

90° Indexer

Technical Manual and Parts Catalog

This catalog covers
Model 0925-0400
90° Indexer

©Mettler-Toledo, Inc. 1997

No part of this manual may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, for any purpose without the express written permission of Mettler-Toledo, Inc.

U.S. Government Restricted Rights: This documentation is furnished with Restricted Rights.

INTRODUCTION

This publication is provided solely as a guide for individuals who have received Technical Training in servicing the METTLER TOLEDO product.

Information regarding METTLER TOLEDO Technical Training may be obtained by writing to:

METTLER TOLEDO

350 W. Wilson Bridge Road
Worthington, Ohio 43085
(614) 438-4511

**METTLER TOLEDO RESERVES THE RIGHT TO MAKE REFINEMENTS OR
CHANGES WITHOUT NOTICE.**

PRECAUTIONS

READ this manual BEFORE operating or servicing this equipment.

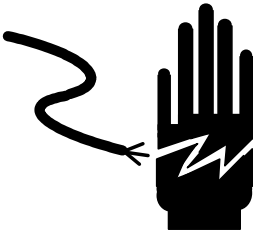

FOLLOW these instructions carefully.

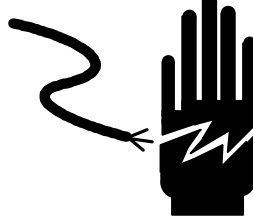

SAVE this manual for future reference.

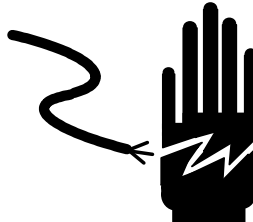

DO NOT allow untrained personnel to operate, clean, inspect, maintain, service, or tamper with this equipment.


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.	

CONTENTS

GENERAL DESCRIPTION	1-1
Introduction	1-1
Photoeye	1-1
Stepper Motors	1-1
Configurations	1-2
645 Solo Plus/Solo XL Wrapper, 90° Indexer, 606 Autolabeler, & 8360 on 645	1-2
645 Solo Plus/ Solo XL Wrapper, 90° Indexer, 602 Autolabeler, & 8305 on 602	1-3
Specifications	2-1
Agency Approval	2-1
Environmental Requirements	2-1
Power Requirements	2-1
Dimensional Information	2-2
Safety Features and Precautions	3-1
Setup & Operation	4-1
Unpacking	4-1
Installation with 645 Wrapper	4-1
Jumper Settings	4-4
Power Up	4-5
Self test	4-5
Sequence of Operation	4-5
General Maintenance, Cleaning and Lubrication	5-1
Maintenance	5-1
Removing the Side Covers	5-1
Changing the Infeed Conveyor Belt	5-2
Changing the Discharge Conveyor Belt	5-2
Changing the Conveyor Drive Belt	5-2
Lifter Assembly Replacement	5-3
Changing the Transfer Conveyor Belts	5-3
Cleaning	5-3
Lubrication	5-4
Troubleshooting	6-1
Power Supply	6-1
Stepper Motor Test	6-2
Stepper motor Resistance Test	6-2
Sensor and Photoeye Test	6-3

Interconnecting Diagram 7-1

 Part Description..... 7-1

Wiring 7-2

Replacement Parts 8-1

90° Indexer 8-2

Parts List for 90° Indexer..... 8-3

Control Box..... 8-4

Parts List for Control Box..... 8-5

Lifter Assembly..... 8-6

Parts list for Lifter Assembly..... 8-7

Lifter Motor Assembly..... 8-8

Parts list for Lifter Motor Assembly..... 8-9

Conveyor Motor Assembly..... 8-10

Parts List For Conveyor Motor Assembly..... 8-11

Infeed Conveyor..... 8-12

Parts List for Infeed Conveyor..... 8-13

1

General Description

Introduction

The Mettler Toledo model 0925-0400 90° Indexer is designed for use with the 645 Solo Plus and Solo XL wrappers.

The 90° Indexer automatically indexes and positions trays for proper orientation with a Model 606, a Model 602 or a Hobart ILA Labeler. Microprocessor controlled stepper drive motors are used for positioning accuracy and reliability.

Figure 1-1 shows the system configuration of the 645 Wrapper, 90° Indexer, 606 Labeler, 8360 Controller, and 317 Printer. Figure 1-2 shows the system configuration of the 645 Wrapper, 90° Indexer, 602 Labeler, 8305 Controller and the 315 Printer.

Photoeye

The 90° Indexer uses one +24V photoeye to control its operation. When the leading edge of the package crosses the photoeye the conveyor is turned on. The photoeye senses the trailing edge of the package to position it for proper alignment with the Labeler.

Stepper Motors

The 90° Indexer is equipped with two DC stepper motors. The functions of these stepper motors are as follows:

Lifter Stepper Motor - lowers the lifter rollers for the package to be discharged from the lifter and raises the rollers for the next package.

Conveyor Stepper Motor - operates the infeed rollers, lifter rollers and conveyor belts to convey the package on and discharge the package off the indexer.

MODEL 645 Solo Plus/Solo XL Wrapper
MODEL 0925-0400 90° Indexer
MODEL 606 Auto-Labeler
8360 on 645

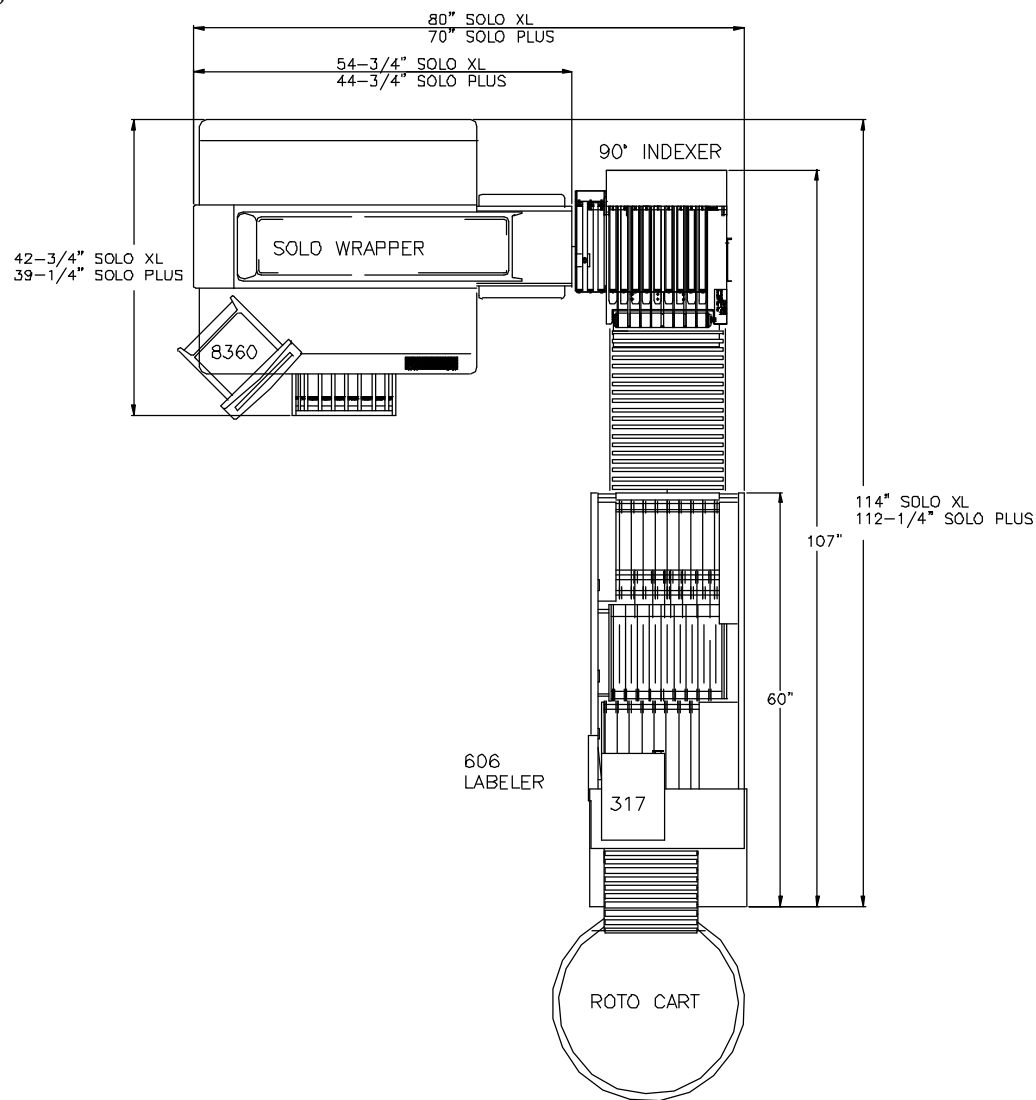


Figure 1-1: 645 Wrapper/ 90° Indexer/ 606 Labeler System Layout

System Components

Description	Product I. D.
Solo Wrapper	645-10XX
90° Indexer	0925-0400
606 Labeler	606-0117
317 with applicator	317-2001
8360 Controller	8360-XXXX

MODEL 645 Solo Plus/Solo XL Wrapper
MODEL 0925-0400 90° Indexer
MODEL 602 Auto-Labeler
8305 on 602

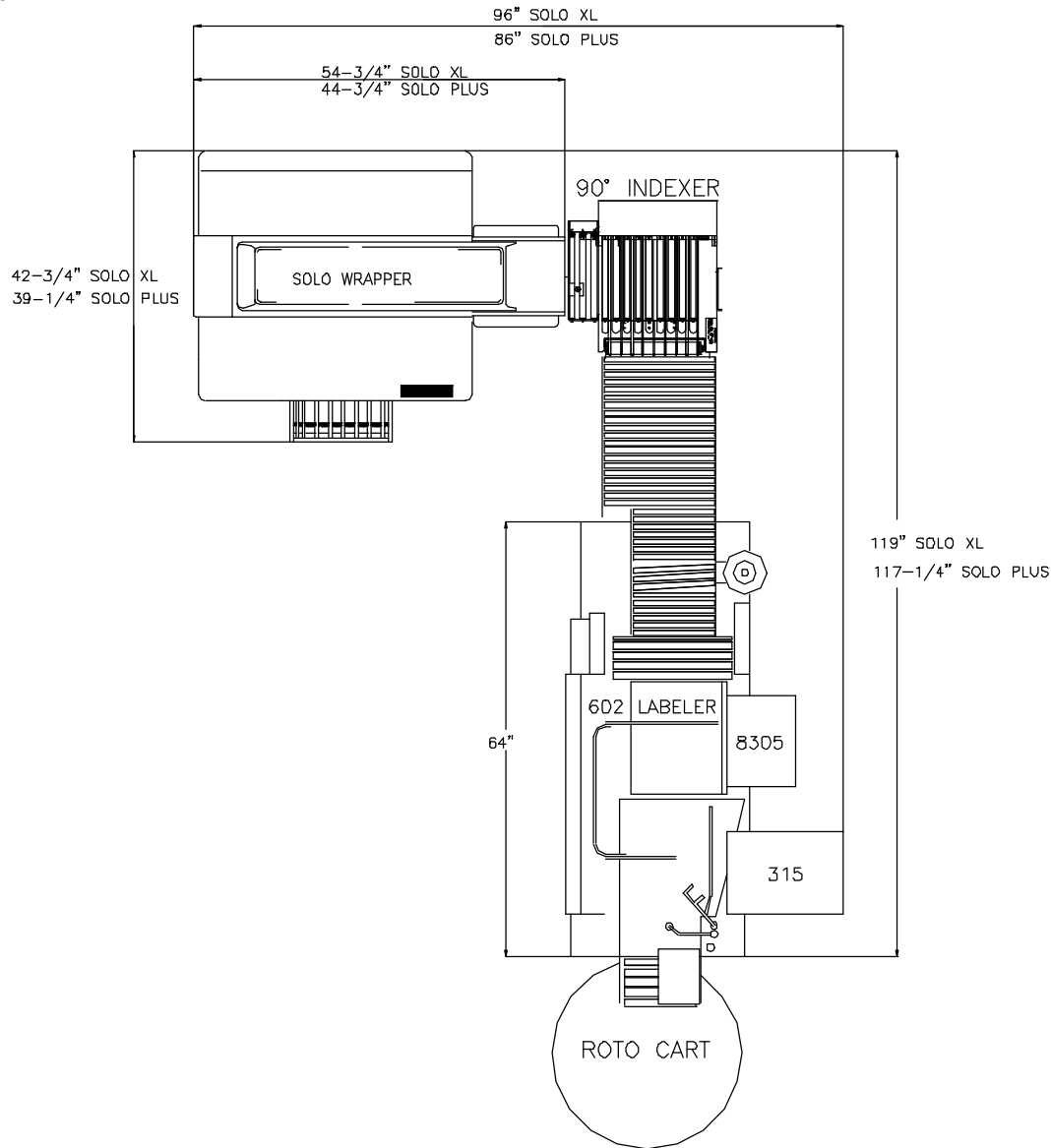


Figure 1-2: 645 Wrapper/ 90° Indexer/ 602 Labeler System Layout

System Components

Description	Product I. D.
Solo Wrapper	645-10XX
90° Indexer	0925-0400
602 Labeler	602-1419
315 Printer	315-0002
8305 Controller	8305-XXXX

2

Specifications

Agency Approval

Submitted for ETL Approval.

Environmental Requirements

The 90° Indexer 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 indexer 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.

Power Requirements

The 90° Indexer requires 115 VAC, 60 Hz., single phase, power .5 kVA, 5 AMP nominal to operate. The circuit must be well regulated, transient free, dedicated, and properly grounded.

The control board and stepper motors operate at 48 VDC. A 115 - 36 volt transformer is used.

Dimensional Information

The 90° Indexer occupies approximately 7.5 square feet of space including the gravity discharge conveyor.

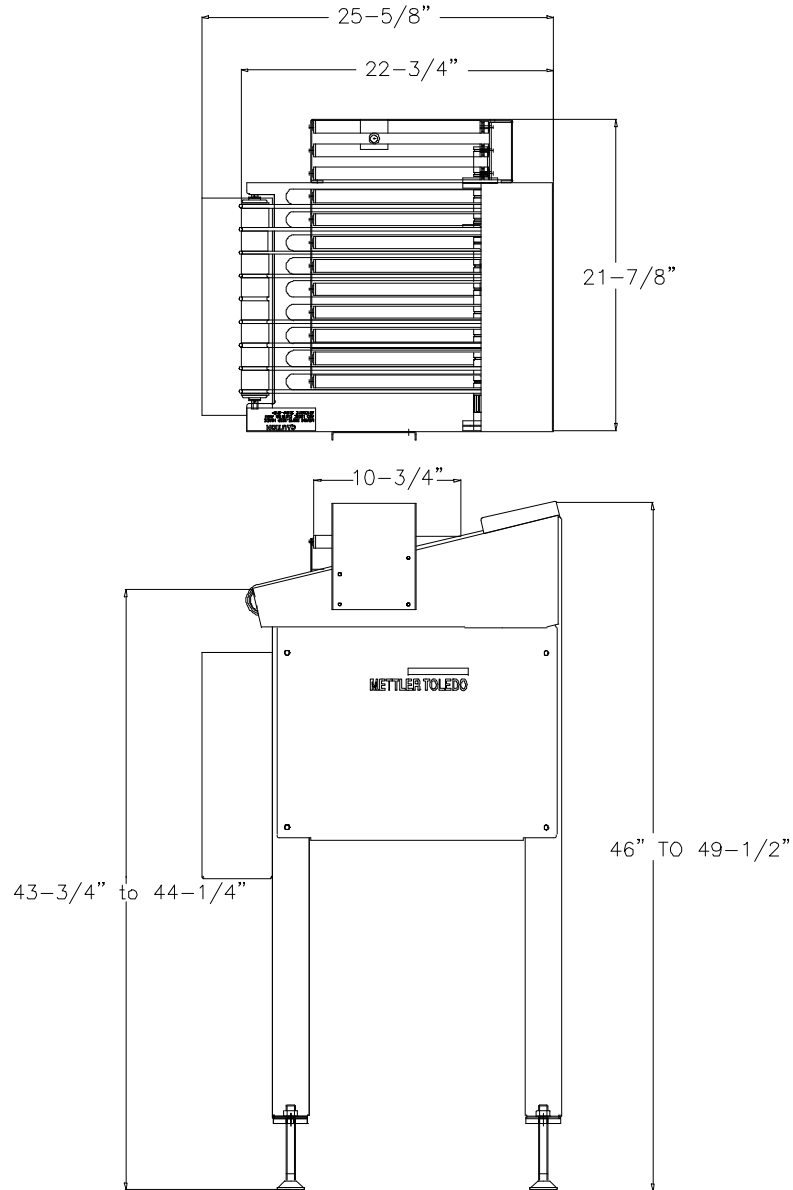
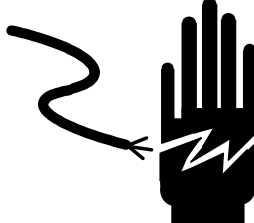



Figure 2-1: Dimensional Views



3

Safety Features and Precautions

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 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.

	<div data-bbox="987 613 1369 701"> WARNING</div> <div data-bbox="881 730 1437 819">DISCONNECT ALL POWER TO THIS UNIT BEFORE REMOVING THE FUSE OR SERVICING.</div>
---	--

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

	<div data-bbox="987 991 1369 1079"> WARNING</div> <div data-bbox="881 1108 1469 1306">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.</div>
--	---

Always take proper precautions when handling static sensitive devices.

<div data-bbox="841 1396 998 1507"></div> <div data-bbox="800 1518 1052 1564">CAUTION</div> <div data-bbox="755 1585 1096 1717">OBSERVE PRECAUTIONS FOR HANDLING ELECTROSTATIC SENSITIVE DEVICES.</div>

4

Setup and Operation

Unpacking

Remove the shipping crate from the 90° Indexer and carefully inspect for any damage. Two shipping holes are provided at the bottom of each leg next to the levelers for lagging the 90° Indexer to a pallet. Unbolt the indexer from the pallet and place it onto the floor. Use extreme caution when lifting and moving the indexer to the desired location. **Warning:** Do not attempt to lift and move the indexer by yourself or injury may occur.

Installation with the 645 Wrapper

To install the 90° Indexer with the 645 Solo Plus or Solo XL Wrapper perform the following steps:

- Position the 645 Wrapper in the proper location.
- Level and adjust the 645 Wrapper height per the 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 90° Indexer so the rear brace on the wrapper fits through the slot in the infeed frame (See figure 4-1).
- Attach the 90° Indexer to the 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 90° Indexer and secure with the set collars provided (See figure 4-1).
- Loosen the lock nuts on the 90° Indexer adjustable leveling feet with a 15/16 in. Wrench (See figure 4-2).

- Adjust the height of the 90° Indexer by turning the leveling feet using a 1/2 in. open end wrench in the flattened portion at the bottom of the levelers. The Indexer infeed conveyor height should be 1/16 in. - 1/8 in. below the discharge sealing belt of the 645 Wrapper.
- Attach the 19 roller discharge to the Indexer by snapping the bracket over the ends of the head pulley shaft.
- On 606 applications the discharge roller assembly is attached to a 0925-0232 infeed bracket using the 15" shaft and set collars provided (See figure 4-3).
- On 602 applications the discharge roller assembly is attached to the infeed of the 602 by replacing the first infeed roller shaft with the 15" shaft and set collars provided. **Note:** The 602 must be positioned as far to the right (away from the infeed of the indexer) as possible (See figure 4-4).
- Adjust the labeler height per the labeler service manual. The height of the last roller of the discharge should be 4.5 to 5.5 inches below the height of the first roller.

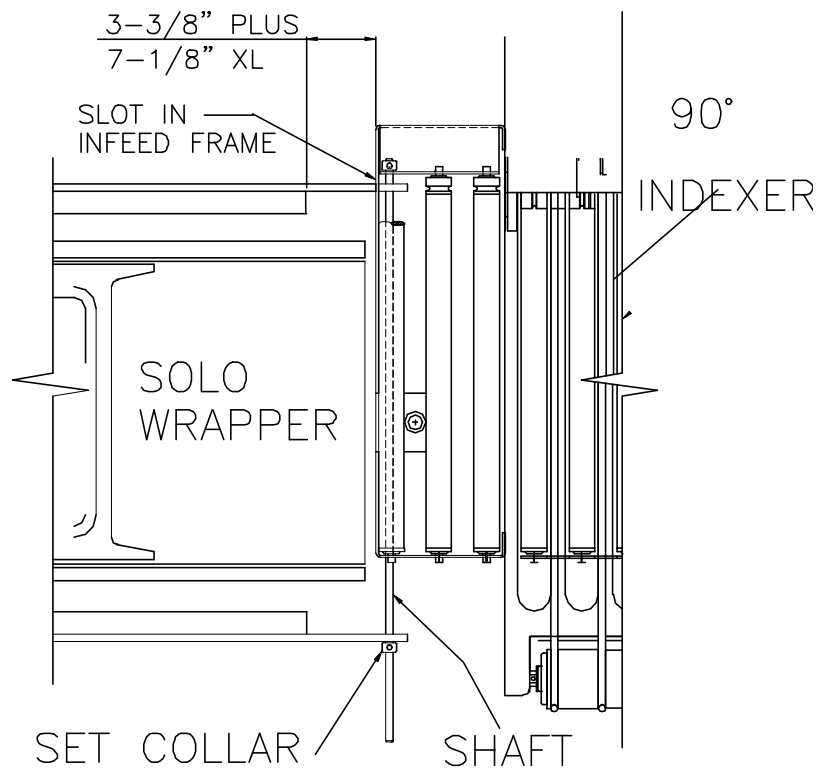


Figure 4-1: Solo Wrapper Attachment

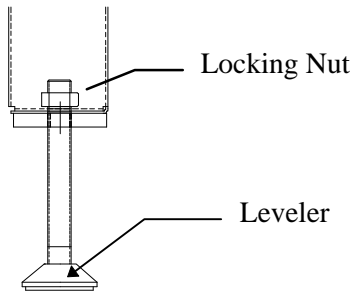


Figure 4-2a: 90° Indexer Leveler

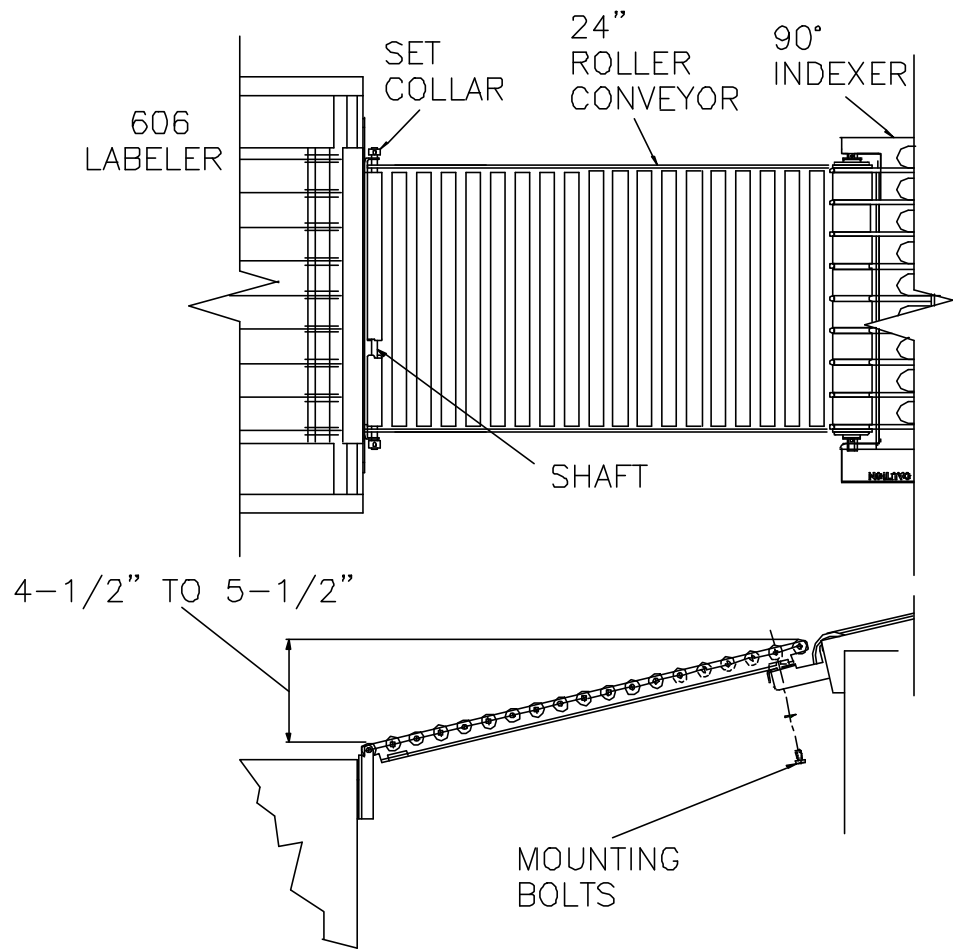


Figure 4-3 606 Attachment

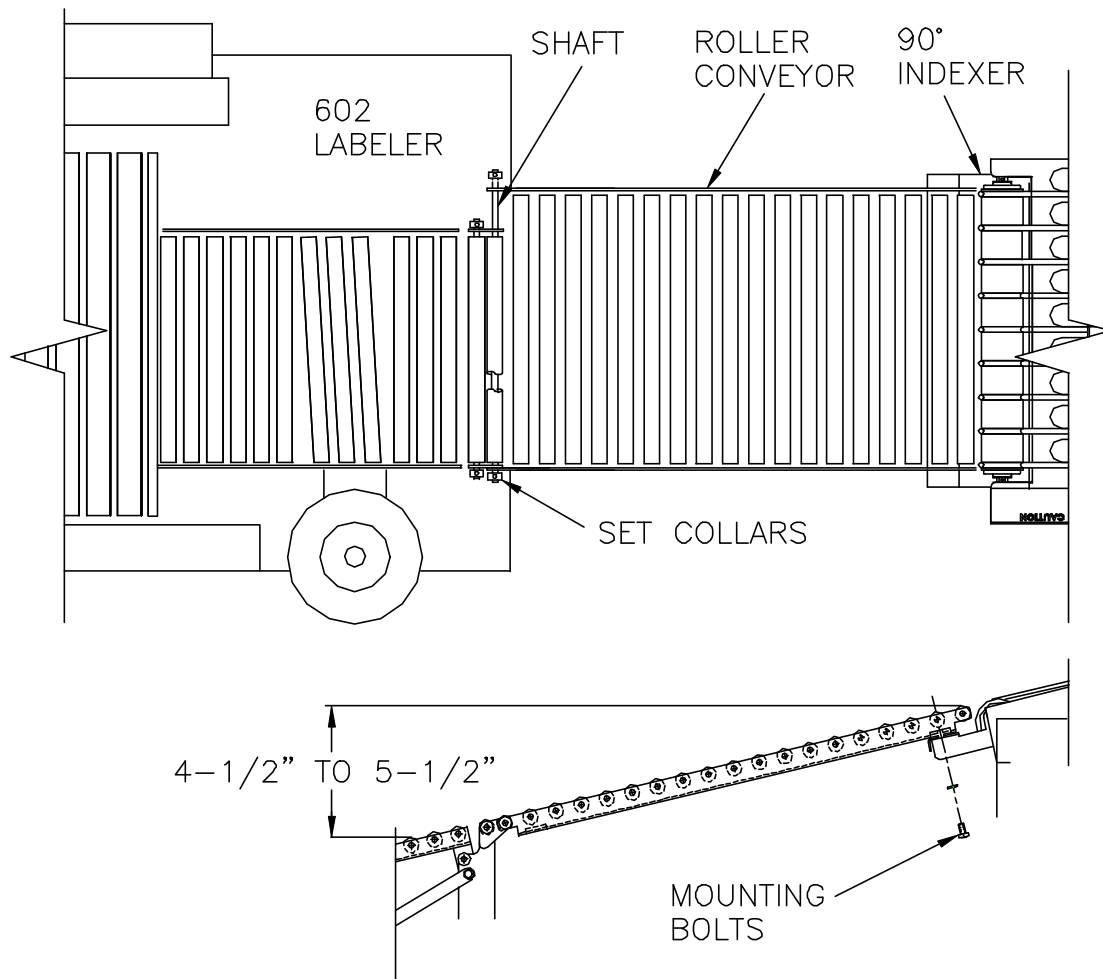


Figure 4-4: 602 Attachment

Note: The infeed of the 602 must be positioned as shown.

Jumper Settings

The jumper settings on the 90° Indexer Control PCB are as follows:

- W1** off - Normal Operation
 on - Continuous Run Mode
- W2 and W3** - Both on

Power Up

Plug the AC power cord of the 0925-0400 90° Indexer into a 115 VAC wall outlet. The Indexer is powered up by pressing the power switch to the on position as shown in Figure 4-5.

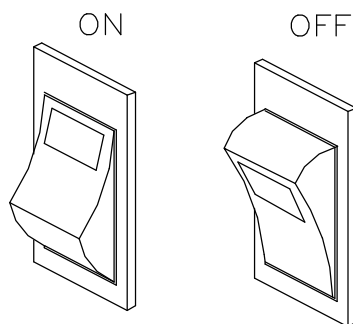


Figure 4-5: Power Switch

Self Test

During power up the 90° Indexer performs several internal checks before the Indexer is operable. It will cycle 1,2,3 on the 3-digit LED display located on the control PCB. If all the conditions are met then the lifter will go through a homing sequence to make sure the lifter is in the raised position. The LED display will show the level of the sensor which last changed.

Sequence of Operation

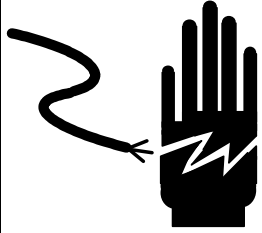

As the package is discharged from the 645 Wrapper, the leading edge of the package moves onto a three-roller conveyor at the infeed to the 90° Indexer. The first roller is free wheeling. When the package is sensed by the photoeye located between the first and second rollers of the infeed the Indexer Control PCB powers the conveyor stepper motor. The second and third infeed rollers and the lifter conveyor rollers are driven from a common drive shaft. This shaft is powered through the drive pulley of the discharge conveyor belts by the conveyor stepper motor. The infeed conveyor transports the package to the lifter. The conveyor remains on until the trailing edge of the package has cleared the photoeye by a predetermined number of steps. The Indexer Control PCB then powers the lifter stepper motor to lower the package onto the discharge conveyor belts. The Indexer Control PCB then powers the conveyor stepper motor to transport the package to the gravity discharge roller conveyor. The 19-roller gravity conveyor is used to guide packages onto the infeed of the labeler. The lifter is then raised and the cycle repeats.

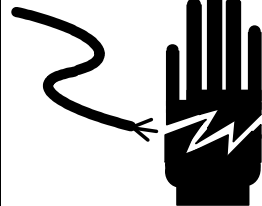

5

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.

	<div data-bbox="980 737 1365 827"> WARNING</div> <div data-bbox="878 848 1458 1054">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.</div>
--	--

	<div data-bbox="980 1113 1365 1203"> WARNING</div> <div data-bbox="870 1234 1425 1323">DISCONNECT ALL POWER TO THIS UNIT BEFORE REMOVING THE FUSE OR SERVICING.</div>
---	--

Removing the Side Covers

The two side covers are designed for easy access to the internal components of the Indexer. The covers fit in a slot at the top and are held in place by four capscrews on the side. To remove a side cover, remove the four capscrews with an 8 mm wrench. Pull down to remove the top of the cover from the slot.

Changing the Infeed Conveyor Belt

Remove power from the machine before performing this service. The second and third rollers on the infeed conveyor are belt driven by the conveyor stepper motor. The belts can be replaced by removing the snap ring on the left end of the belt driven roller assembly. Remove the belt from the groove of the drive roller assembly. Slide the roller shaft out the right side and remove the roller assembly. Remove and replace the infeed conveyor belt. Reinstall the shaft through the roller assembly and insert the snap ring. Make sure the belt is installed in the grooves of the rollers.

Changing the Discharge Conveyor Belts

Note: Damaged conveyor belts can be repaired by cutting out the damaged area and installing a butt splice (PN 82114200A).

Remove power from the machine before performing this service. The conveyor belts can be replaced without disassembling any major parts. Remove the tail pulley cover. The belts snap together and can be pulled apart by twisting the joint, shown in Figure 5-b, with two pliers. To replace a belt, first remove the side covers. Then twist apart the belt at the joint and remove it from the unit. Install the new belt by feeding it through the proper location around the head and tail pulleys and snapping it together in place. Be certain the belt is routed correctly around the lifter assembly, and the conveyor belts on the underside of the Indexer. Reinstall the tail pulley cover and side covers.

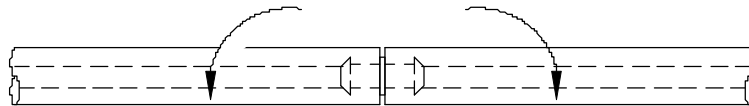


Figure 5-b: Conveyor Belt Joint

Changing the Conveyor Drive Belt

Note: There should be 1/4 in. \pm 1/8 in. deflection in the belt after the drive motor is tight. Using switch #3 (SW 3) in the normal operation mode, check for smooth tooth engagement when running the conveyor.

Remove power from the machine before performing this service. To change the conveyor drive belt, remove the 9 conveyor belts as described in the section above and loosen the conveyor drive motor. Remove the two socket head cap screws that fasten the lifter bearing to the slider bed on the side opposite the infeed. The conveyor drive pulley is supported in a slot at each end of the pulley. Pull the drive pulley away from the slots towards the outside of the machine and allow the pulley to drop down. Remove the drive belt from the drive pulley and the stepper motor pulley and replace. Reinstall in reverse order.

Lifter Assembly Replacement

Remove power from the machine before performing this service. Remove the side covers, infeed belts and conveyor belts as described in previous sections. The lifter assembly is supported by the two adjustable links on one end and pivots on the drive shaft on the other. Support the lifter assembly and disconnect the two adjustable links from the lifter assembly. Remove the 2 socket head cap screws used to fasten the rear lifter bearing to the frame. Remove the tail pulley by pulling it back out of the mounting slots. Remove the 2 socket head cap screws used to fasten the front lifter bearing to the frame. Carefully lower the lifter assembly out through the bottom of the machine. Reinstall in reverse order.

Changing the Transfer Conveyor Belts

Remove power from the machine before performing this service.

Remove the lifter assembly as described in the previous section.

The two outer transfer drive belts on either side can be replaced by lifting up on the belt end of the roller and disengaging the roller shaft on the opposite end from the carrier. Slide the transfer belt out of the groove and off the roller assembly. Remove the belt from the drive shaft. Replace in reverse order.

To replace any of the middle 5 transfer roller belts, remove all the transfer rollers as previously described. Remove the 4 socket head cap screws used to fasten the drive shaft to the lifter assembly. Pull the drive shaft down out of the slots in the lifter frame. Remove and replace the belts on the drive shaft. Reinstall in reverse order.

Cleaning

Remove power from the machine 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 belts.

Lubrication

Note: Too much oil may cause the belts to slip

Note: Avoid getting lubricant on the transfer conveyor drive belts.

The machine should not be lubricated by the operator/customer. Use a light oil (FMO 350) on the following parts:

- Head and tail pulley bearings
- Infeed and transfer roller bearings (24)
- Lifter rod ends (4)
- Lifter drive shaft bearings (4)
- Conveyor belts

Individual lubrication points are shown on the replacement parts breakdown.

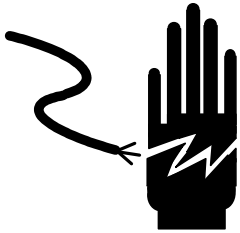

Spray FMO 350 on the conveyor belts and wipe off the excess oil. Lubricate enough to fill the pores of the belts. This will eliminate friction with the slider bed when running heavier packages.

Lubrication is required a minimum of once a year.

6

Troubleshooting

Power Supply

	<div data-bbox="1019 472 1399 562"> WARNING</div> <p data-bbox="878 583 1518 758">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.</p>
---	---

The Power Supply Assembly supplies +48 VDC to the Control PCB. With the 90° Indexer plugged in and powered on, verify the on/off switch is lit. This is a quick way to check the AC power input and the 5 amp fuse. If the on/off switch is not lit, check to be sure the fuse is not blown.

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. The rectifier is located right of the filter capacitor and above the transformer, as shown in Figure 6.1 below. 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.

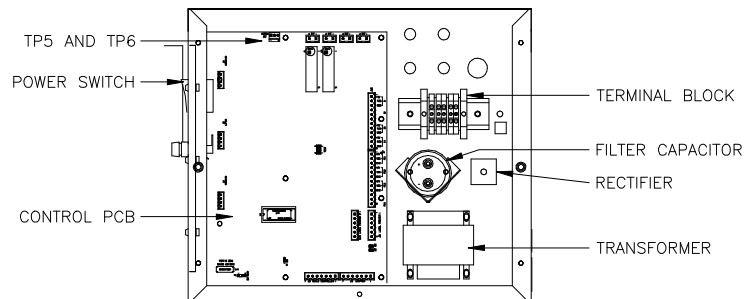


Figure 6-a: Control Box

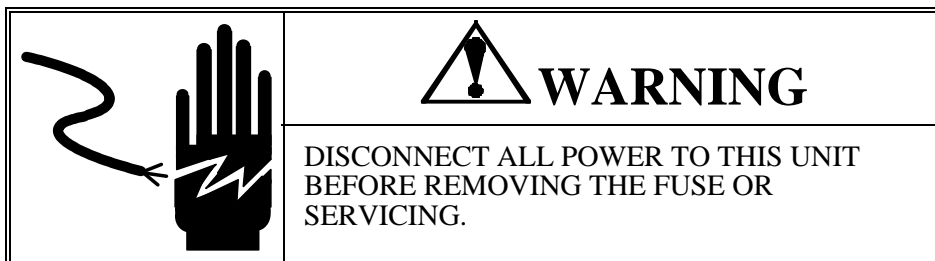
Stepper Motor Test

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

- Switch 1(unused)
- Switch 2 will run the lifter stepper motor.
- Switch 3 will run the conveyor stepper motor.

The stepper motors will chatter if the mechanism or drive belts are jammed. If the stepper motor will not operate during these tests, test for 38 to 42VDC from TP4 to TP5. If the voltage is present, proceed with the resistance test of the stepper motors. If the voltage is not present, replace the control PCB.

Stepper Motor Resistance Test



Remove power from the machine before performing this service. The stepper motors can be tested by checking the resistance of the windings of the stepper motor in the control box. Disconnect the stepper motor from the Control PCB. Using an ohm meter, test the motor leads for shorts to ground. Following Table 6-a below, test the resistance of the windings for the two stepper motors. If a reading is not within specifications, replace the stepper motor.

Typical Stepper Motor Winding Resistance		
Stepper Motor	Pins 1 and 2	Pins 3 and 4
Lifter	.4 -.8 ohms	.4 -.8 ohms
Conveyor	.8 -1.2 ohms	.8 - 1.2 ohms

Table 6-a: Stepper Motor Winding Resistance

Sensor and Photoeye Test

The photoeye and lifter sensor can be blocked or cleared to change its state from low to high. There is a red LED on the bottom of the 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.

Display	Status
P1H	Photoeye blocked
P1L	Photoeye unblocked
S1H	Sensor blocked
S1L	Sensor unblocked

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

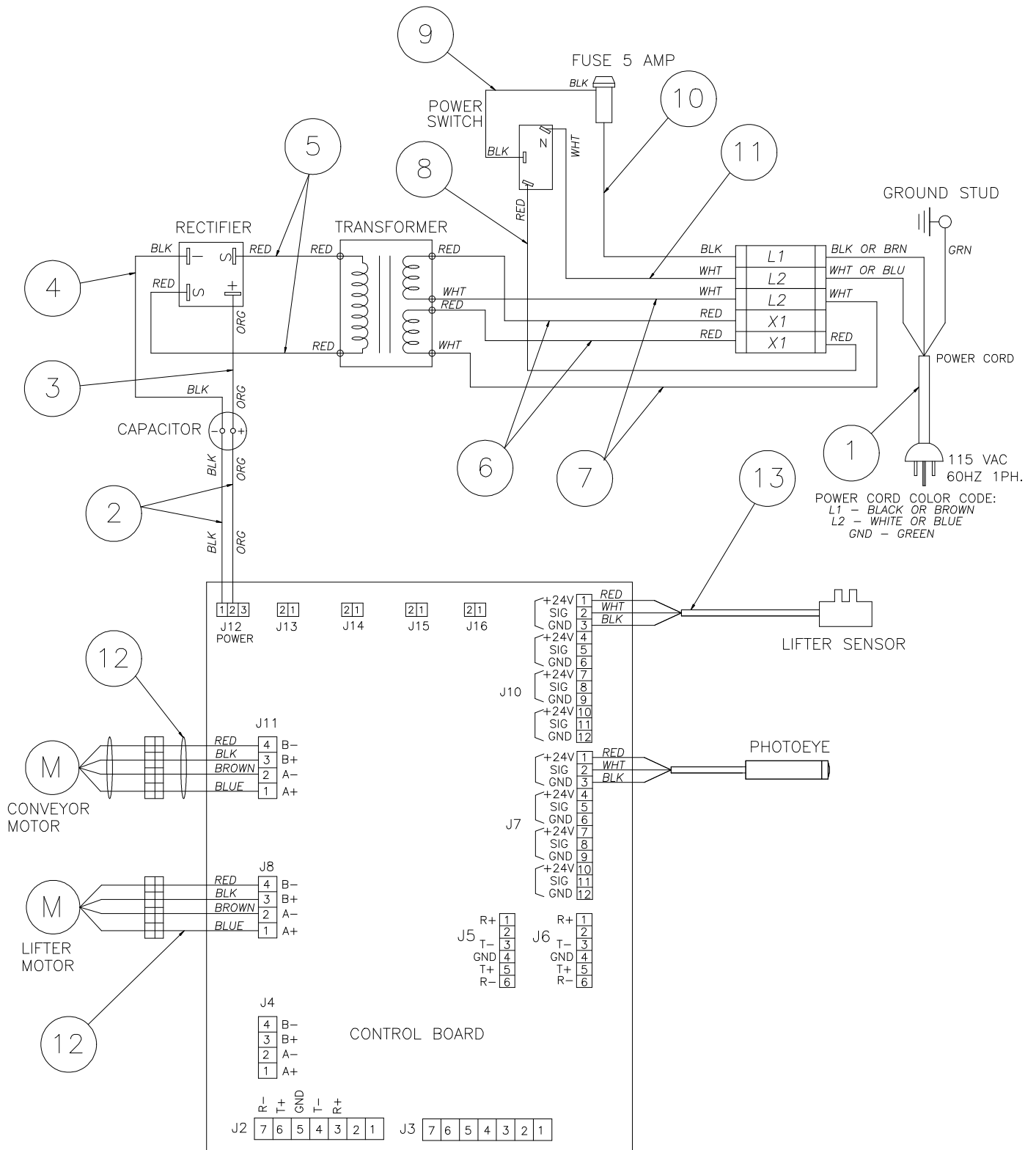
7

Interconnecting Diagram

Part Description

Item	Qty	Part #	Description
1	1	A80958700A	Power Cord
2	1	82810100A	Wire Assembly
3	1	82811000A	Wire Assembly
4	1	82811100A	Wire Assembly
5	2	82810400A	Wire Assembly
6	2	82810300A	Wire Assembly
7	2	82810200A	Wire Assembly
8	1	82811700A	Wire Assembly
9	1	82810500A	Wire Assembly
10	1	82925300A	Wire Assembly
11	1	82925400A	Wire Assembly
12	2	82925500A	Wire Assembly
13	1	82799900A	Cable Assembly

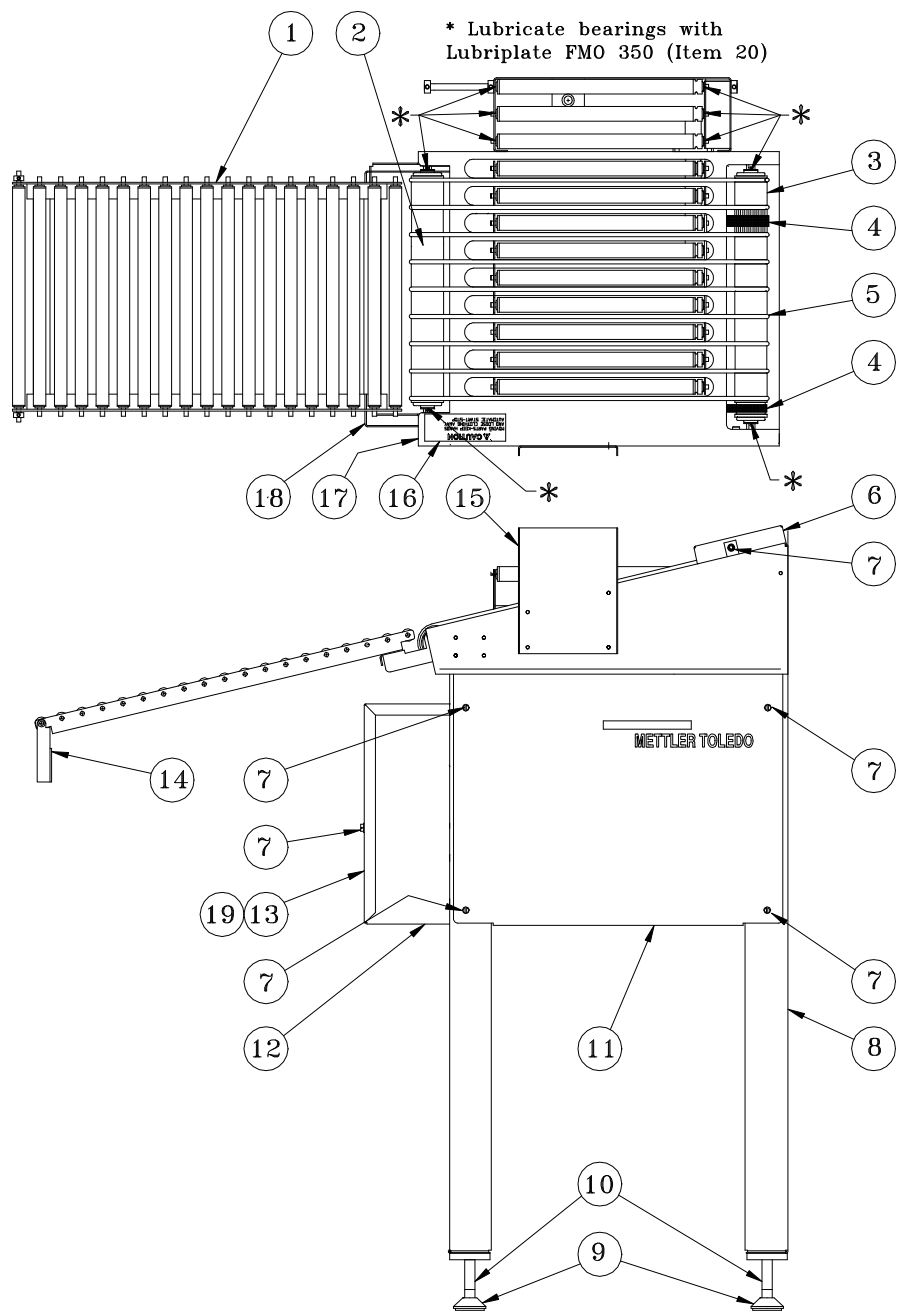
Wiring Diagram



8

Replacement Parts

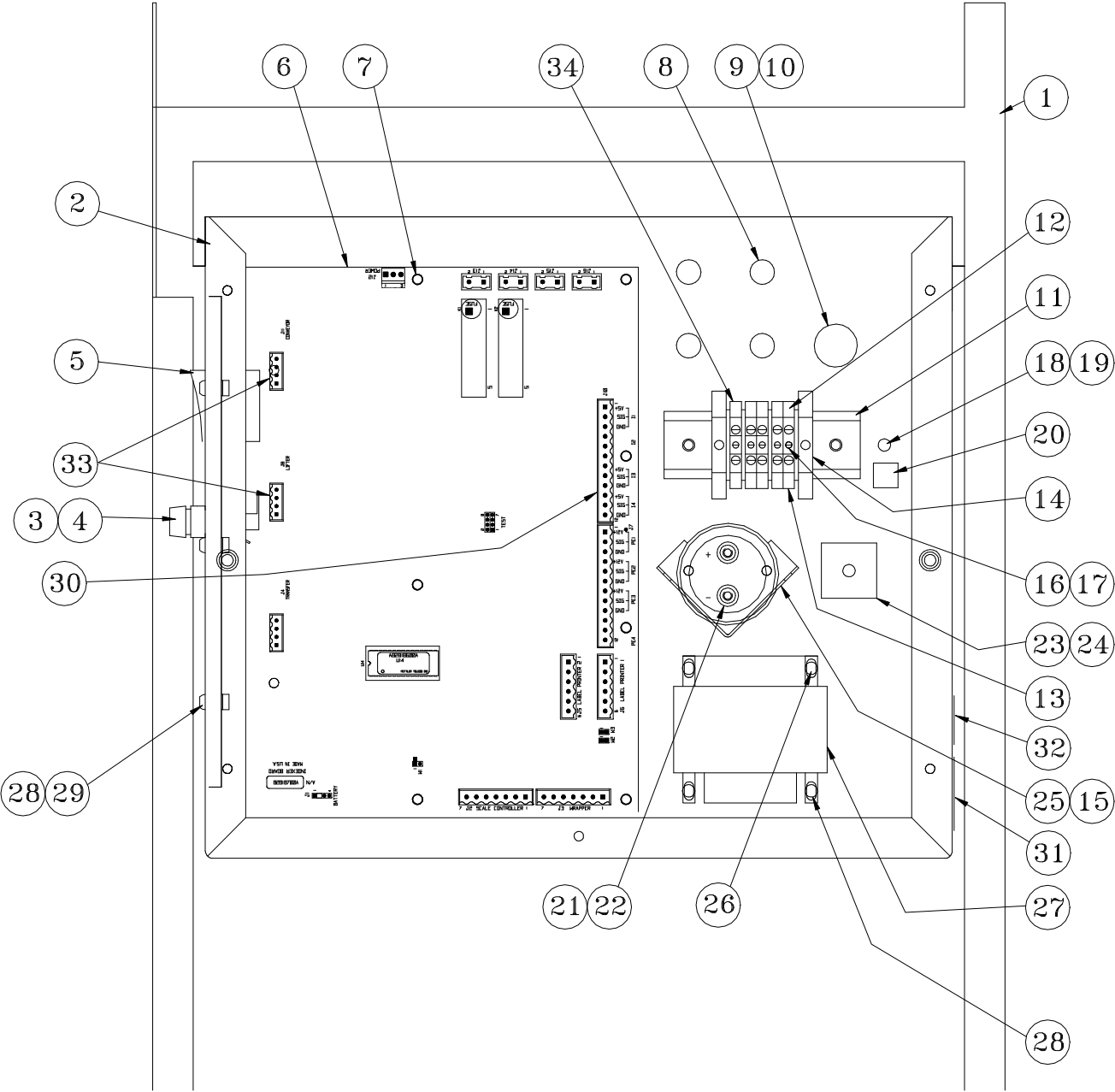
90° Indexer



90° Indexer Parts List

ITEM	QUAN.	DESCRIPTION	PART NUMBER
1	1	ROLLER CONVEYOR 24" LONG	82172700A
2	1	HEAD PULLEY ASSEMBLY	82922900A
3	1	TAIL PULLEY ASSEMBLY	82923000A
4	2	TIMING BELT 5MM HTD 81 TOOTH	82925800A
5	9	1/4" QUICK-GO BELTING 44 INCH	82926000A
NOT SHOWN	9	CONVEYOR BELT BUTT SPLICE	82114200A
6	1	TAIL PULLEY COVER	82917600A
7	16	SCREW, M6 X 12MM FLANGED CROSS RECESS STAINLESS STEEL	82804900A
8	1	REAR LEG	82917400A
9	4	LEVELER - RUBBER PAD	82819400A
10	4	LEVELER - WITH M16 NUT	82674300A
11	1	SIDE PANEL	82918900A
12	2	CONTROL BOX ASSEMBLY	82923100A
13	1	CONTROL BOX COVER	82917800A
14	1	BRACKET ASSEMBLY 606 INFEED	82171600A
15	1	BUMPER	82917300A
16	1	LABEL - AUTOSTART	82802100A
17	1	SLIDER BED	82922800A
18	1	GRAVITY EXIT BRACKET	82913900A
19	1	LABEL-WARNING	81921300A
20	-	LUBRIPLATE FMO 350	81863500A

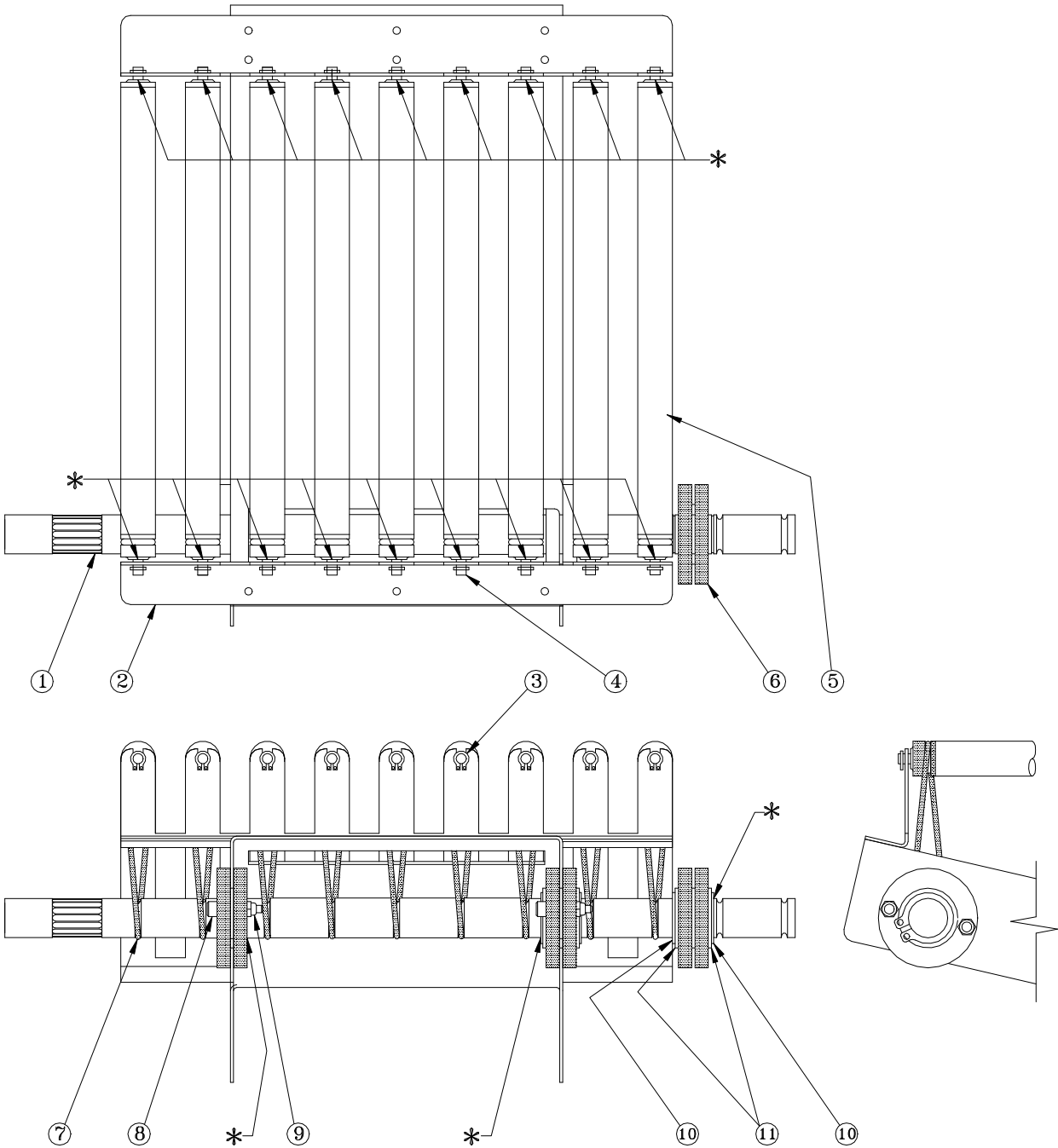
Control Box



Control Box Parts List

ITEM	QUAN.	PART NUMBER	DESCRIPTION
1	1	82917500A	FRONT LEG
2	1	82917700A	CONTROL BOX SIDES
3	1	82466700A	FUSE HOLDER
4	1	82349700A	FUSE - BUSS MDL - 5
5	1	A82351600A	ROCKER SWITCH - LIGHTED
6	1	82926900A	PCB ASSEMBLY
7	7	82783300A	M3 X 8MM PHILLIPS PAN HEAD CS
8	4	81976100A	CORD GRIP 1/2 W/NUT
9	1	82474700A	CORD GRIP 7/8
10	1	A80077800A	CORD GRIP NUT
11	2	82281400A	DIN RAIL
12	4	82478400A	END PLATE - DIN RAIL
13	5	82478200A	TERMINAL - DIN RAIL
14	2	82292200A	CLAMP - DIN RAIL
15	12	81861100A	POP RIVET 3/16 .126-.250
16	.012	82478300A	TERMINAL JUMPER - 2 HOLES
17	4	82476500A	CONNECTING PIN - JUMPER
18	1	82709100A	M5 LOCKNUT
19	1	82709600A	M5 WASHER
20	1	82700100A	GROUND DECAL
21	1	82806200A	CAPACITOR CONTROL
22	2	A80655300A	WIRE TIE 5.5 INCH
23	1	09394300A	RECTIFIER
24	1	82715600A	M4 X 20MM PHILLIPS PAN HEAD CS
25	1	82697100A	CAPACITOR BRACKET
26	2	82823300A	M4 X 12MM HEX HEAD CAP SCREW
27	1	82806100A	TRANSFORMER
28	5	82715400A	M4 X 12MM PHILLIPS PAN HEAD CS
29	3	82783100A	M4 NUT W/LOCKWASHER
30	2	13431600A	TERMINAL 12 PT
31	1	82519600A	SERIAL NUMBER LABEL
32	1		ETL LISTING LABEL
33	2	13457200A	TERMINAL 4 PT
34	.1	82845300A	TERMINAL MARKER SET

Lifter Assembly

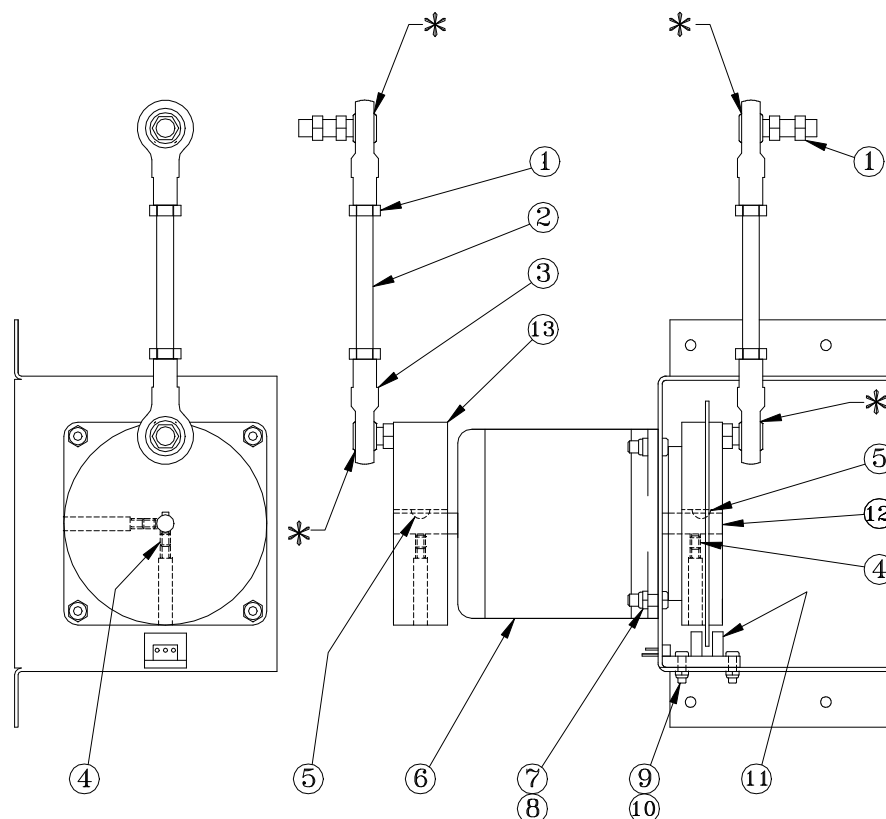


* Lubricate bearings with
Lubriplate FM0 350 (Item 12)

Lifter Assembly Parts List

ITEM	QUAN.	DESCRIPTION	PART NUMBER
1	1	LIFTER DRIVE SHAFT	82915800A
2	1	LIFTER FRAME	82923800A
3	18	GRIP RING 1/4"	82059100A
4	9	ROLLER SHAFT 1/4" DIA. X 13.440 LONG	82916200A
5	9	ROLLER ASSEMBLY	82923900A
6	3	LIFTER BEARING	82915700A
7	9	BELT 1/8" DIA. X 10" LONG	82654000A
8	4	SCREW M5 X 0.8 X 30MM LONG SOCKET HEAD CAP S.S.	82925600A
9	4	NUT M5 LOCK	82709100A
10	6	SNAP RING 63/64" INSIDE DIA.	82925900A
11	6	THRUST WASHER 1" INSIDE DIA. X 1-1/2" OUTSIDE DIA.	A80547800A
12	—	LUBRIPLATE FMO 350	81863500A

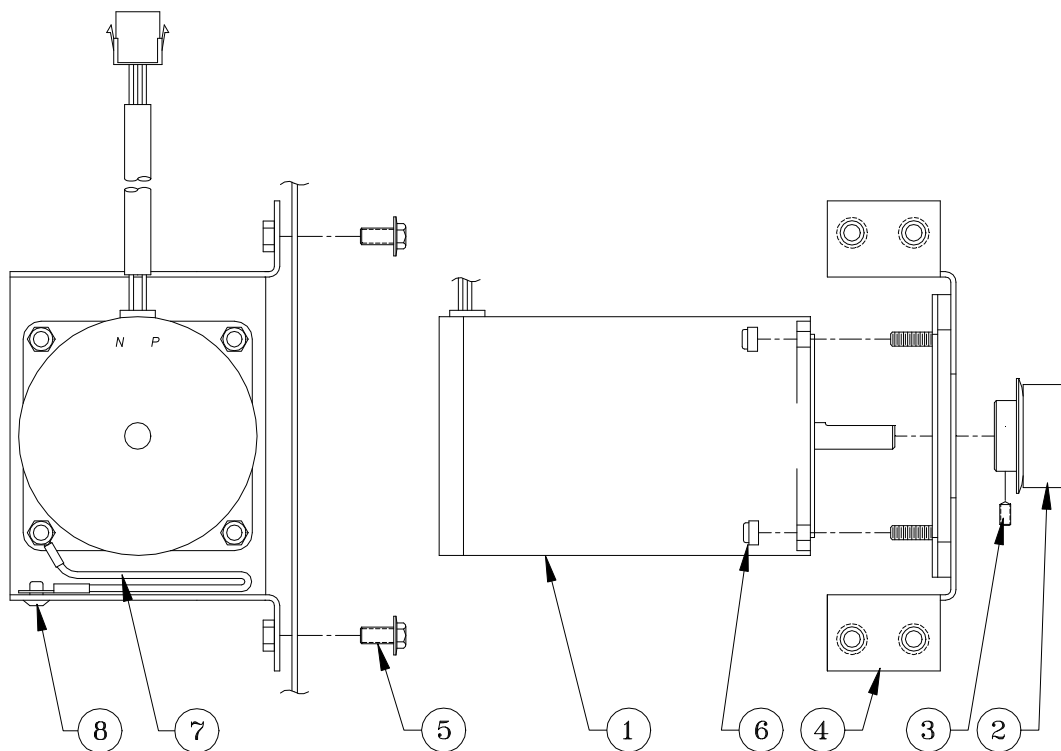
Lifter Motor Assembly



* Lubricate rod ends with
Lubriplate FMO 350 (Item 14)

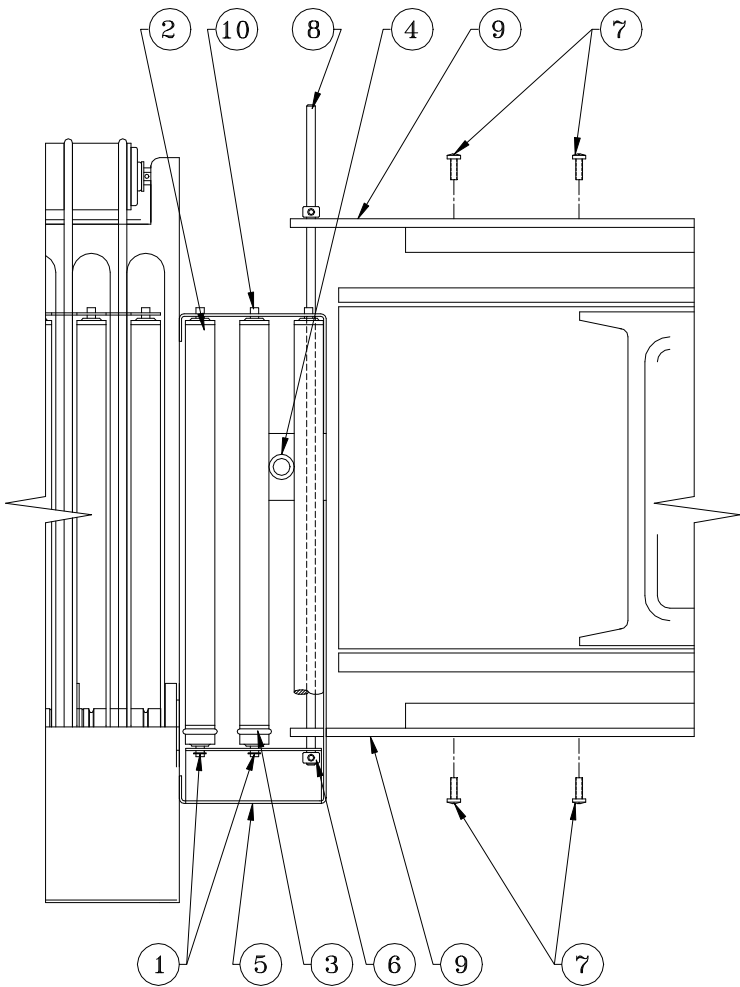
ITEM	QUAN.	DESCRIPTION	PART NUMBER
1	4	NUT 5/16-24 HEX UNF	R01174050
2	2	THREADED ROD 5/16-24 X 4" LONG	82919700A
3	4	ROD END 5/16-24	82673700A
4	4	SCREW M4 X 8MM CONE POINT SET	82717800A
5	2	WOODRUFF KEY 302.5	82378400A
6	1	STEPPER MOTOR - DUAL SHAFT	82914600A
7	4	SCREW M5 X 20MM HEX HEAD CAP	82712200A
8	4	NUT M5 LOCKING	82709100A
9	2	SCREW M3 X 12 PHILLIPS HEAD CAP	82719100A
10	2	NUT M3 X 0.5 LOCKING	82818400A
11	1	PHOTO INTERRUPTER	82700500A
12	1	LIFTER CAM WITH TARGET	82918600A
13	1	LIFTER CAM WITHOUT TARGET	82918500A
14	-	LUBRIPLATE FMO 350	81863500A

Conveyor Motor Assembly



ITEM	QUAN.	DESCRIPTION	PART NUMBER
1	1	STEPPER MOTOR	82765900A
2	1	DRIVE PULLEY-24 TOOTH	A82798100A
3	2	SCREW-M4 x 8 CONE POINT	82718700A
4	1	MOTOR BRACKET ASSEMBLY	82803400A
5	4	SCREW-M6 x 12 FLANGED HEX HEAD CAP	82804900A
6	4	NUT-M5 LOCK	82709100A
7	1	STRAP-GROUND	82810900A
8	1	POP RIVET	81861100A

Infeed Conveyor



ITEM	QUAN.	PART NUMBER	DESCRIPTION
1	3	82059100A	GRIP RING 1/4"
2	3	82923900A	ROLLER ASSEMBLY
3	2	82654000A	BELT 1/8" DIA. X 10 INCH LONG
4	1	82674100A	PHOTOEYE
5	1	82917100A	INFEED SUPPORT
6	3	A80054600A	3/8 SET COLLAR
7	4	82716100A	SCREW-M5 x 16MM PHILLIPS HEAD CAP
8	1	82926500A	CONNECTING BAR
9	2	A82796600A	SIDE BRACE
10	3	82916200A	ROLLER SHAFT .25 X 13.44" LONG

METTLER TOLEDO

Scales & Systems

350 West Wilson Bridge Road
Worthington, Ohio 43085-2273

P/N: 14882100A

(3/96)

METTLER TOLEDO™ is a trademark of Mettler-Toledo, Inc.

©1996 Mettler-Toledo, Inc.

Printed in U.S.A.



14882100A