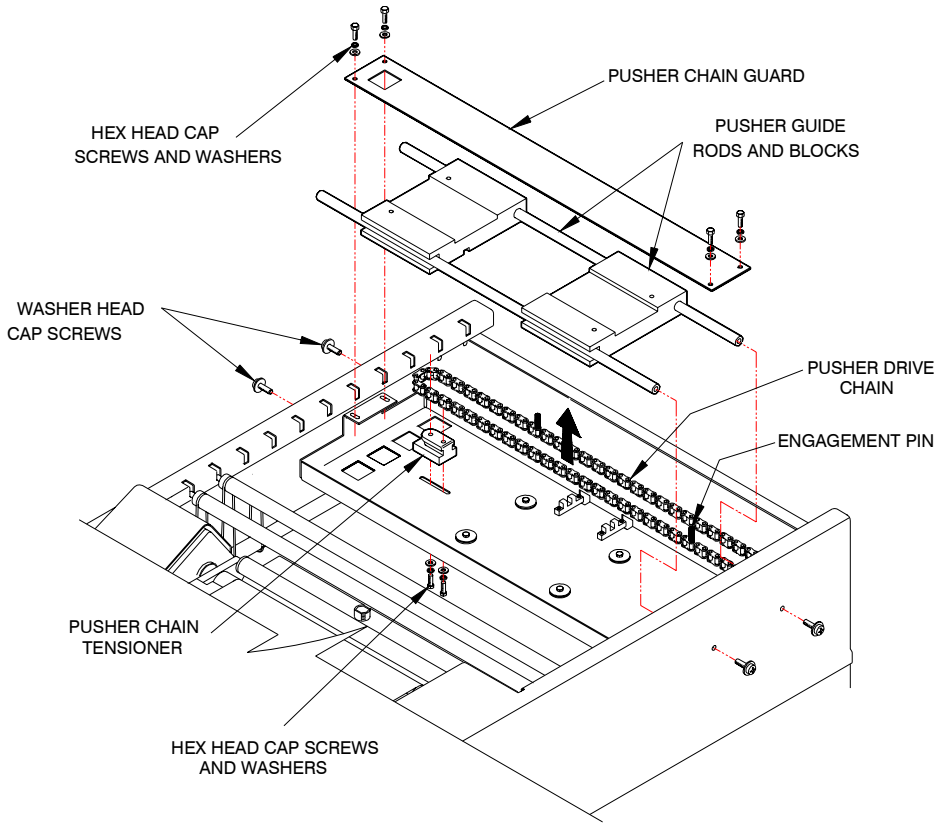
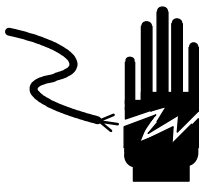


Figure 5-7: Pusher Drive Chain Service

Cleaning



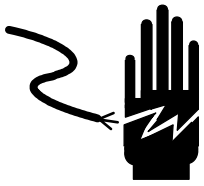
⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Remove power from the machine by turning the power switch to off and unplugging the line cord before performing this service. Use a soft clean cloth dampened with a mild detergent and water to wipe the exterior surfaces. Do not spray liquids directly on the unit. A mild spray cleaner can be used by spraying the cleaning cloth. Do not use solvents or commercial cleaners on the unit. Use a soft clean cloth to wipe the dirt and grime off the scale conveyor belt.

Lubrication

The machine should lubricated at least once a year by a factory-trained technician only.



⚠ WARNING

DISCONNECT ALL POWER TO THIS UNIT BEFORE INSTALLING, SERVICING, CLEANING, OR REMOVING THE FUSE. FAILURE TO DO SO COULD RESULT IN BODILY HARM AND/OR PROPERTY DAMAGE.

Use a light oil (FMO 350) on the following parts:

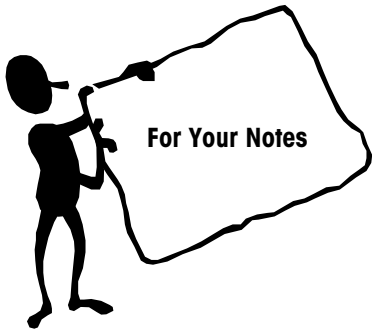
- Scale conveyor roller bearings (6)
- Positioner conveyor roller bearings (22)

Note: Avoid getting lubricant on the scale and positioner conveyor drive belts.

Use a food grade grease (GRS 460F) on the following parts:

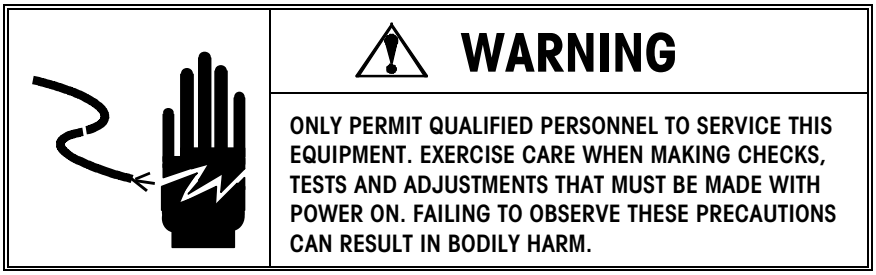
- Positioner drive chain

Individual lubrication points are shown on the replacement parts breakdown.


For Your Notes

6 Troubleshooting

Power Supply



The Power Supply Assembly supplies +48 VDC to the Control PCB. With the Model 706 Labeler plugged in and powered on, the On/Off switch should be illuminated. This is a quick way to check the AC power and the 5-amp fuse. If the on/off switch is not illuminated, check the fuse.

The +48 VDC can be tested at J12 or at TP6 to TP5 on the Control PCB. Place your negative meter lead on J12 pin 1. Place your positive meter lead on J12 pin 2. You should read +43.2 to +52.8 VDC.

If this voltage is missing, check the input and output voltage of the rectifier, located to the right of the filter capacitor and above the transformer, as shown in Figure 6-1. There should be +32.4 to +39.6 VAC across the two red input wires coming from the output of the transformer and +43.2 to +52.8 VDC across the orange and black output wires of the transformer. If the input voltage to the rectifier is within specification but the output voltage is incorrect, replace the rectifier. If the voltage to the control PCB is within specification but the labeler will not power up, replace the control PCB.

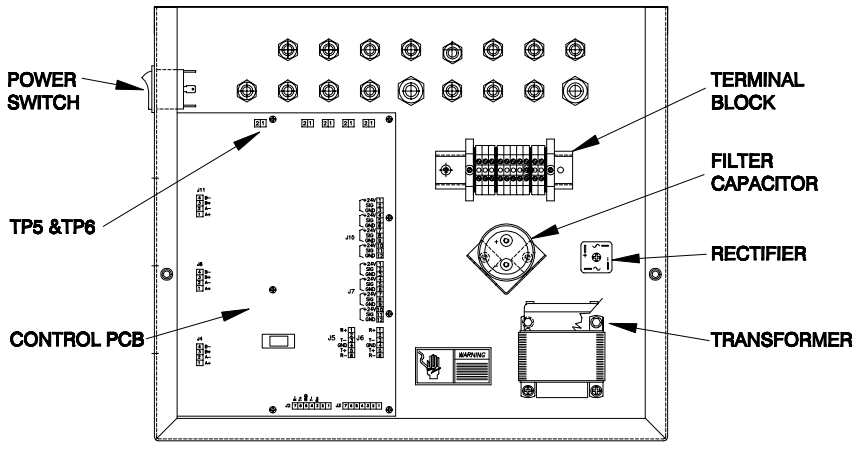
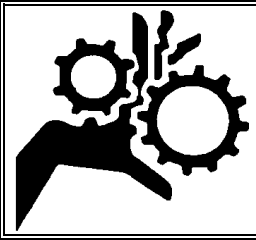


Figure 6-1: Control Box

Stepper Motor Test



⚠ WARNING

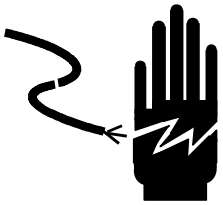
During the test, the conveyors and pusher will be in motion. Do not place materials on the belts during this test. Keep hands clear of the machine during the test.

Operation of the three stepper motors can be tested individually through software. The LED display on the control PCB must be in the "**_OP**" mode for normal operation (W1 not jumpered). The three switches on the control PCB will operate the following stepper motors:

- Switch 1 will run the positioner conveyor stepper motor.
- Switch 2 will run the package pusher stepper motor.
- Switch 3 will run the scale conveyor stepper motor

The stepper motors will chatter if the mechanism or drive belts are jammed.

Sensor and Photoeye Test



⚠ WARNING

ONLY PERMIT QUALIFIED PERSONNEL TO SERVICE THIS EQUIPMENT. EXERCISE CARE WHEN MAKING CHECKS, TESTS AND ADJUSTMENTS THAT MUST BE MADE WITH POWER ON. FAILING TO OBSERVE THESE PRECAUTIONS CAN RESULT IN BODILY HARM.

To test the pusher sensors and the photoeyes for proper operation with the Control PCB, perform the following steps:

- Jumper **W1** on the control PCB. (The display will show "**_SU**" for setup.)
- Press Switch 1 to enter the test mode (**tst**).
- Press Switch 3 once to display "**t_1**" (test 1).
- Press Switch 3 again and the sensors and photoeyes will cycle through a test (**L** = low state and **H** = high state). If all the sensors and photoeyes are operating properly, the display will cycle as follows:

  1. S1L Rear Pusher

  2. S2H Front Pusher

  3. S3H 702 Mode Switch

  4. S4H 702 Gap Sensor

  5. P1L Infeed Photoeye

  6. P2L Positioner Photoeye

  7. P3L (Not used)

  8. P4L Power 90 Conveyor Photoeye

After the self-test has completed, the photoeyes and sensors can be blocked or cleared to change the state from low to high. There is a red LED on the bottom of each photoeye that turns on when the photoeye is blocked indicating the photoeye recognizes the change in state. At the same time, the LED display on the control PCB displays the status of the photoeye or sensor being blocked indicating the microprocessor recognizes the change in state.

This is a good test if you suspect a bad or dirty photoeye or an open circuit in the photoeye wiring.

Press Switch 1 again to enter test 2 **(t_2)**, which tests the Relay Outputs as described in the next section. Press Switches 1 and 3 simultaneously to return to the setup mode **(_SU)**. Remove the **W1** jumper to return to normal operation **(_OP)**.

Relay Output Test

To test the relay outputs for proper operation, perform the following steps:

- Jumper **W1** on the control PCB. (The display will show "**_SU**" for setup.)
- Press Switch 1 to enter the test mode (**tst**).
- Press Switch 3 once to display "**t_1**".
- Press Switch 1 once to enter "**t_2**" (test 2).
- Press Switch 3 and the display will change to "**r_0**."
- Press Switch 3 again to increment to the next test to test the following devices:

  r_0 - All off

  r_1 - K1-Vacuum pump

  r_2 - K2-Model 702 Conveyor

  r_3 - K3-Mega/Max Wrapper Interface

  r_4 - K4-Model 702 Take Up Motor

This is a good test if the Vacuum Pump or Model 702 Conveyor does not operate.

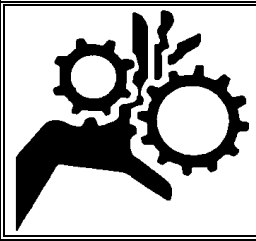
Press Switch 1 to go back to test "**t_1**." Press Switches 1 and 3 simultaneously to return to setup mode **(_SU)** and remove the **W1** jumper to return to normal operation **(_OP)**.

Vacuum Pump

During normal operation there should be between 22-28 inches of vacuum at the gauge on the printer. If there is not a minimum of 22 inches of vacuum, check the vacuum to the valve and at the vacuum pump. If the vacuum is not within this range, adjust the vacuum relief valve located on the side of the compressor. If the problem still exists, switch the vacuum tube to the other side of the double-head vacuum pump. If problem still exists, replace the vacuum pump.

High Speed Conveyor Test

To test the tracking of the scale conveyor belt, perform the following steps:



⚠ WARNING

Exercise care when running this test, the conveyor belt will be in motion. Do not place materials on the belts during this test. Keep hands clear of the machine during the test.

- Jumper **W1** on the control PCB. (The display will show "**_SU**" for setup.)
- Press Switch 1 to enter the test mode (**tst**).
- Press Switch 3 once to display "**t_1**".
- Press Switch 1 twice to enter "**t_3**" (test 3).
- Press Switch 3 once to display **"blt"**.
- Block the infeed photoeye to activate the test. The scale conveyor will run at high speed for approximately 30 seconds.
- Follow the procedure in page 5-3 to adjust the belt tracking.

Press Switch 1 to go back to test "**t_1**." Press Switches 1 and 3 simultaneously to get back to setup mode **(_SU)** and remove the **W1** jumper to return to normal operation **(_OP)**.

- Block Photoeye PE2 to stop the motor.

Clearing The Error Log

The Error Log is cleared through the Model 706 Labeler. This resets the package count to zero and clears all the error codes stored in Battery-Backed RAM. To clear the Error Log File from the Model 706 Labeler:

- Go into setup (W1 jumpered).
- Press Switch 1 until "**Log**" appears on the display (Error Log mode).
- Press Switch 3 to display "**rst**." This resets the error log file.
- Press Switch 3 again to (**clr**) clear the error log file.

Printing The Error Log

The error log file of the Model 706 Labeler can be printed using the Model 8360/8361 Controller and Model 317 printer. To print the error log file from the Model 8360/8361 Controller:

- Enter **Setup**.
- Choose **Unit** from the **Setup Mode**.
- Select **Wrapper Package Count**.
- Select **Retrieve Indexer Data**.
- Select **Retrieve**.

The error log file prints the following information on the Model 317 Price Label Printer:

- Software number used in the Model 706 Labeler.
- Total package count since the last time the error log was cleared.
- Last 20 error codes and the package count on which it occurred.
- List of all the error codes, number of times each occurred, and at what package count it last occurred. A sample error log label is shown in Figure 6-2 below.

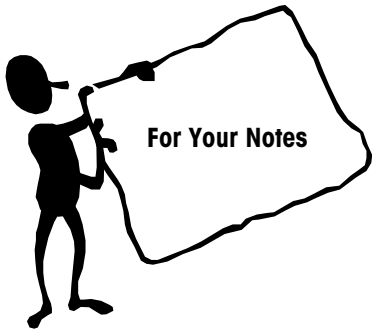
```
706   82976500A
PACKAGE COUNT - 084717
E12-082752 \ E12-082856  \ E17-082912  \ E12-083029
E12-083029 \ E17-083277  \ E17-083285  \ E12-083293
E12-083293 \ E13-083293  \ E12-083310  \ E12-083341
E13-083341 \ E12-083490  \ E12-083507  \ E12-083630
E12-084182 \ E12-084374  \ E12-084380  \ E12-084442

E04=0000-000000 \E05=0000-000000 \E12=0092-058500
E13=0079-083341 \E17=0559-084442 \E18=0013-032489
E20=0051-083285 \E22=0017-007220 \E30=0018-007218
E31=0007-000120 \E32=0000-000000 \E33=0000-000000
E34=0000-000000 \E35=0000-000000 \E36=0000-000000
E37=0005-004118 \E40=0001-000062 \E41=0000-000117
E42=0000-000000 \E43=0000-000000 \E44=0000-000000
E45=0000-000000 \E46=0000-000000 \E47=0000-000000
END
```

Figure 6-2: Sample Error Log Label

Error Codes

Any machine errors encountered will display on the Model 706 Control PCB LED display. If you clear an error code on the Model 8361 Controller, it sends a command to clear the error on the Model 706 Labeler. These errors are as follows:

ERROR CODE	ERROR
Fatal Errors:	
E_1	EPROM checksum error
E_2	Internal RAM error
E_4	EEPROM checksum error
E_5	BRAM checksum error
Major Errors:	
E12	Scale Photoeye blocked on power up
E13	Positioner Photoeye blocked on power up
E17	Scale Photoeye blocked too long
E18	Positioner Photoeye blocked too long
Run-Time Errors:	
E20	Weigh complete time-out error
E21	Pusher failed to position package
E22	Rear Pusher stalled backing out of sensor
E23	Front Pusher stalled backing out of sensor
E24	Rear Pusher failed to home
E25	Front Pusher failed to home
Primary Label Printer / Applicator Errors:	
E30	Label print complete time-out error
E31	Primary Label Applicator communication error
E32	Invalid response from Primary Applicator
E33	Primary Label Applicator ROM error
E34	Primary Label Applicator RAM error
E35	Primary Label Applicator encoder error
E36	Primary Label Applicator index mark error
E37	Primary Printer Label-Taken Sensor blocked
Secondary (DayGlo) Label Printer / Applicator Errors:	
E40	DayGlo print complete time-out error
E41	Secondary Label Applicator communication error
E42	Invalid response from secondary applicator
E43	DayGlo Label Applicator ROM error
E44	DayGlo Applicator RAM error
E45	DayGlo Applicator encoder error
E46	DayGlo Applicator index mark error
E47	DayGlo Label-Taken Sensor blocked
Model 702 Applicator Errors:	
E50	Low Stock Error
E51	Label Jam

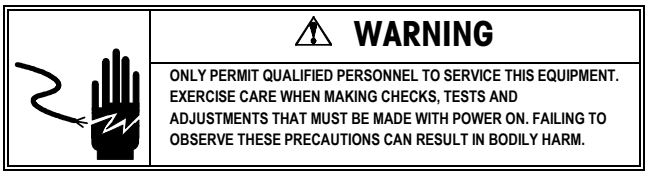

For Your Notes

7 Interconnecting Diagrams

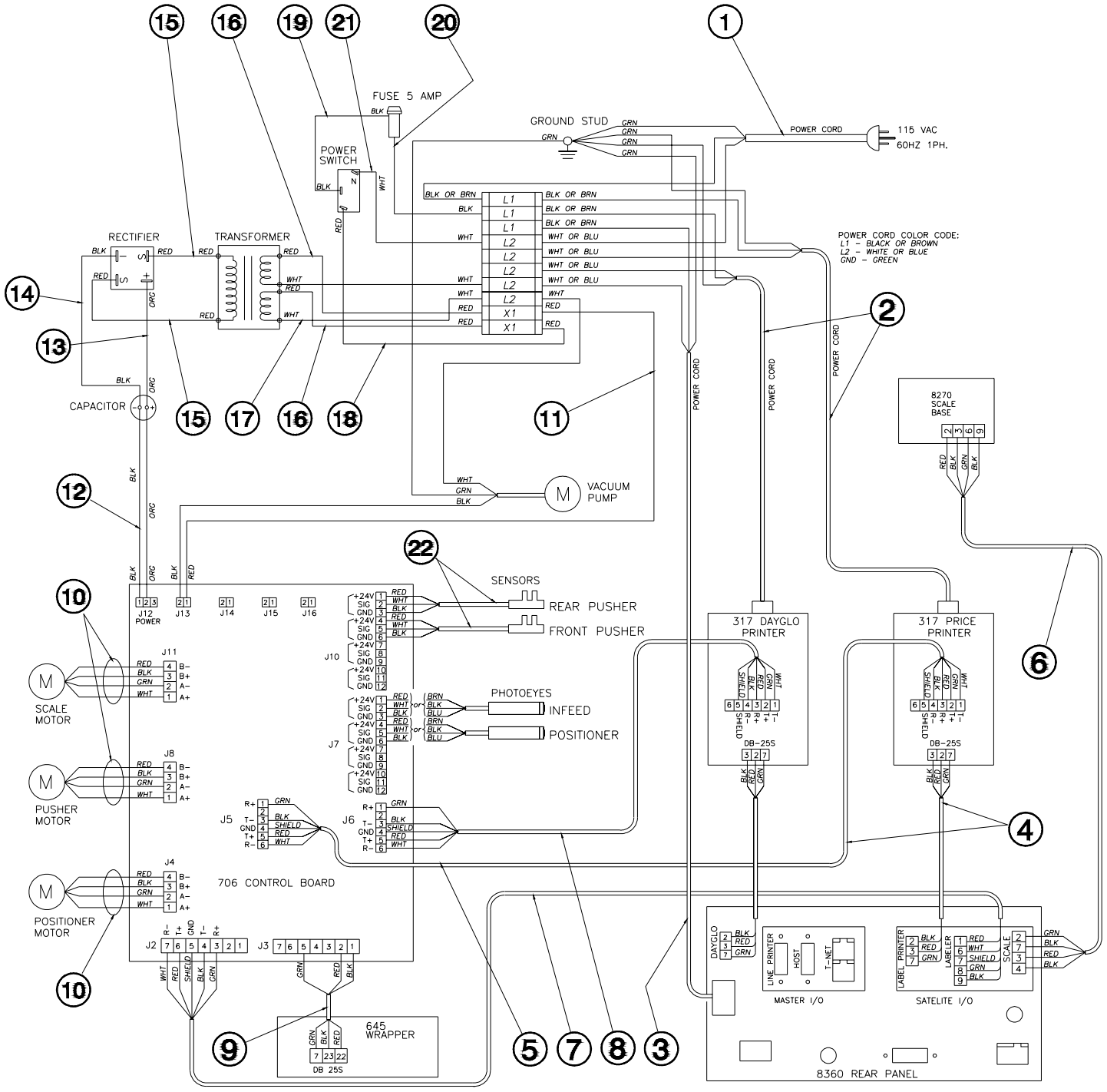
Part Description

Item	Qty	Part #	Description
1	1	A80958700A	Power Cord Model 706
2	2*	82798900A	Power Cord - Printer
3	1	82799000A	Power Cord Model 706-8361
4	2*	82802200A	Cable Model 317-8361
5	1	82812000A	Cable Model 706- Price Printer
6	1	82802000A	Cable Model 8361 - Scale
7	1	82686400A	Cable Model 706 - 8361
8	1	82811500A	Cable 706- DayGlo Printer
9	1	82864100A	Cable Assembly
10	3	82935200A	Wire Assembly
11	1	82811900A	Wire
12	1	82810100A	Wire Assembly
13	1	82811000A	Wire Assembly
14	1	82811100A	Wire Assembly
15	2	82810400A	Wire Assembly
16	2	82810300A	Wire Assembly
17	2	82810200A	Wire Assembly
18	1	82811700A	Wire Assembly
19	1	82810500A	Wire Assembly
20	1	82810800A	Wire Assembly
21	1	82810700A	Wire Assembly
22	2	82799900A	Wire Assembly

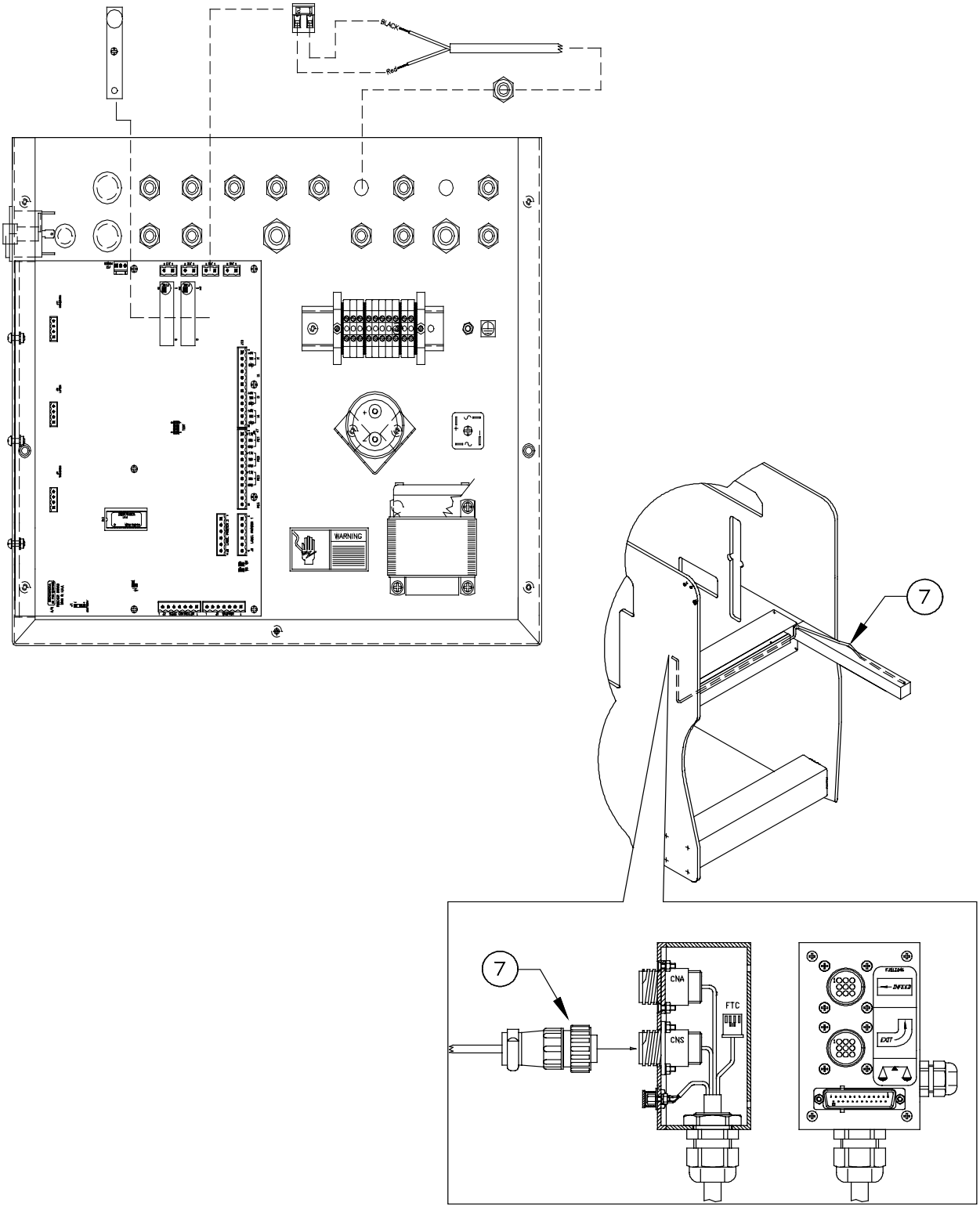
* indicates 2 used on DayGlo units only



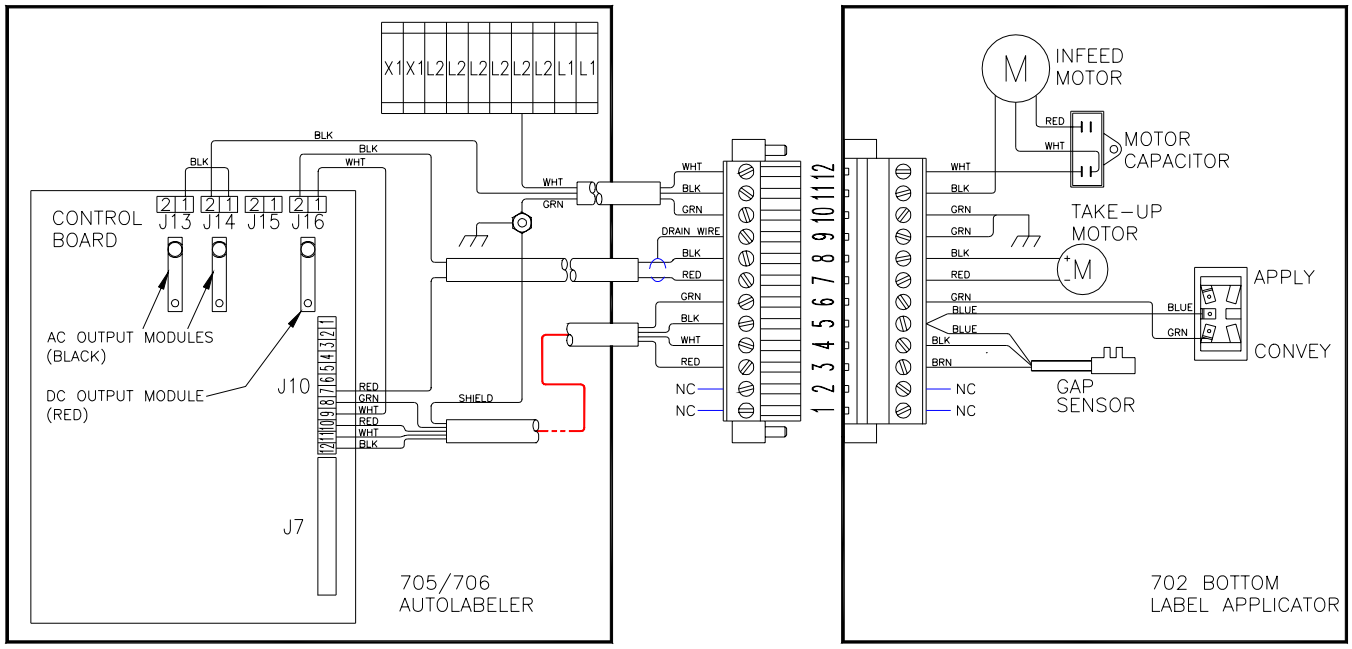
Model 706 Wiring Diagram



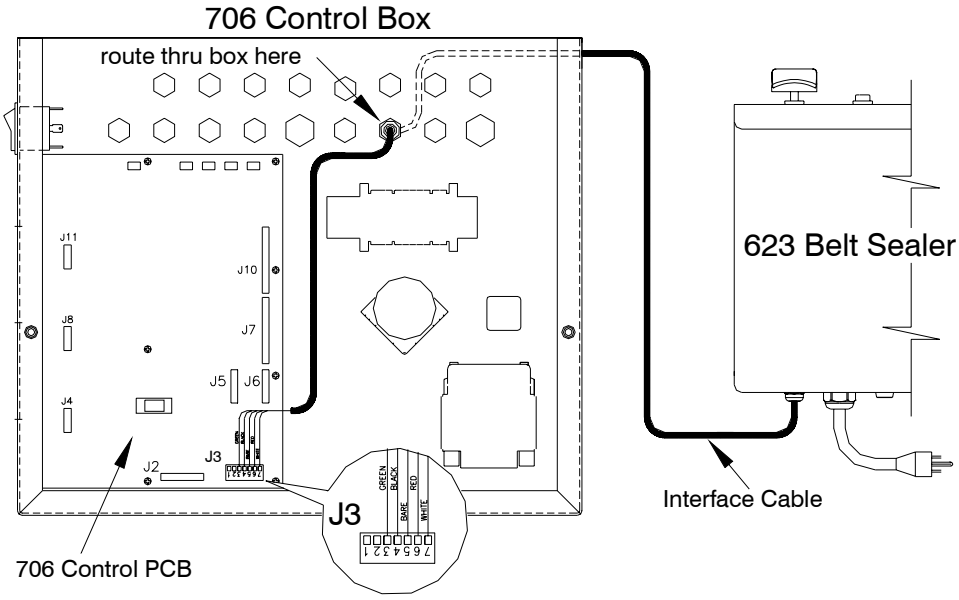
Wiring - Model 706 to Mega/Max



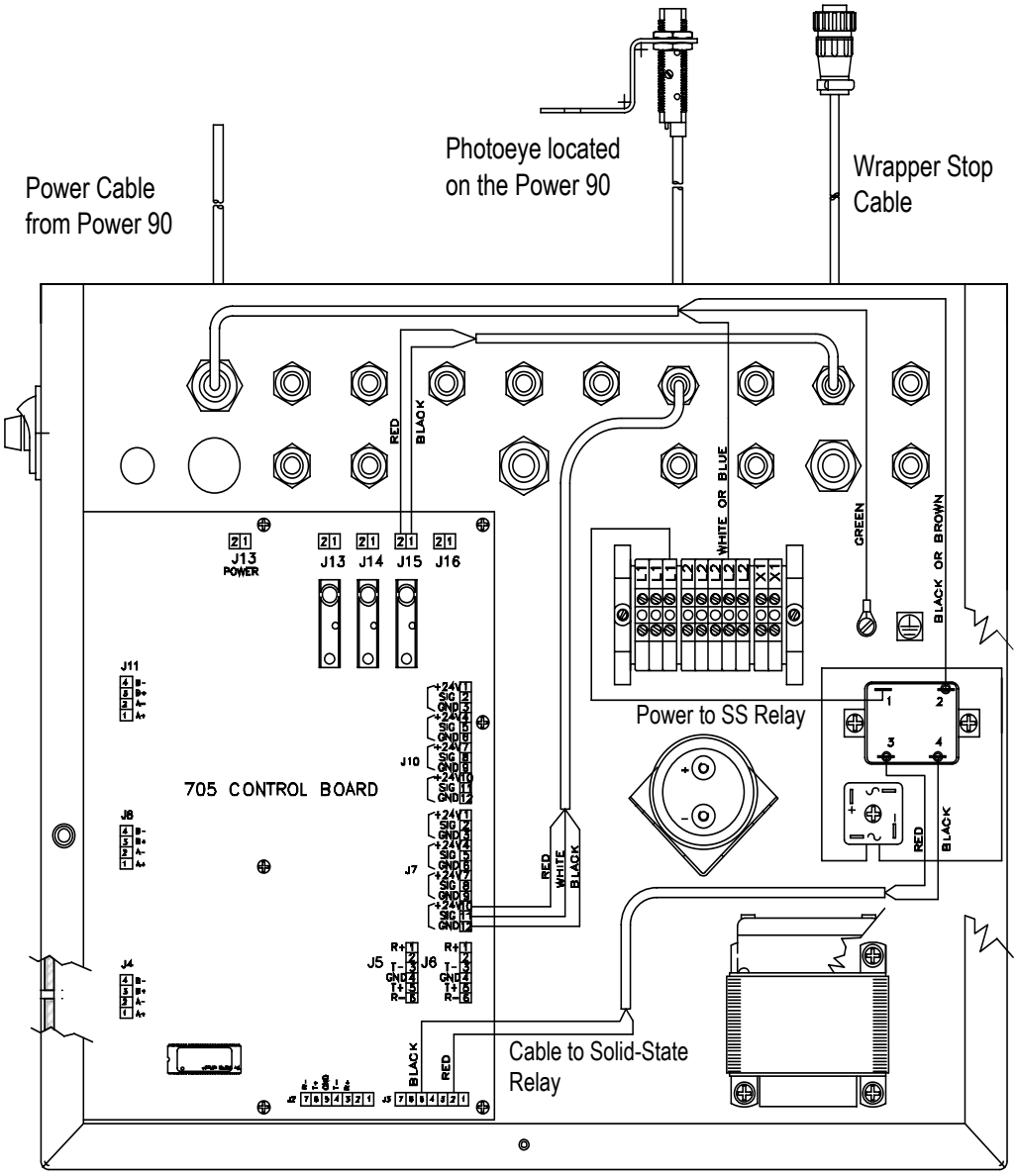
Wiring - Model 706 to Model 702



Wiring - Model 706 to Model 623



Wiring – Model 706 to Power 90



8

Replacement Parts

This chapter lists replacement parts available from METTLER TOLEDO® Aftermarket.

The Aftermarket Operation at METTLER TOLEDO® is dedicated to satisfying every customer every time. The ISO registered facility provides quick, efficient and quality service. Aftermarket services include everything from daily parts shipments and product repairs to load cells and overhaul kits compatible with most scale manufacturers.

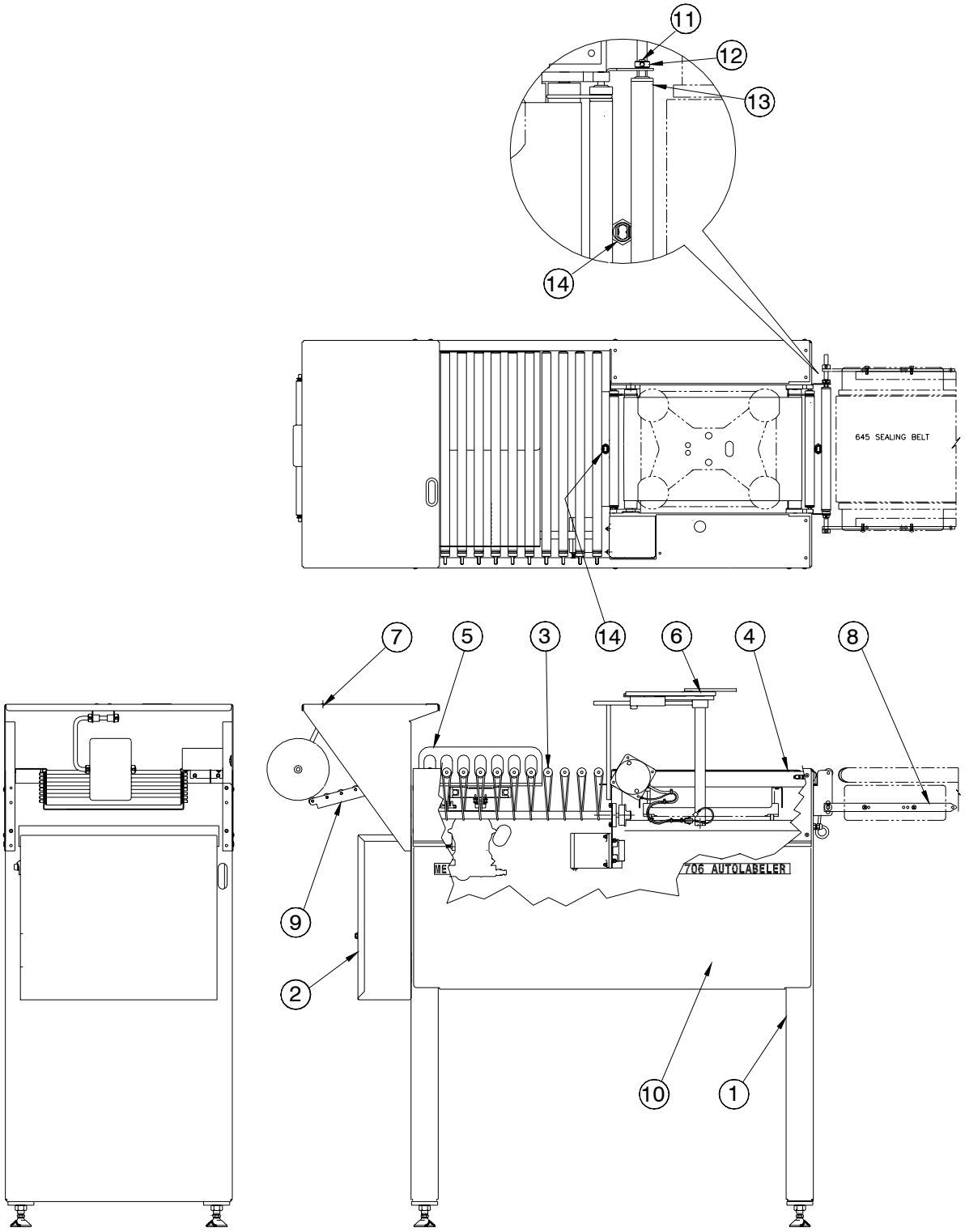
Aftermarket Services:

- Same day replacement parts shipment
- Full service repair center
- Printed circuit board repair and exchange program
- Load cell weighing solutions
- Load cell exchange program
- Mechanical scale overhaul kits
- Rental scales

Mettler-Toledo, Inc.
Aftermarket
60 Collegeview Road
Westerville, Ohio 43081
Tel: (800) 848-3992
(614) 430-2555
Fax: (800) 405-6312
(614) 438-4921

Rental
Tel: (800) 428-4310
Fax: (614) 841-5185
E-mail: rental@mt.com

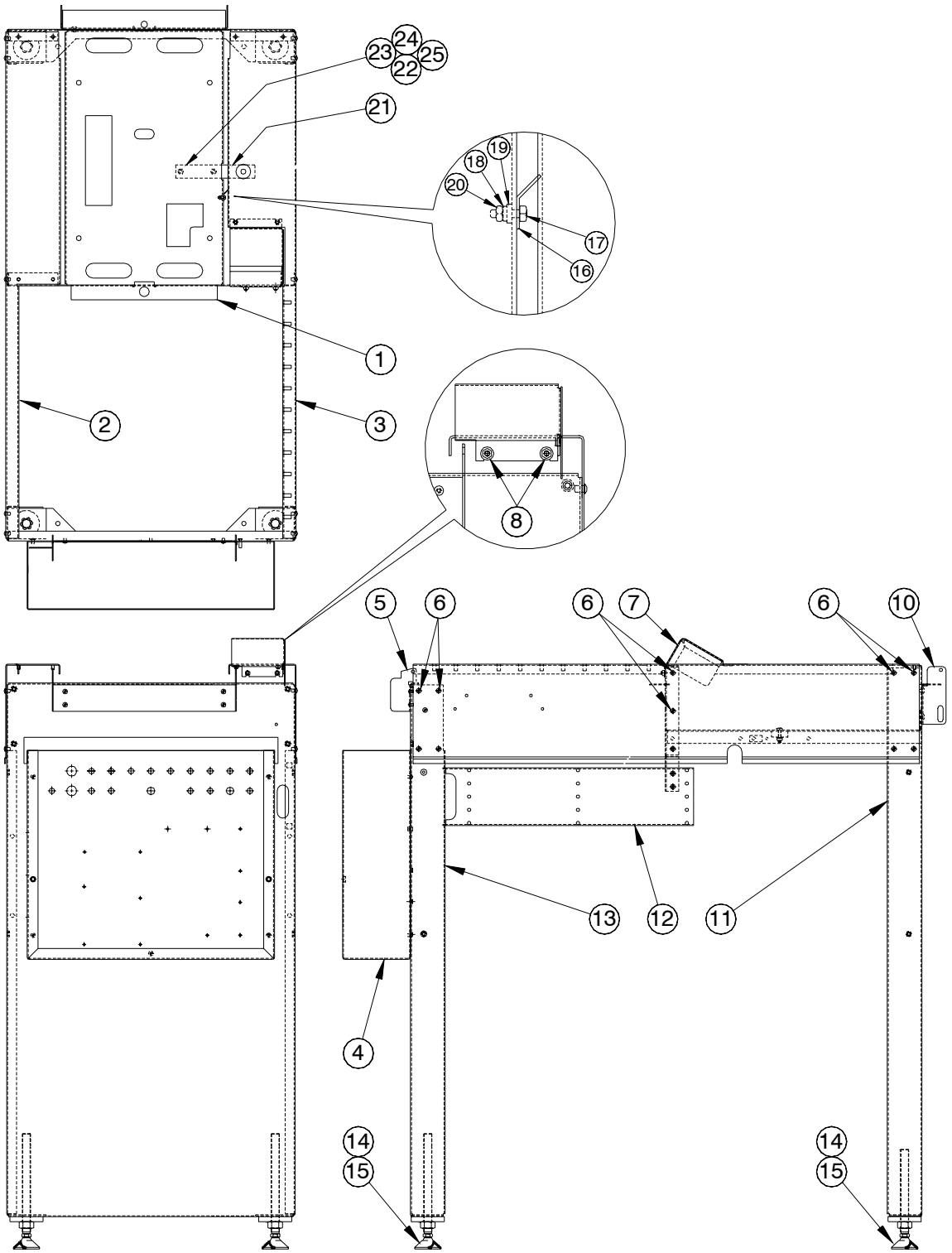
Model 706 Labeler



Model 706 Labeler Parts List

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	FRAME SUB-ASSEMBLY	
2	1	CONTROL BOX ASSEMBLY	
3	1	POSITIONING SUB-ASSEMBLY	
4	1	SCALE CONVEYOR ASSEMBLY	
5	1	PUSHER SUB-ASSEMBLY	
6	1	DAY-GLO LABELER MOUNT	
7	1	DATA LABELER MOUNT	
8	1	645 CONNECTOR BRACKET KOP	82820500A
9	1	DISCHARGE CONVEYOR ASSEMBLY	82980000A
10	2	SIDE COVER ASSEMBLY	82975200A
11	1	INFEED ROLLER SHAFT	82977300A
12	2	SET COLLAR, STAINLESS STEEL 1/4" ID	81895700A
13	1	INFEED ROLLER ASSEMBLY	82977200A
14	2	PHOTOEYE	82674100A

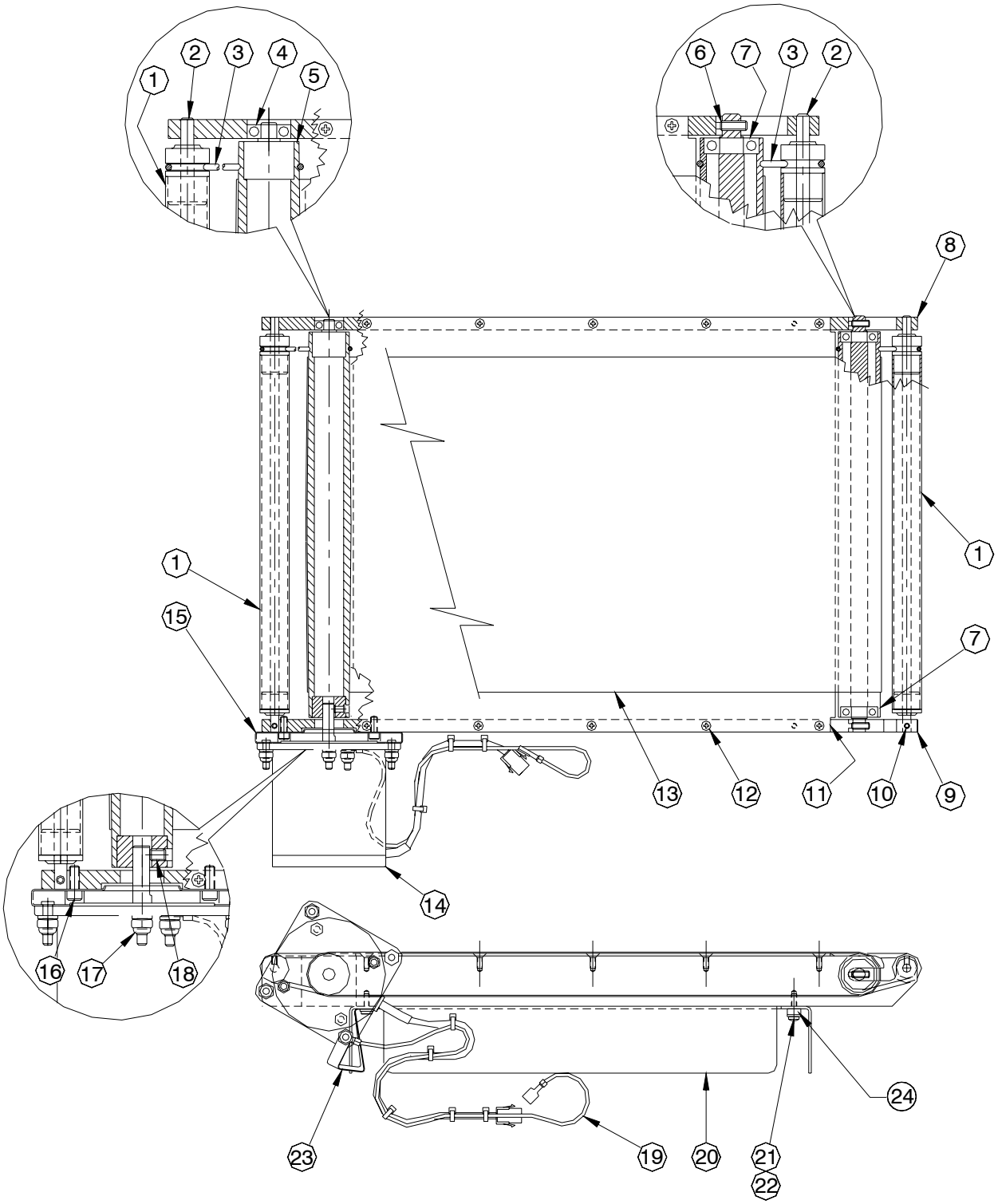
Frame Assembly



Frame Assembly Parts List

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	SCALE SUPPORT	82971200A
2	1	FRAME MEMBER - FRONT	82955100A
3	1	FRAME MEMBER - REAR	82955000A
4	1	CONTROL BOX	82780000A
5	1	DISCHARGE ROLLER MOUNT	82958900A
6	40	POP RIVOT - 3/16"	81861100A
7	1	SCALE CONVEYOR MOTOR COVER	82959100A
8	2	SELF LOCKING NUT, SS, DIN 985 - M5	82709100A
9	2	WASHER, SS, DIN 985 - M5	82709600A
10	1	INFEED ROLLER BRACKET	82958800A
11	1	INFEED LEG	82954700A
	1	INFEED LEG SHORT	82997500A
12	1	CABLE GUIDE	82971300A
13	1	DISCHARGE LEG	82954800A
	1	DISCHARGE LEG, SHORT	82983900A
14	4	SWIVEL FOOT	82674300A
15	1	TERMINAL ANGLE - QUICK CONNECT	82819400A
16	1	PAN HEAD MACHINE SCREW, SS, M3X10MM	82714900A
17	1	LOCKWASHER, SS, DIN 125A M3	82710700A
18	1	FLAT WASHER, SS, 125A M3	82709400A
19	1	HEX NUT, SS, DIN 934 M3	82708300A
20	1	LOWER SWIVEL PLATE	82968200A
21	2	HEX HEAD CAP SCREW, SS, DIN 933 M6X12MM	82712300A
22	2	LOCK WASHER, SS, DIN 127B M6	82711000A
23	2	FLAT WASHER, SS, DIN 125A M6	82709700A
24	2	HEX NUT, SS, DIN 934 M6	82708600A

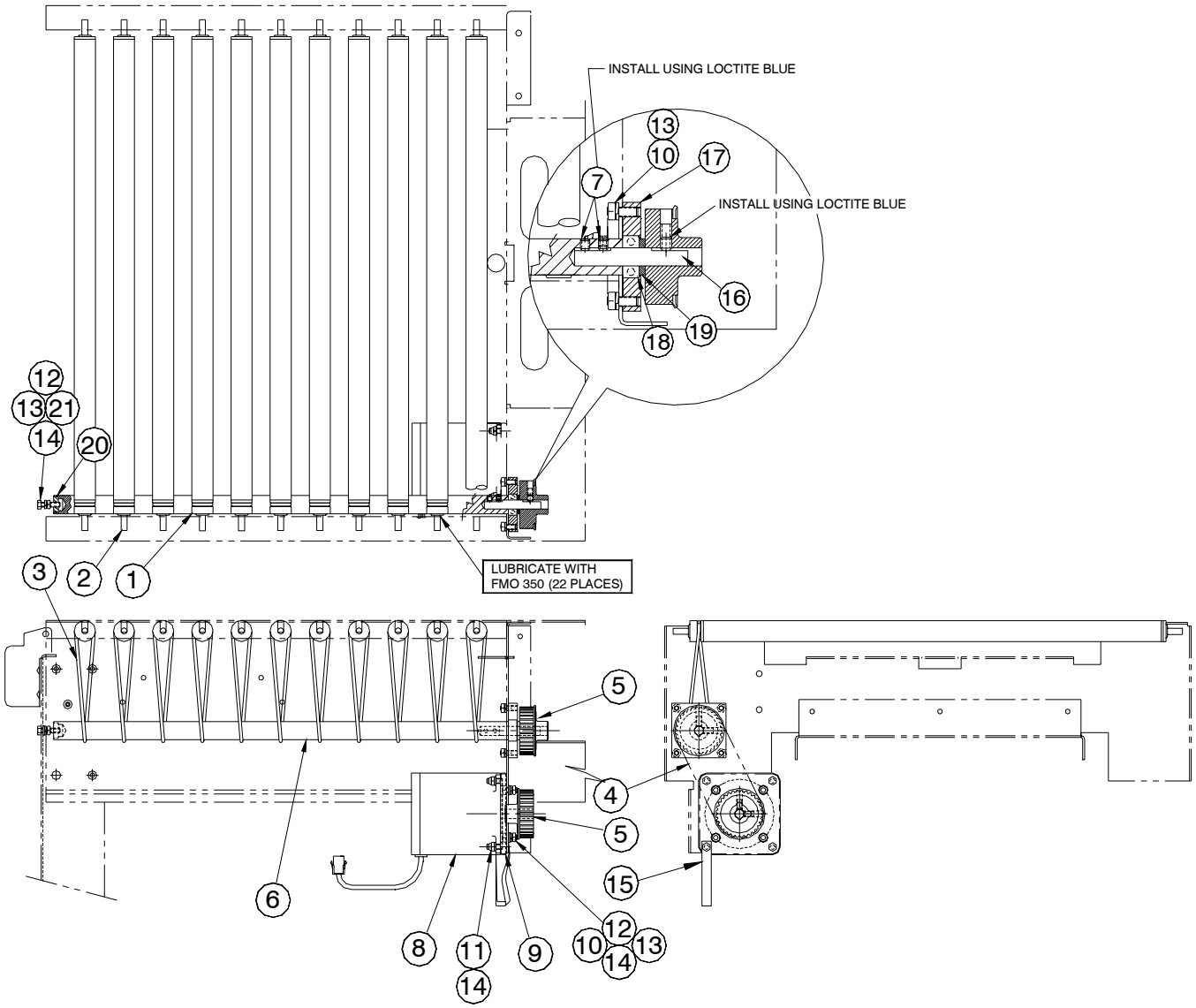
Scale Conveyor



Scale Conveyor Parts List

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	2	ROLLER ASSEMBLY	82974500A
2	2	ROLLER SHAFT	82956400A
3	2	ROLLER DRIVE BELT	82945000A
4	1	BALL BEARING 8MM ID X 22MM OD X 7MM	82704300A
5	1	CONVEYOR DRIVE ROLLER ASSEMBLY	82974300A
6	2	DOG POINT SET SCREW, SS, DIN 915 M5X16MM	82718600A
7	2	BALL BEARING, 12MM ID X 28MM OD X 8MM	82704600A
8	1	CONVEYOR FRAME - FRONT	82955700A
9	1	CONVEYOR FRAME - REAR	82955600A
10	2	FLAT TIP SET SCREW, SS, DIN 913 M4X5MM	82717900A
11	1	SCALE CONVEYOR BED	82955400A
12	10	FLAT HEAD CAP SCREW, SS, DIN 965A M4X10MM	82713500A
13	1	SCALE CONVEYOR BELT	82959000A
14	1	STEPPER MOTOR	82756400A
15	1	MOTOR ISOLATOR	827556300A
16	2	HEX HEAD CAP SCREW, SS, DIN 933 M5X10MM	82709400A
17	4	SELF LOCKING NUT, SS, DIN 985 M5	82709100A
18	2	FLAT TIP SET SCREW, SS, DIN 913 M6X8MM	82718400A
19	1	CONVEYOR GROUND WIRE	82980100A
20	1	SCALE PLATTER	82955500A
21	4	CROSS RECESS HEAD CAP SCREW, SS, DIN 7985A M4X16MM	82715500A
22	4	WASHER, SS, DIN 125A M4	82709500A
23	1	GROUND STRAP	82742000A
24	1	SPACER	83140700A

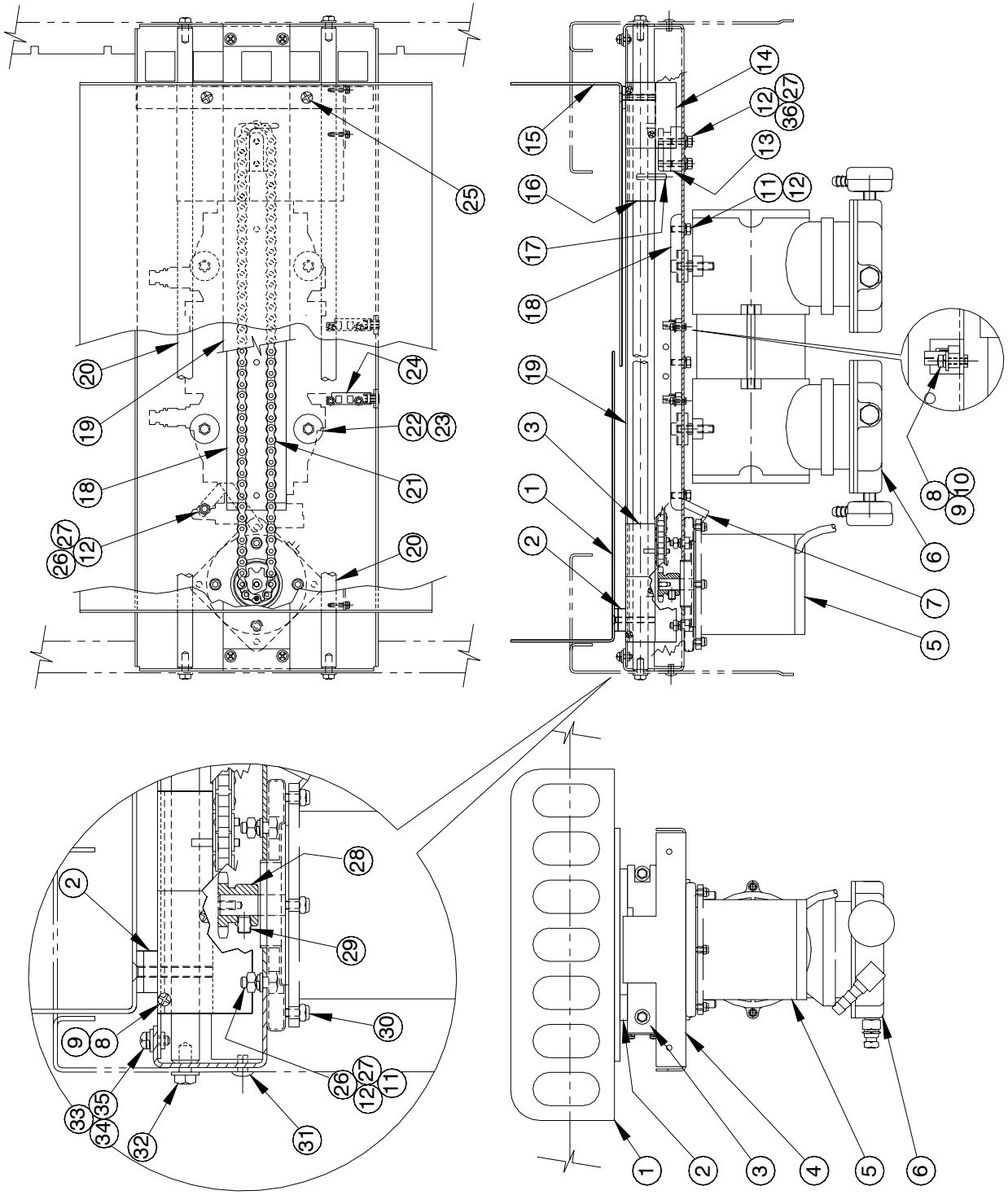
Positioning Assembly



Positioning Assembly Parts List

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	11	POSITIONING ROLLER ASSEMBLY	82973700A
2	11	POSITIONING ROLLER SHAFT	82956100A
3	11	ROLLER DRIVE BELT	82654000A
4	1	TIMING BELT, 5MM P. X 12MM X 71 TOOTH	82757200A
5	2	TIMING PULLEY - 5MM P. X 32 TOOTH	82913000A
6	1	POSITIONING DRIVE SHAFT	82956000A
7	2	FLAT TIP SET SCREW, SS, DIN 913 M5X6MM	82718000A
8	1	STEPPER MOTOR 2Nm	82756400A
9	1	MOTOR ISOLATOR	82756300A
10	8	HEX HEAD CAP SCREW, SS, DIN 933 M5X12MM	82712000A
11	4	SELF LOCKING NUT, SS, DIN 985 M5	82709100A
12	5	HEX NUT, SS, DIN 934 M5	82708500A
13	9	LOCK WASHER, SS, DIN 127B M5	82710900A
14	9	WASHER, SS, DIN 125A M5	82709600A
15	1	GROUND STRAP	82742000A
16	1	TRANSFER DRIVE UNION SHAFT	82969600A
17	1	TRANSFER BEARING MOUNT	82971500A
18	1	BEARING - 3/8 ID X 7/8 OD X 5/16 WIDE	A80759900A
19	1	THRUST WASHER	A80363400A
20	1	BALL BEARING, 5MM ID X 16MM OD X 5MM	82704000A
21	1	HEX HEAD CAP SCREW, SS, 933 M5 X 20MM	82712200A

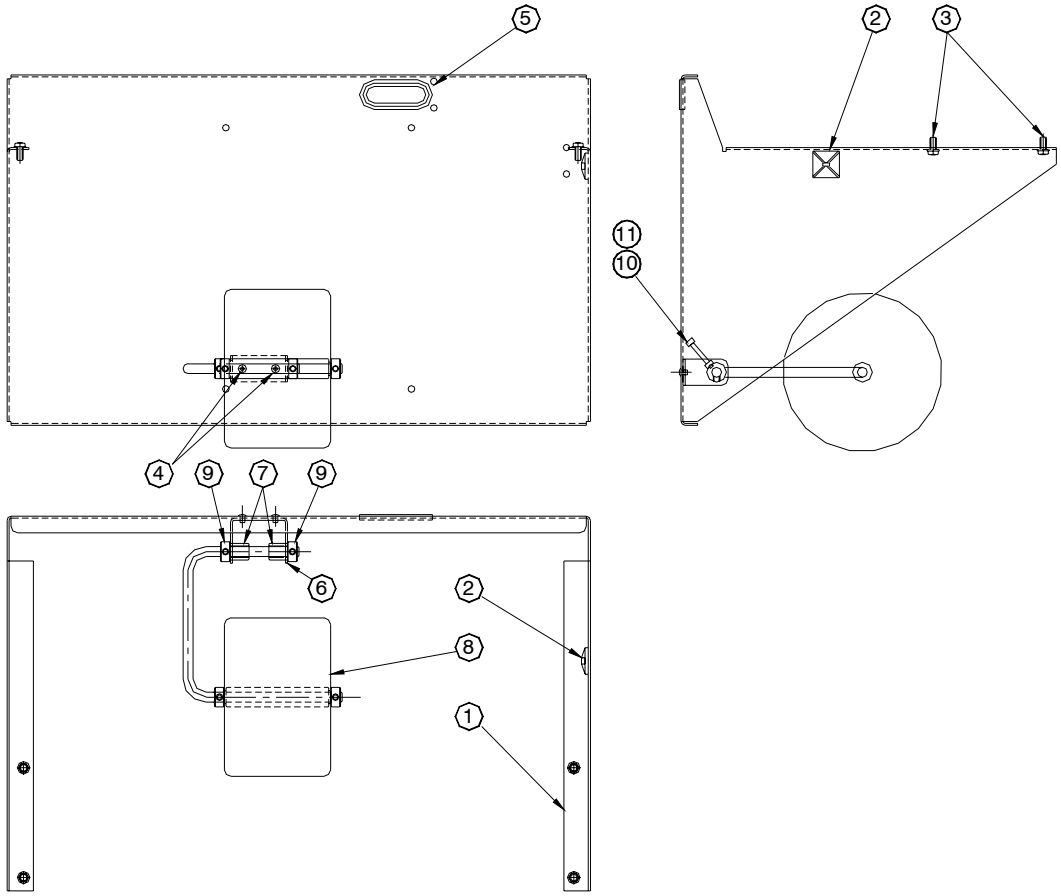
Positioner Pushers and Vacuum Pump



Positioner Pushers and Vacuum Pump Parts List

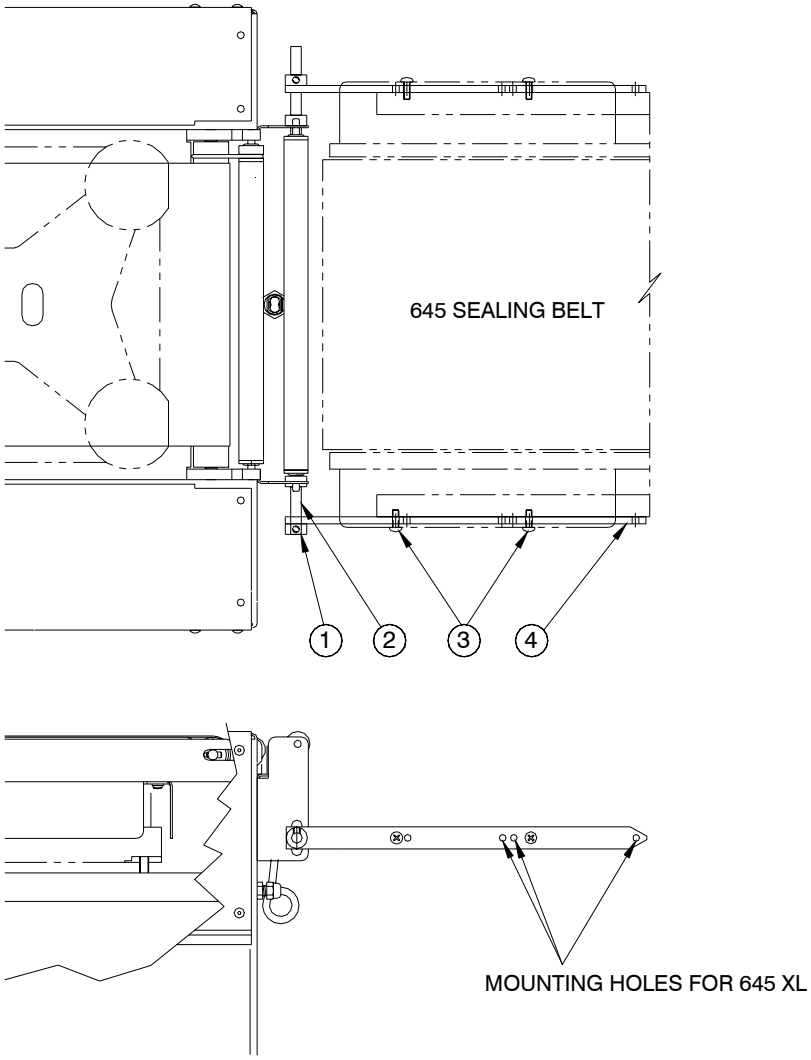
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	POSITIONER PUSHER - FRONT	82956700A
2	1	PUSHER SPACER BLOCK	82957800A
3	1	PUSHER MOUNTING BLOCK FRONT	82957100A
4	1	LATERAL SUPPORT	82957000A
5	1	STEPPER MOTOR - 2Nm	B82756400A
6	1	VACUUM PUMP	82794900A
7	1	GROUND STRAP	82742000A
8	8	CROSS RECESS HEAD SCREW, SS, DIN 7985A M3X10MM	82714900A
9	8	LOCK WASHER, SS, DIN 125A M3	82710700A
10	4	FLAT WASHER, SS, DIN 125A M3	82709400A
11	7	HEX HEAD CAP SCREW, SS, DIN 933 M5X12MM	82712000A
12	10	LOCK WASHER, SS, DIN 127B M5	82710900A
13	1	PUSHER CHAIN TENSIONER	82958200A
14	2	PUSHER FLAG	82956800A
15	1	POSITIONER PUSHER - REAR	82956600A
16	1	PUSHER MOUNTING BLOCK - REAR	82957200A
17	1	DOWEL PIN, 5MM DIA. X 24MM LONG	82702900A
18	1	CHAIN SUPPORT PLATE	82979800A
19	1	CHAIN GUARD	82973200A
20	2	PUSHER GUIDE ROD	82955800A
21	1	PUSHER CHAIN	82945400A
22	4	HEX HEAD CAP SCREW, SS, #10-32 X 1-1/4" LONG	R0388200A
23	4	WASHER	82910100A
24	2	PHOTO INTERRUPT SENSOR	82700500A
25	4	FLAT PHILLIPS HEAD CAP SCREW, SS, DIN 965A M5X25MM LONG	82825400A
26	5	HEX NUT, SS, DIN 934 M5	82708500A
27	7	FLAT WASHER, SS, DIN 125-A M5	82709600A
28	1	PUSHER MOTOR SPROCKET	82958400A
29	2	FLAT TIPPED SET SCREW, SS, DIN 913 M6X8MM LONG	882718400A
30	4	SELF LOCKING NUT, SS, DIN 985 M5	82709100A
31	4	POP RIVOT 3/16	81861100A
32	4	HEX WASHER HEAD CAP SCREW, SS, M6X12MM LONG	82804900A
33	4	CROSS RECESS HEAD SCREW, SS, DIN 7985A M4X10MM LONG	82715300A
34	4	LOCK WASHER, SS, DIN 127B M4	82710800A
35	4	FLAT WASHER, SS, DIN 125A M4	82709500A
36	2	HEX HEAD CAP SCREW, SS, DIN 933 M5X20MM	82712200A

Price Label Printer Support



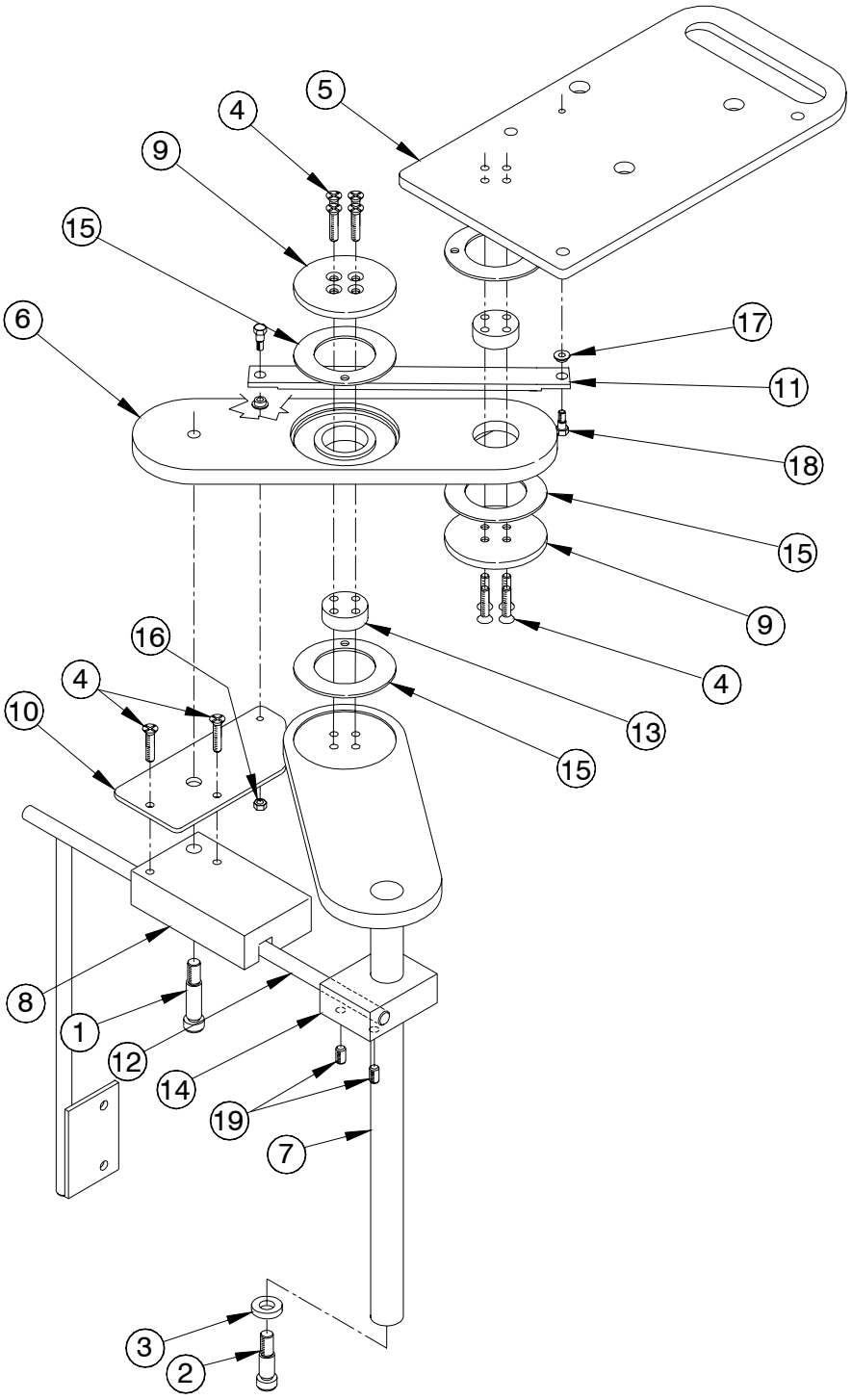
ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	PRINTER SHELF	82955300A
2	1	WIRE TIE	A80690800A
3	4	WASHER HEAD CAP SCREW, SS, M6 X 12MM	82804900A
4	2	POP RIVOT 3/16	81861100A
5	1	HOLE LINER - 4" LONG	82660100A
6	1	FOAM WHEEL PIVOT	A82778500A
7	2	BUSHING	82805100A
8	1	FOAM WHEEL ASSEMBLY	82974700A
9	2	3/8 SET COLLAR	A80054600A
10	1	SCREW, .25" x 20 x 1.25"	R0367800A
11	1	NUT, .25" X 20	R0361400A

Model 645 Connector Bracket



ITEM	QTY.	DESCRIPTION	PART NUMBER
1	4	SET COLLAR	A80054500A
2	1	RETAINING BAR	82797800A
3	4	CROSS RECESS HEAD CAP SCREW, SS, DIN 7985A M5X16MM	82716100A
4	2	SIDE BRACE	82796600A

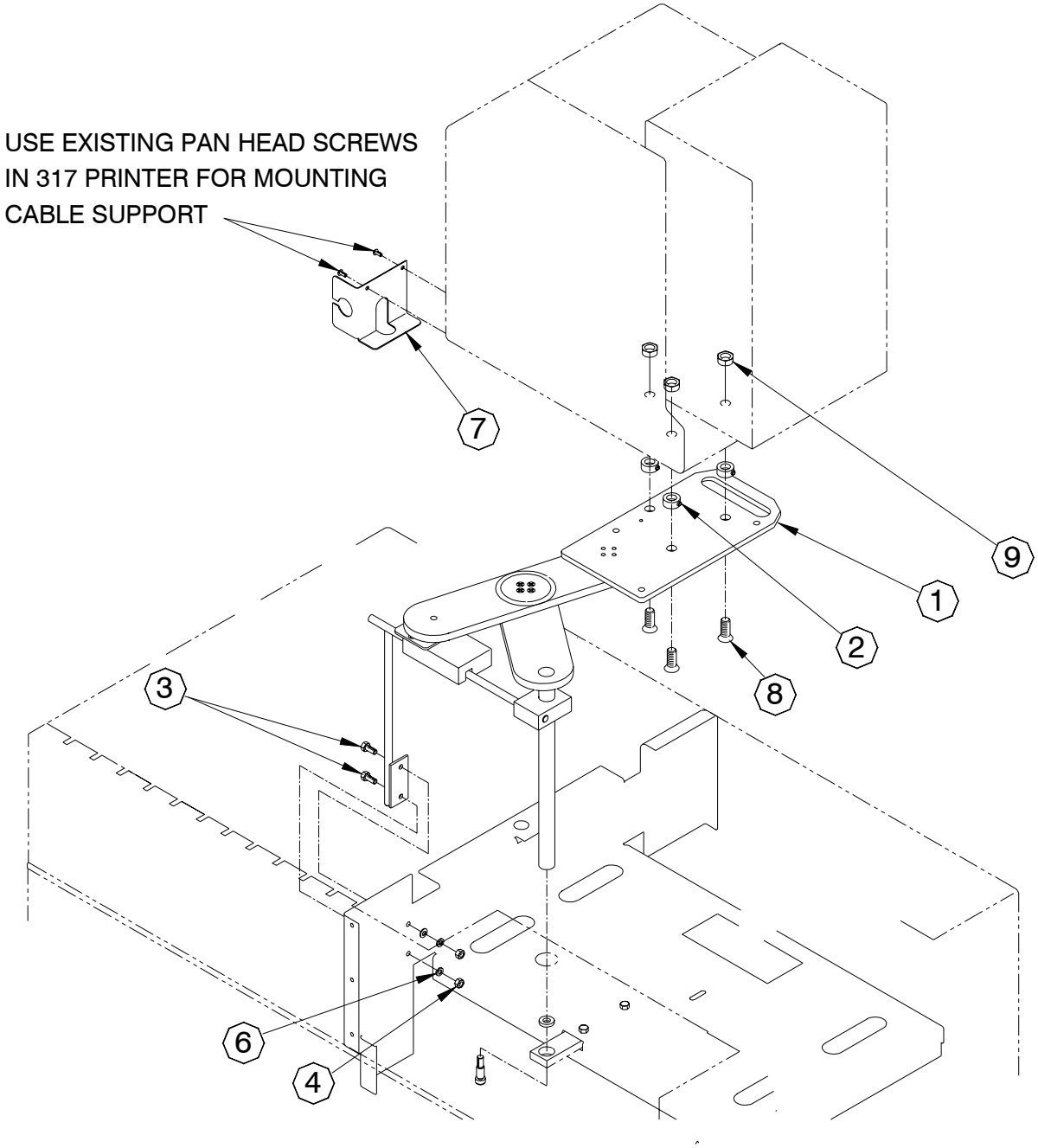
DayGlo Printer Support



DayGlo Printer Support
Parts List

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	SHOULDER BOLT - 3/8 OD X 1" LONG SHOULDER	A80636200A
2	1	SHOULDER BOLT - 3/8 OD X 5/8 LONG SHOULDER	A80379700A
3	1	THRUST WASHER	A80363400A
4	10	FLAT HEAD CAP SCREW - CR, SS, DIN 965A M5X20MM	82717200A
5	1	PRINTER SUPPORT PLATE	82967100A
6	1	PRINTER SUPPORT LINK	82967200A
7	1	PRINTER SUPPORT ARM	82967300A
8	1	SLIDE BLOCK	82967400A
9	2	SUPPORT ARM PIVOT PLATE	82967500A
10	1	SLIDE LINK ARM	82967600A
11	1	PARALLEL LINK	82967700A
12	1	GUIDE ROD	82967800A
13	2	PIVOT SEPARATION PLATE	82967900A
14	1	GUIDE ROD TOP MOUNT	82968000A
15	4	THRUST BEARING	82968100A
16	1	KEEPS NUT, BN 1364 M4	82783100A
17	2	IGLIDE BEARING	82721200A
18	2	SHOULDER SCREW	82730400A
19	2	CUP PT SET SCREW M6 X 6MM DIN 916 SS,	82762900A

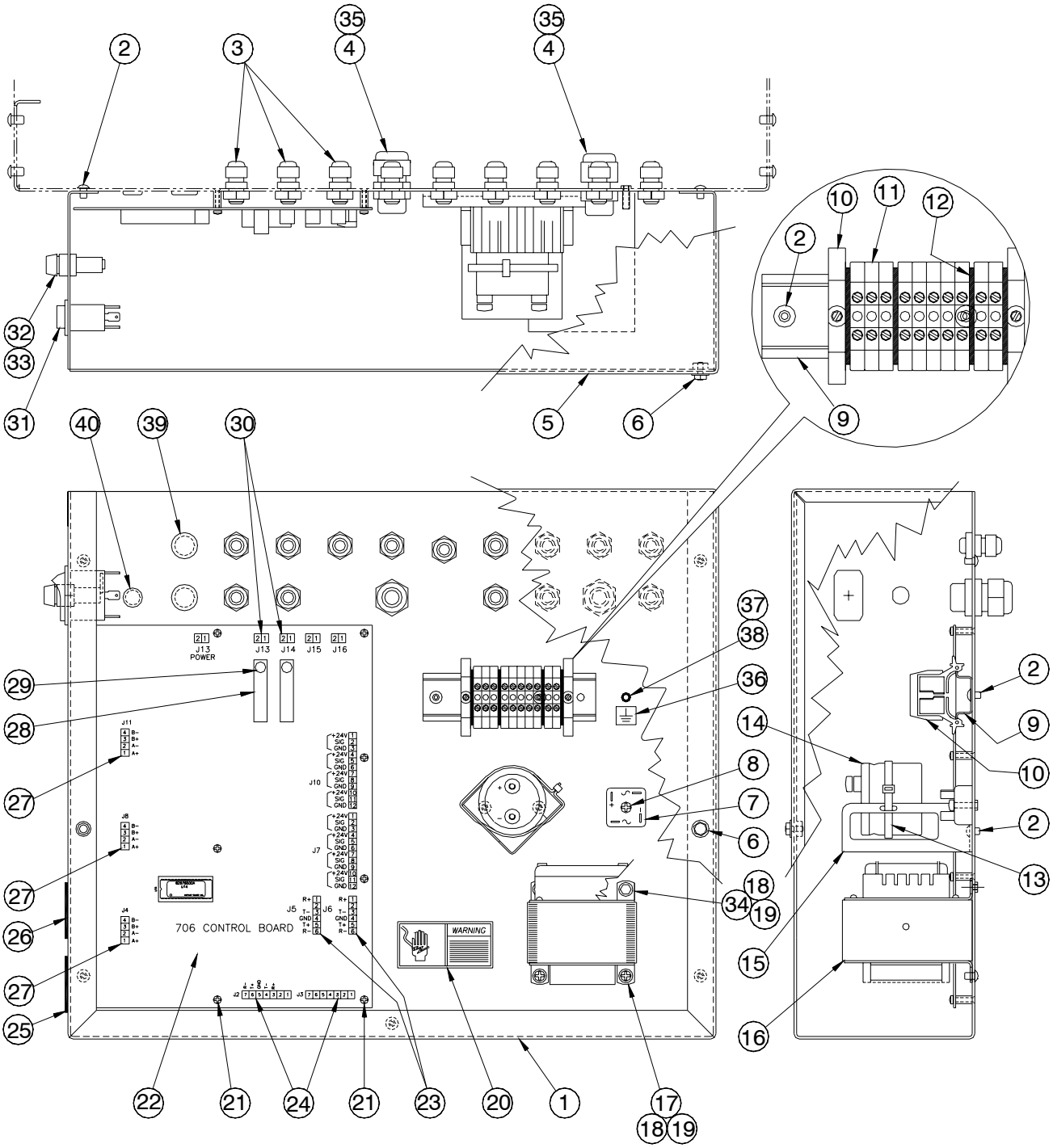
DayGlo Printer Accessory Kit (0925-0406-000)



DayGlo Printer Accessory Kit (0925-0406-000) Parts List

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	ARM-SUB ASSEMBLY	82975000A
2	3	SET COLLAR 5/16	A80441100A
3	2	HEX HEAD CAP SCREW, SS, DIN 933 M6X12MM	82712300A
4	2	HEX NUT, SS, DIN 934 M6	82708600A
6	2	LOCK WASHER, SS, DIN 127B M6	82711000A
7	1	CABLE SUPPORT - 706 DAY-GLO	82976800A
8	3	FLAT HEAD CAP SCREW 5/16-18 X 1" LONG	R0320500A
9	3	HEX JAM NUT 5/16-18	R0365600A
10	1	POWER CORD	82798900A
11	1	CABLE, 706 PRINTER	82811500A
12	7.8 FT.	VACUUM HOSE	275290002
13	2	CORD GRIP 1/2" WITH NUT	A80976100A
14	2	WIRE TERMINAL 6 PT.	82781200A
15	1	CABLE 317 - 8360	82802200A
16	2	TERMINAL LABEL 1-10	82802200A
		ITEMS 10 THRU 16 NOT SHOWN	

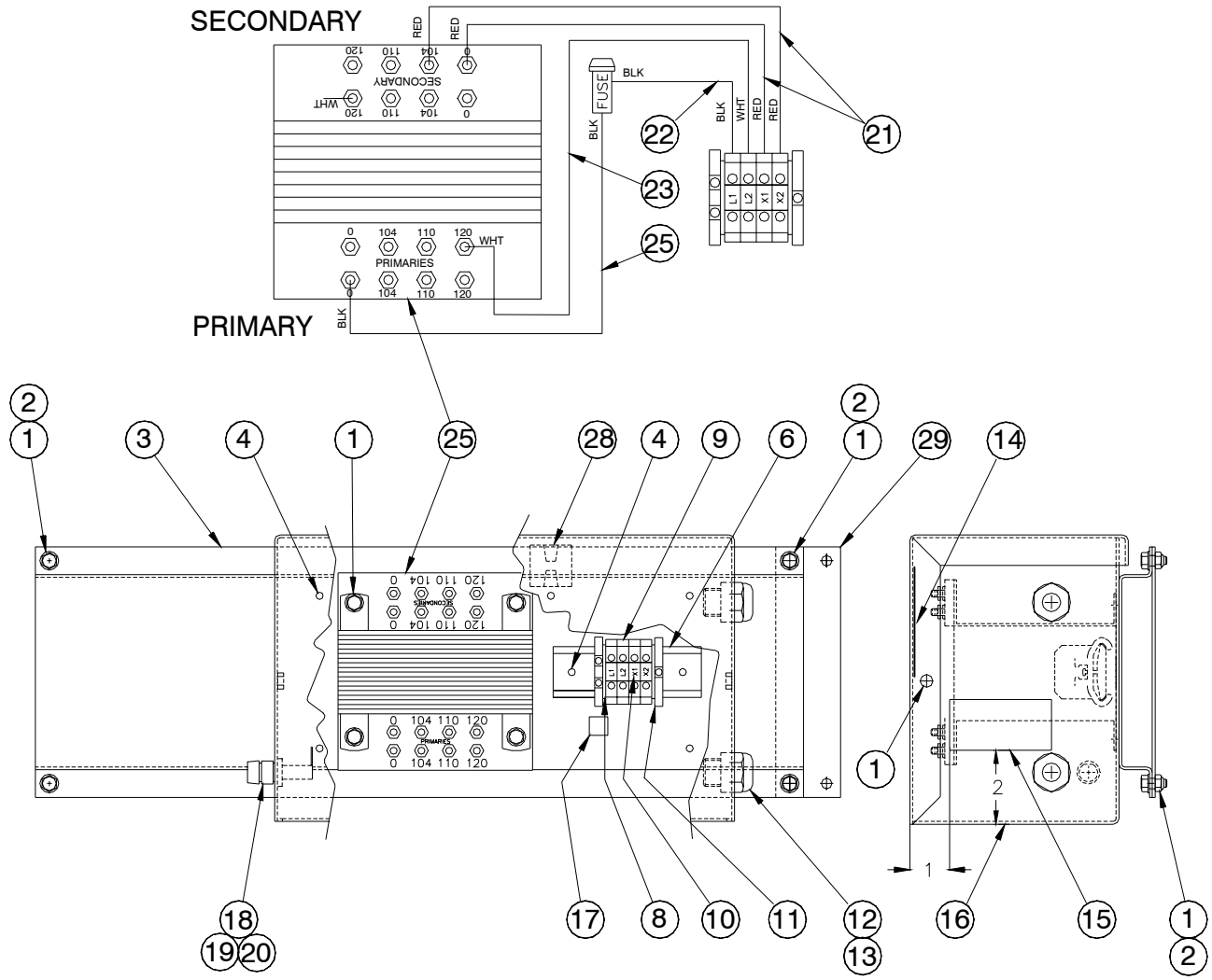
Control Box


706 CONTROL BOARD
WARNING
J13 POWER
J13
J14
J15
J16
J11
J8
J4
J10
J7
J5
J6
J2
J3

Control Box Parts List

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	CONTROL BOX	82780000A
2	8	POP RIVOT 3/16"	81861100A
3	14	CORD GRIP SMALL (WITH NUT)	81976100A
4	2	CORD GRIP LARGE	A82474600A
5	1	CONTROL BOX COVER ASSEMBLY	82973400A
6	2	HEX WASHER HEAD CAP SCREW, SS, M6X12MM	82804900A
7	1	RECTIFIER	09394300A
8	1	PHILLIPS HEAD SCREW, M4X20MM	82715600A
9	1	DIN RAIL	82281400A
10	2	DIN RAIL CLAMP	82292200A
11	10	DIN RAIL TERMINAL	82478200A
12	4	DIN RAIL END PLATE	82478400A
13	1	TIE WRAP	A80655300A
14	1	CAPACITOR	82806200A
15	1	CAPACITOR BRACKET	82697100A
16	1	POWER TRANSFORMER	82806100A
17	2	PHILLIPS PAN HEAD SCREW, SS M4X12MM	82715400A
18	4	LOCK WASHER, SS, DIN 127-A2 M4	82710800A
19	4	FLAT WASHER, SS, DIN 125-A M4	82709500A
20	1	WARNING DECAL	81921300A
21	7	PHILLIPS PAN HEAD SCREW, SS M3X8MM	82783300A
22	1	PCB ASSEMBLY - 706 CONTROL	E82976600A
23	2	TERMINAL 6 PT	82781200A
24	2	TERMINAL 7 PT	11924100A
25	1	SERIAL NUMBER LABEL	82519600A
26	3	ETL LISTING LABEL	82844700A
27	3	TERMINAL 4 PT	13457200A
28	2	SOLID STATE RELAY	13636700A
29	2	FUSE	13637500A
30	2	TERMINAL 2 PT	14708000A
31	1	POWER SWITCH	A82351600A
32	1	FUSE HOLDER	82466700A
33	1	FUSE BUSS MDL-5 AMP	82349700A
34	2	HEX HEAD CAP SCREW, SS M4X12MM	82823300A
35	2	CORD GRIP NUT 7/8"	A80077800A
36	1	GROUND DECAL	82700100A
37	1	WASHER, SS M5	82709100A
38	1	LOCKNUT M5	82709600A
39	2	3/4" HOLE PLUG	81406200A
40	1	1/2" HOLE PLUG	82804200A
NS		LABEL, WIRING DIAGRAM SWITCH SETTINGS	82951200A

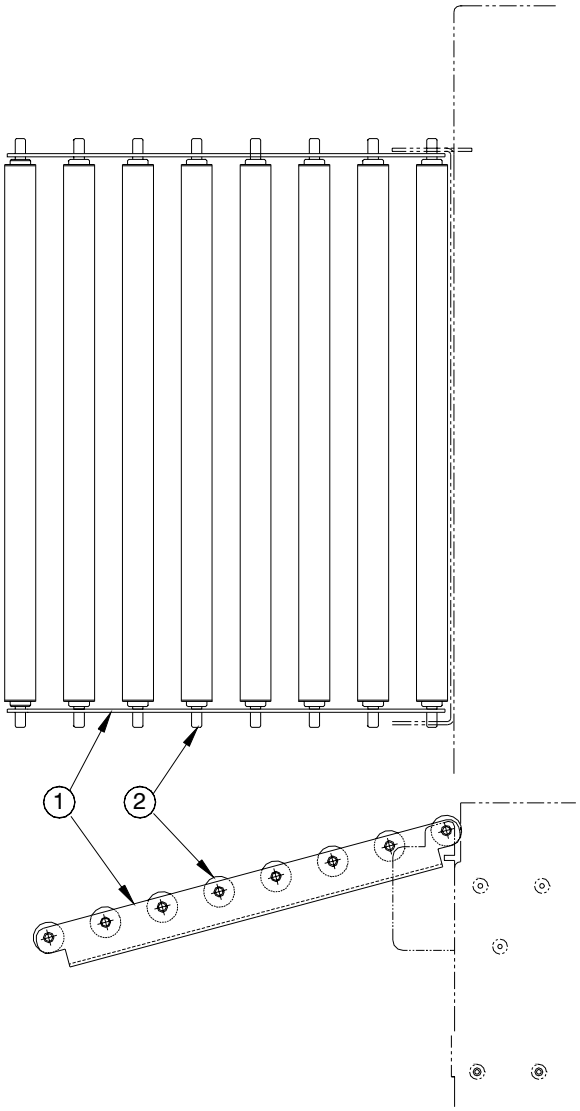
50 Hz Transformer (0925-0374-000)



50 Hz Transformer (0925-0374-000) Parts List

ITEM	QTY.	DESCRIPTION	PART NUMBER
1	6	FLANGED HEX HEAD CAP SCREW, SS, M6X12MM	82804900A
2	6	SELF LOCKING HEX NUT, SS, DIN 985 M6	82709200A
3	1	TRANSFORMER SUPPORT	82849400A
4	7	POP RIVOT 3/16"	81861100A
5	1	TRANSFORMER COVER	82849600A
6	1	DIN RAIL	82281400A
7	1	DIN RAIL GROUND CLAMP	82476400A
8	2	DIN RAIL END PLATE	82478400A
9	4	DIN RAIL TERMINAL	822478200A
10	.04	TERMINAL MARKER	82850400A
11	1	DIN RAIL CLAMP	82292200A
12	2	CORD GRIP 7/8"	82474700A
13	2	CORD GRIP NUT 7/8"	A80077800A
14	1	WIRING LABEL	82849700A
15	2	WARNING LABEL - POWER	81921300A
16	1	TRANSFORMER BOX	82849500A
17	1	GROUND DECAL	82700100A
18	1	FUSE HOLDER	82466700A
19	1	FUSE - BUSS MDL - 2-1/2 AMP.	82486000A
20	1	FUSE - BUSS MDL - 5 AMP	82349700A
21	2	WIRE ASSEMBLY	82849800A
22	1	WIRE ASSEMBLY	82849900A
23	1	WIRE ASSEMBLY	82850000A
24	1	WIRE ASSEMBLY	82850100A
25	1	UNIVERSAL TRANSFORMER	82850600A
26	4	JUMPER WIRE ASSEMBLY	82850200A
27	3	WIRE TIE - 4"	A80655500A
28	1	WIRE TIE ANCHOR	A80690800A
29	1	TRANSFORMER SUPPORT EXTENSION	82977400A

Discharge Conveyor



ITEM	QTY.	DESCRIPTION	PART NUMBER
1	1	DISCHARGE CONVEYOR FRAME	82979900A
2	8	13-1/4" LONG ROLLER	82172500A

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