

DE-TAPING UNIT
For PB14 Terminator Tool
Installation and Operation Manual
Order No. 69127-5045

molex[®]

- Description
- Operation
- Maintenance

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Safety Warnings and Information

	<p>Read and understand all of the instructions and safety information in this manual before operating or servicing this tool.</p> <p style="text-align: center;"><u>Keep this manual available when using this tool.</u></p> <p style="text-align: center;">Replacement manuals are available for download at www.molex.com.</p>
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SAFETY ALERT SYMBOL	
<p>This symbol is used to call your attention to hazards or unsafe practices which could result in an injury or property damage. The signal word, defined below, indicates the severity of the hazard. The message after the signal word provides information for preventing or avoiding the hazard.</p>	
	<p>DANGER:</p> <ul style="list-style-type: none"> Indicates an imminently hazardous situation that, if not avoided, could result in death or serious injury
	<p>WARNING:</p> <ul style="list-style-type: none"> Indicates a potentially hazardous situation that, if not avoided, could result in death or serious injury
	<p>CAUTION:</p> <ul style="list-style-type: none"> Indicates a potentially hazardous situation that, if not avoided, may result in minor or moderate injury May also be used to alert against unsafe practices associated with events that could lead to personal injury

	<p style="text-align: center;"> WARNING</p> <p>Always wear proper eye protection when operating or servicing these tools.</p> <p>Failure to wear eye protection could result in serious eye injury from flying debris.</p>		<p style="text-align: center;"> WARNING</p> <p>Never install or service these tool while connected to any electrical power source.</p> <p>Disconnect power by unplugging the press from its power source.</p> <p>Failure to observe this warning could result in severe injury or death.</p>
	<p style="text-align: center;"> WARNING</p> <p>Never wear clothing or jewelry that is loose or that could potentially get caught in the equipment.</p> <p>Failure to observe this warning could result in severe injury or death.</p>		<p style="text-align: center;"> WARNING</p> <p>Use Extreme Caution when using compressed air to clean the equipment.</p> <p>The forces created by compressed air can force debris into the tool.</p> <p>Failure to observe these precautions may result in injury or property damage.</p>
	<p style="text-align: center;"> WARNING</p> <p>Never operate, service, install or adjust this machine without proper instruction and without first reading and understanding the instructions in this manual and all applicable press or wire processing machine manuals.</p>		

	 WARNING
	<p>Never use a press or wire processing machine without guards or safety devices.</p> <p>Failure to observe this warning could result in severe injury or death.</p>
 CAUTION	
<p>Caution: Operators must undergo suitable training before using this machine.</p> <p>Caution: A machinery installation safety assessment checklist must be completed before the machine is used in production.</p> <p>Never perform any service or maintenance other than as described in this manual.</p> <p>Never modify, alter or misuse the equipment.</p> <p>Never use this machine for outdoor use. The machine is not water resistant, and improper use may result in damage to the unit.</p> <p>Failure to observe this precaution may result in injury and property damage.</p>	

Tooling Technical Assistance

Molex offers tooling technical assistance for customers who may need some guidance for tooling adjustments. This support can be obtained by calling the number listed below and asking for the Molex Tooling Group.

This assistance is limited to the operation and setup of a customer’s Molex De-Taping Unit. Questions with regard to Molex connector products or how to identify the proper tooling or tooling documentation should be directed to your local Molex personnel or customer service representative.

When calling for service on these tools, it is recommended to have the following present: a copy of the operation manual, the specific Application Tooling Specification sheet and a person familiar with the tools. Please provide the following information as well:

1. Customer name
2. Customer address
3. Person to contact (e.g., name, title, e-mail address and telephone number)
4. Tool order number (Lease number also if applicable)
5. Serial number (Lease number also if applicable)
6. Molex connector product order number
7. Urgency of request
8. Nature of problem

Application Tooling Support

Phone: (402) 458-TOOL (8665)
E-Mail: applicationtooling@molex.com
Website: www.molex.com/applicationtooling

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Section 1 – General Description

1.1 Description

1.2 Features

1.3 Technical Specifications

1.4 Delivery Check

1.5 Tools

1.6 Products

1.1 Description

The PB14 De-Taping Unit automatically pulls off the adhesive tape from 90327 series reeled connectors, 4 to 26 circuits.

This unit is intended for use on the 69127-1001 PB14 terminator.

A taped strip of connectors is loaded into the vertical magazine and then loaded into the termination nest. As connectors are terminated, the De-Taping Unit pulls off the adhesive tape from the strip so the next connector can fall into place.

1.2 Features

- Mounts to the PB14 without modifications.
- No compressed air required for de-taping.

1.3 Technical Specification

Dimensions (PB14 with De-Taping Unit)

Width: 475mm (19")
Depth: 450mm (18")
Height: 670mm (26")

Weight (De-Taping Unit only)

10kg (22 lbs.)

Electrical Requirements

100-240VAC, 50/60Hz, 1A

Pneumatic Requirements

No compressed air is required for the De-Taping Unit.

Production Rate with De-Taping Unit

This machine terminates 1,000 to 1,700 per hour maximum, depending on operator skill and cable length.

1.4 Delivery Check

Carefully remove the PB14 De-Taping Unit from its shipping container and determine that the following items are included in the package:

Description	Qty.
69127-5045 PB14 De-Taping Unit	1
TM-691275045 Operation Manual	1

1.5 Tools

The following tools are recommended for setting up and adjusting the De-Taping Unit:

- ✓ Metric standard hex wrench set
- ✓ Scissors
- ✓ Large and small regular screwdrivers
- ✓ Pliers (needle nose)
- ✓ Eye Loupe (10x)

1.6 Products

90327 Connector Assembly Series Number					
4 Circuit	90327-0304	90327-0351	90327-0352	90327-0353	90327-0354
	90327-3304	90327-3351	90327-3352	90327-3353	90327-3354
6 Circuit	90327-0306	90327-0355	90327-0356	90327-0357	90327-0358
	90327-3306	90327-3355	90327-3356	90327-3357	90327-3358
8 Circuit	90327-0308	90327-0359	90327-0360	90327-0361	90327-0362
	90327-3308	90327-3359	90327-3360	90327-3361	90327-3362
10 Circuit	90327-0310	90327-0363	90327-0364	90327-0365	90327-0366
	90327-3310	90327-3363	90327-3364	90327-3365	90327-3366
12 Circuit	90327-0312	90327-0367	90327-0368	90327-0369	90327-0370
	90327-3312	90327-3367	90327-3368	90327-3369	90327-3370
14 Circuit	90327-0314	90327-0371	90327-0372	90327-0373	90327-0374
	90327-3314	90327-3371	90327-3372	90327-3373	90327-3374
16 Circuit	90327-0316	90327-0375	90327-0376	90327-0377	90327-0378
	90327-3316	90327-3375	90327-3376	90327-3377	90327-3378
18 Circuit	90327-0318	90327-0379	90327-0380	90327-0381	90327-0382
	90327-3318	90327-3379	90327-3380	90327-3381	90327-3382
20 Circuit	90327-0320	90327-0383	90327-0384	90327-0385	90327-0386
	90327-3320	90327-3383	90327-3384	90327-3385	90327-3386
22 Circuit	90327-0322	90327-0391	90327-0392	90327-0393	90327-0394
	90327-3322	90327-3391	90327-3392	90327-3393	90327-3394
24 Circuit	90327-0324	90327-0395	90327-0396	90327-0397	90327-0398
	90327-3324	90327-3395	90327-3396	90327-3397	90327-3398
26 Circuit	90327-0326	90327-0387	90327-0388	90327-0389	90327-0390
	90327-3326	90327-3387	90327-3388	90327-3389	90327-3390

Use with 90328 Terminal Series		
90327 Connector Assembly 90327-03xx	90328-0001	Chain
	90328-0002	Loose
90327 Connector Assembly 90327-33xx	90328-0008	Chain
	90328-0009	Loose

Section 2 – Installation and Operation

2.1 Installation

2.2 Adjustments

2.3 Operation

Principal Mechanical Parts of the PB14 De-Taping Unit

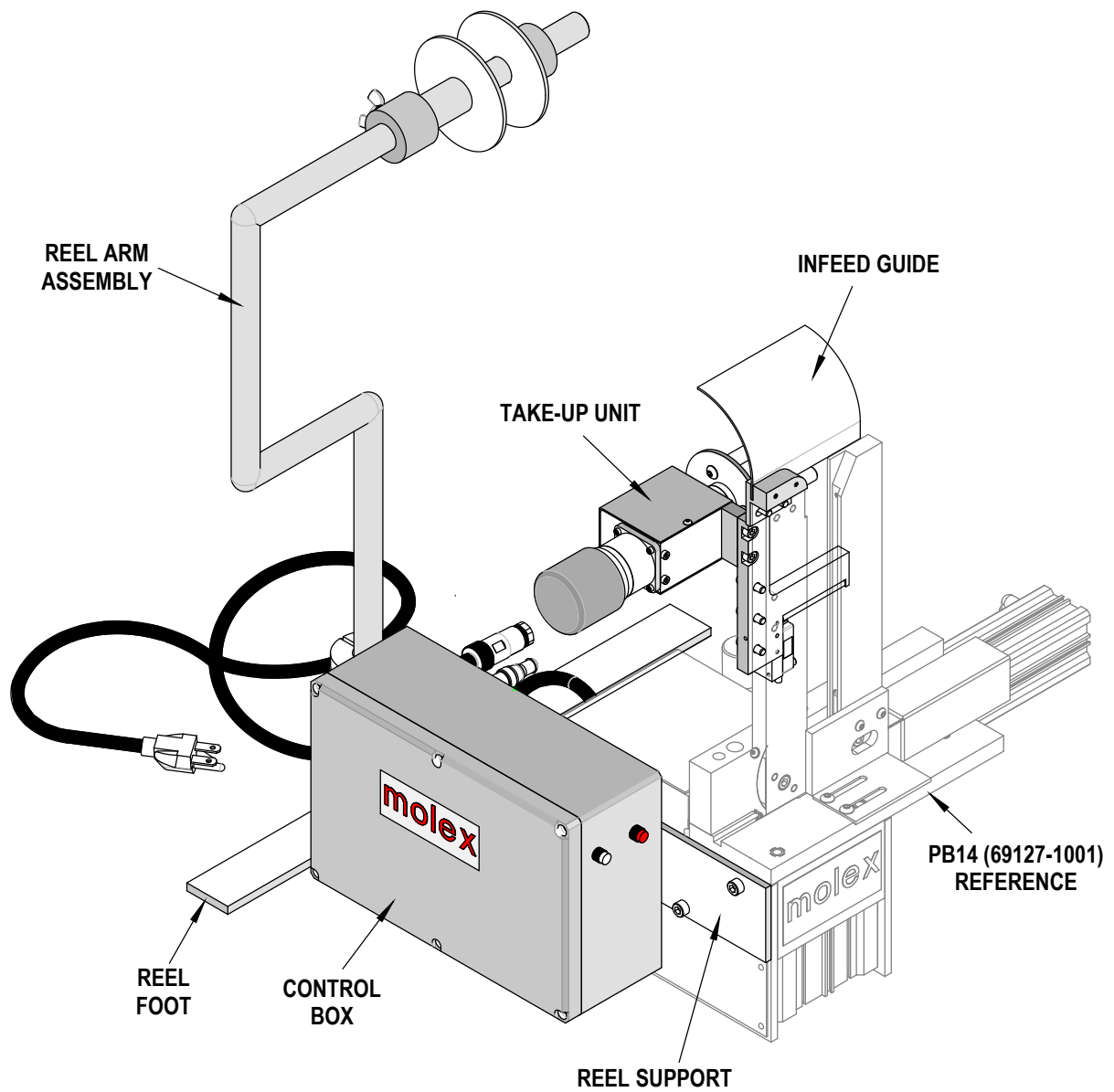


Figure 2-1



Read the following instructions before attempting to operate the PB14 De-Taping Unit

2.1 Installation

1. Remove the De-Taping Unit from its packing crate, and make sure all packing material has been removed.
2. Mount the Reel Support to the left side of the PB14 using (2) M6 x 20mm long button head cap screws.
3. Place the Reel Foot on the bench, and align the center hole to the hole in the Reel Support.
4. Place the Reel Arm through the hole in the Reel Support and into the hole in the Reel Foot. Tighten the (2) M6 socket head cap screws to clamp the Reel Arm in place. See Figure 2-2.
5. Mount the Take-Up Unit Assembly to the left side magazine rail using (2) M5 x 16mm long socket head cap screws.
6. Mount the In-Feed Guide Assembly to the top of left magazine rail using (2) M5 x 10mm long socket head cap screws and m5 washers.
7. Insert the plug on the motor cord into the receptacle on the front of the control box.
8. Insert the plug on the sensor cord into the receptacle on the front of the control box.
9. Mount the Infeed Guide Assembly to the left magazine rail using (2) M5 x 10mm long socket head cap screws.
10. Connect the AC power cord to the front of the control box, and plug the other end into a grounded AC outlet.

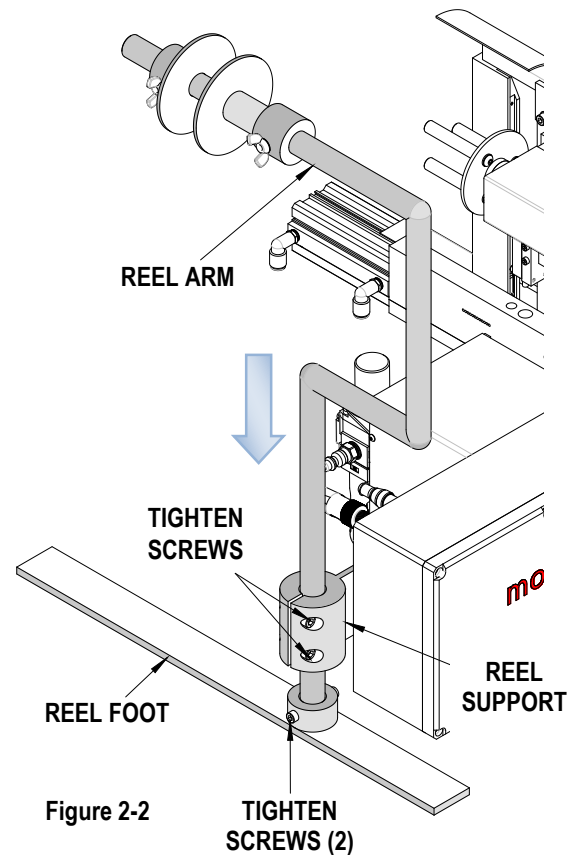


Figure 2-2

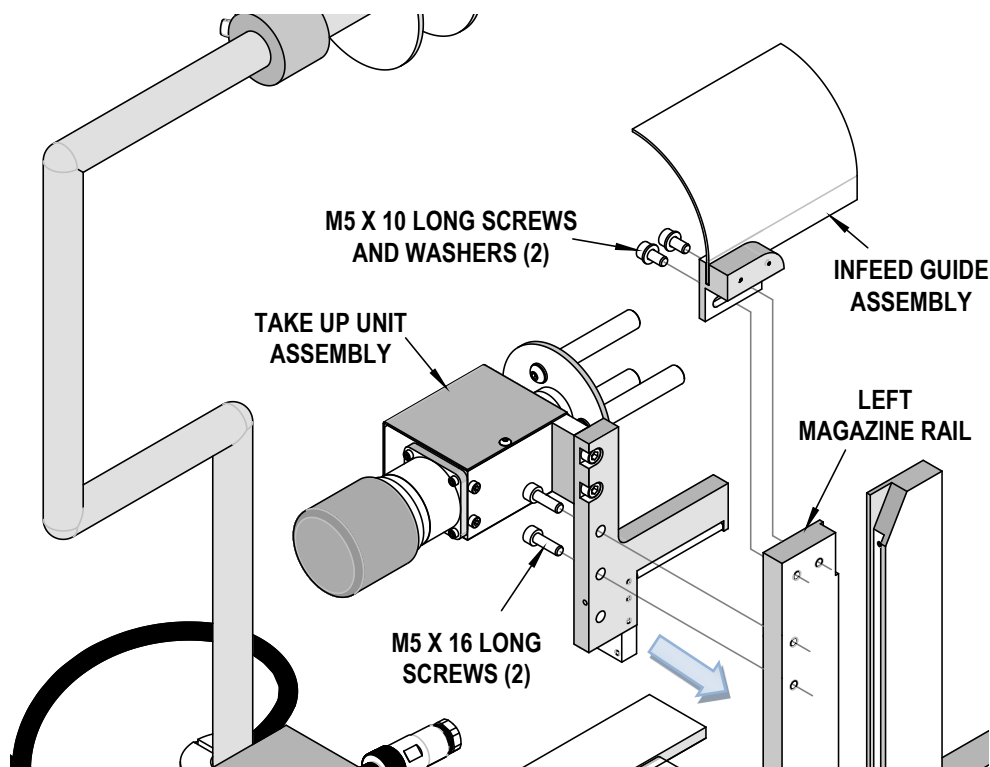


Figure 2-3

2.2 Adjustments

De-Taping Adjustments

1. No adjustments are necessary for de-taping.

Connector Orientation in PB14



CAUTION: Always disconnect the power and air supply before making any adjustments.

The connectors are processed with their terminals facing down.

1. A key is inserted into side of the vertical magazine.
2. This key (order number 69127-5032) will allow the connector to travel down the magazine in one direction only.
3. The key can be used in the other vertical magazine to change the orientation of the connector. See Figure 2-4.
4. The key will jam the connectors should the connectors be put into the magazine in the wrong orientation.
5. The connector will be damaged if it is forced through the magazine rails.
6. To move the key over to the other magazine, undo the one retaining screw and move to the other magazine side.

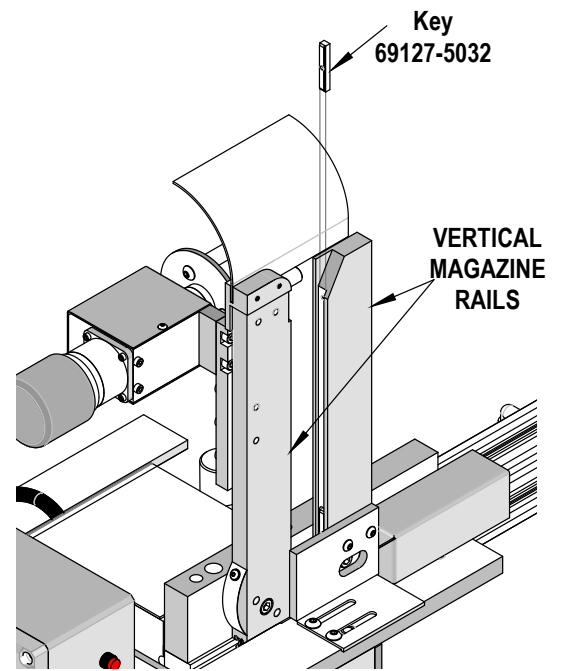


Figure 2-4

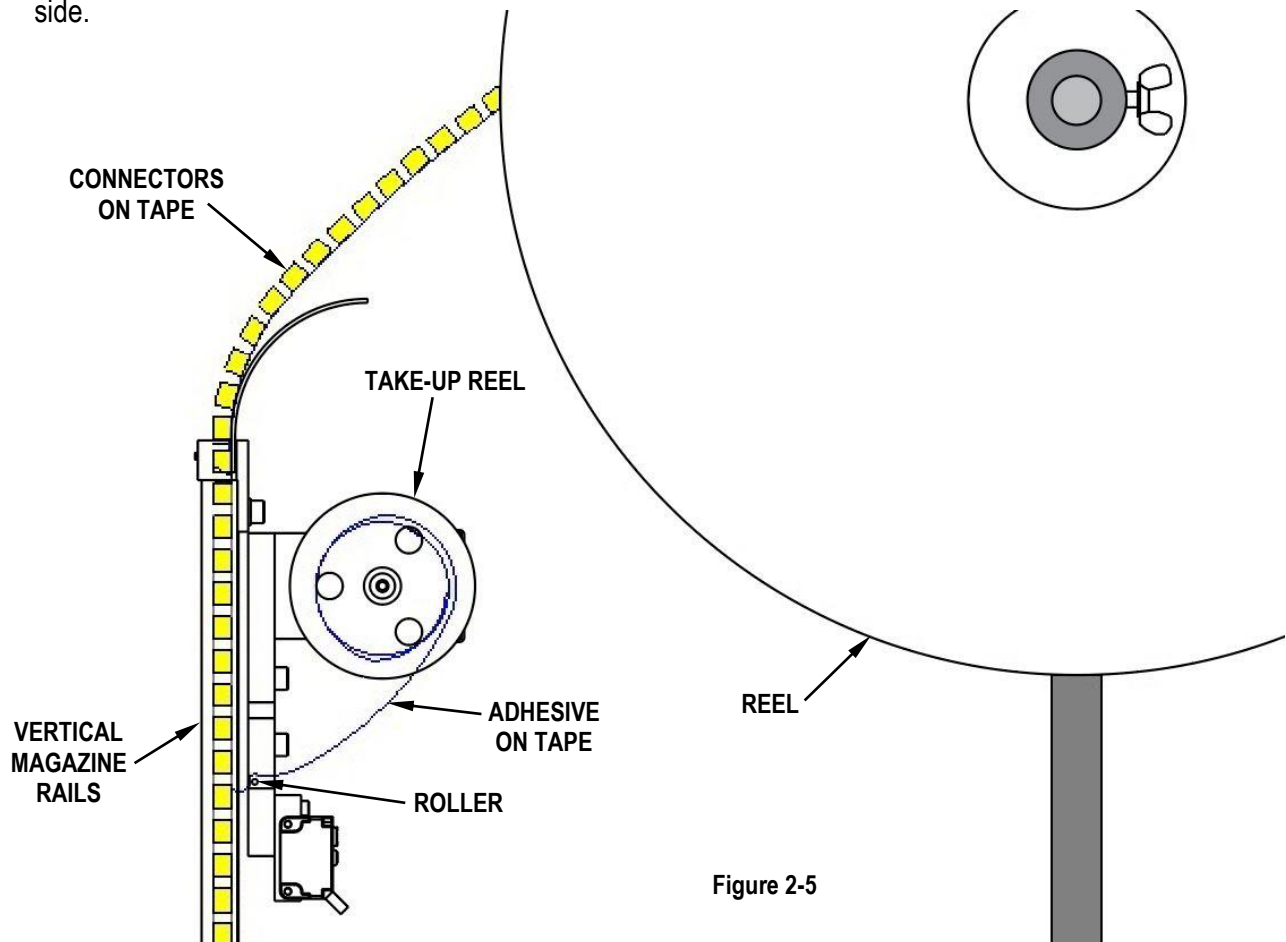


Figure 2-5

2.3 Operation

1. Load the reel of connectors on the reel arm. The flange of the reel arm should be against the side of the reel, but it must not prevent the reel from turning. The taped side of the connectors goes toward the back of the machine.
2. Thread the connectors down into the magazine rails, peeling away the adhesive tape near the bottom of the stack.
3. Attach the end of the adhesive tape to one of the legs on the take-up reel. See Figure 2-5.
4. Turn on the power switch above the power cord on the control box.
5. Press the power on button near the top of the control box.
6. Operate the PB14 as usual. The sensor on the take-up reel assembly will detect when a connector has been terminated and will wind up the adhesive tape as needed.

Section 3 – Maintenance

3.1 Cleaning

3.2 Spare parts

3.3 Troubleshooting

3.1 Cleaning



CAUTION: Always disconnect the air supply before all maintenance.

3.2 Cleaning

1. Always disconnect the power supply from the De-Taping Unit before cleaning.
2. For efficient operation, the De-Taping Unit and PB14 Terminator should be cleaned daily. Use a soft bristle brush to remove debris from critical areas such as the crimp tooling.
3. Brush and then use a clean cloth to wipe off the upper and lower tooling mounting areas.
4. Keep the face of the tape sensor clean of all debris that may have accumulated during production.

An example of a maintenance chart is shown below. Copy and use this chart to track the maintenance of your terminator, or use this as a template to create your own schedule. You can also use your company's standard chart, if applicable.

Preventive Maintenance Chart

Daily: Clean. See Section 3.1.

CHECK SHEET MONTH/YEAR _____

Week	Daily Cycles	Daily Clean	Days of the Week							Solution
			MON	TUE	WED	THU	FRI	SAT	SUN	
1										
2										
3										
4										
Cleaning										Soft Brush
Inspect all tooling		Yes								Replace if signs of wear.

Schedule should be adjusted up or down depending on usage. Molex recommends that a log of preventive maintenance be kept with the press.

3.3 Spare Parts

Customers are responsible for maintaining the De-Taping Unit. Spare parts are available. Moving and functioning parts can be damaged or wear out over time and will require replacement. Molex recommends that customers keep some or all of them in stock to reduce production downtime. These parts are identified in the Parts List. See Section 5.

3.4 Troubleshooting

Symptom	Cause	Solution
Red power light not illuminated	<ul style="list-style-type: none"> No power 	<ol style="list-style-type: none"> Check AC and DC fuses. Make sure power entry switch is on.
Take-up reel motor not running	<ul style="list-style-type: none"> No power to motor 	<ol style="list-style-type: none"> Make sure motor cable is connected to control box. Adjust product photo sensor.
Take-up reel motor not turning off	<ul style="list-style-type: none"> Photo sensor not detecting product 	Adjust photo sensor.
Consistent bad terminations	<ul style="list-style-type: none"> Connector being pushed too far or not far enough 	Feed finger requires adjustment. See Section 2.2.
	<ul style="list-style-type: none"> Insertion blade damaged 	Replace the insertion blade. See Section 2.2.
	<ul style="list-style-type: none"> Terminator jammed with debris 	Clean. See <i>Strip Down</i> in Section 3
	<ul style="list-style-type: none"> Wire guide set incorrectly 	Offset to the right will make it difficult to insert cable and will terminate cable at a slight angle. Offset to the left will move the connector away from the feed finger, thus placing the connector in the wrong place for termination.
	<ul style="list-style-type: none"> Air pressure too low. 	Make sure the connector is touching the end of the brass feed finger at the time of termination.
Inconsistent bad terminations	<ul style="list-style-type: none"> Adjusting screw on the feed finger is loose 	Tighten.
	<ul style="list-style-type: none"> Terminator jammed with debris 	Clean. See <i>Strip Down</i> in Section 3
	<ul style="list-style-type: none"> Operator placing the cable and then moving it slightly to the left 	
Connector feed problems	<ul style="list-style-type: none"> If connector feed is too fast, it may not allow enough time for the connector to drop, the feed finger may strip-out some of the contacts and jam the terminator 	If a new feed finger is required, See <i>Parts List</i> in Section 4.
	<ul style="list-style-type: none"> If after a connector jam, the terminator does not feed to the correct position. This may be because of a bent feed finger. 	Remove the feed finger and straighten it or replace it.

Section 4 – Parts Lists and Assembly Drawings

4.1 Parts Lists and Assemblies

4.2 Schematic Drawings

4.1 PB14 De-Taping Unit Parts List

69127-5045 PB14 De-Taping Unit (Figure 4-1)					
Item	Order No.	Engineering No.	Description	Qty.	Notes
1	63801-7290	63801-7290	Reel Arm Assembly	1	Figure 4-2
2	69127-0115	69127-0115	Control Box Assembly	1	Figure 4-3
3	69127-5055	69127-5055	Take-Up Unit Assembly	1	Figure 4-4
4	69127-5057	69127-5057	Infeed Guide Assembly	1	Figure 4-5
5	63890-0048	63890-0048	Reel Support	1	See Figure 4-2
6	63890-0049	63890-0049	Foot	1	See Figure 4-2
Hardware					
7	—	—	M5 by 10mm long SHCS	2**	
8	—	—	M6 by 20mm long SHCS	2**	
** Available from an industrial supply company					

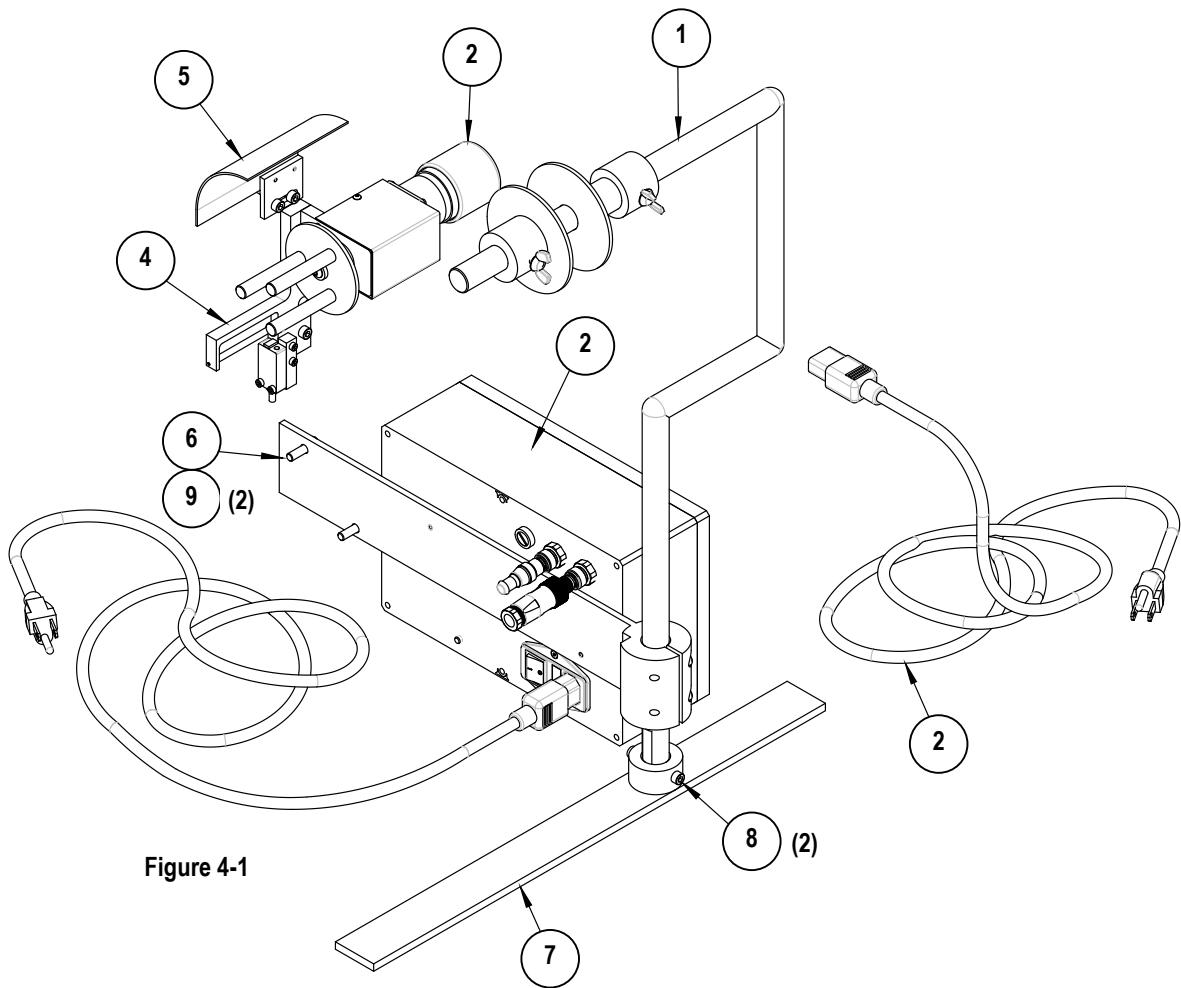
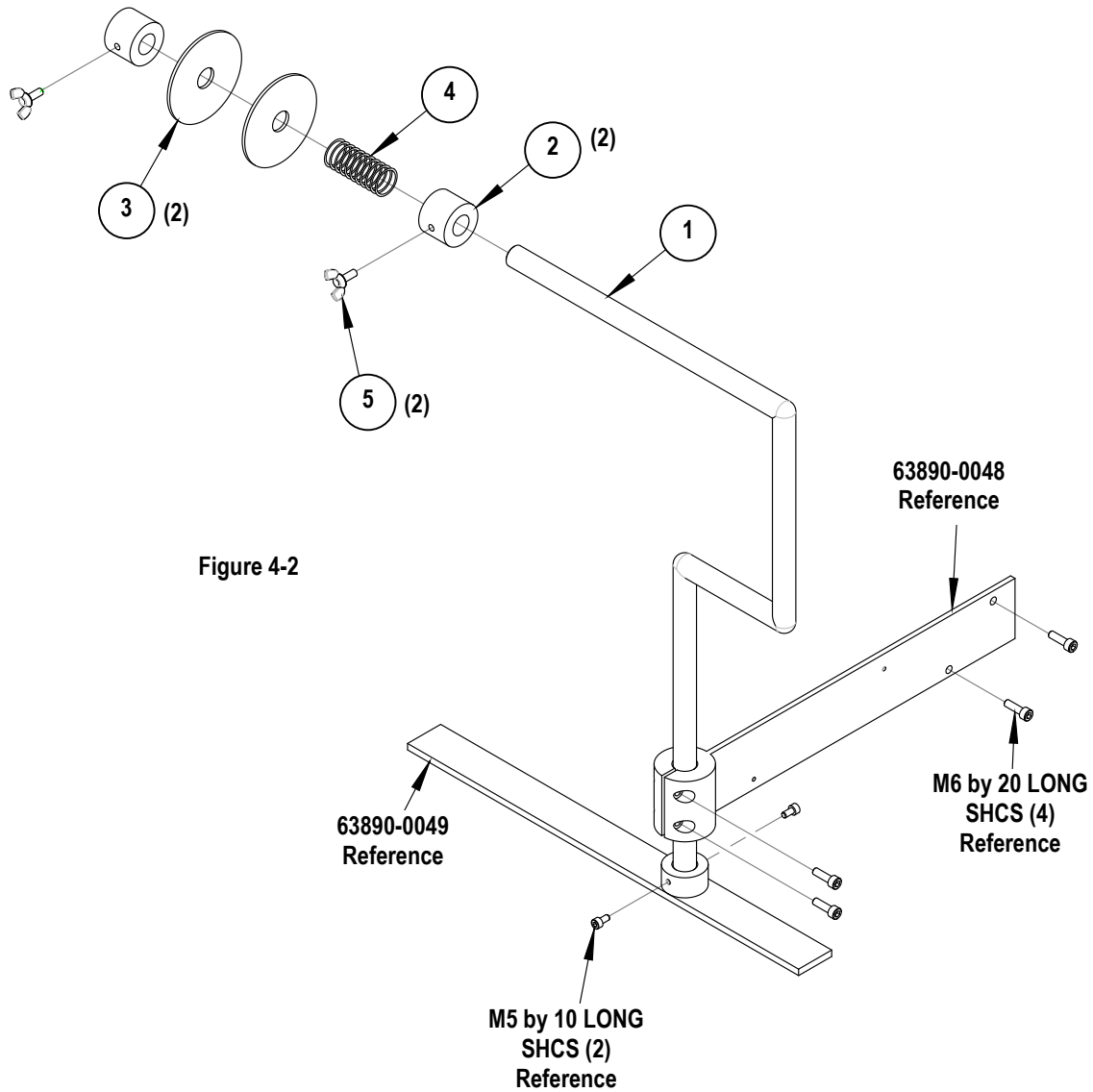


Figure 4-1

Reel Arm Assembly (Figure 4-2)

63801-7290 Reel Arm Assembly (Figure 4-2)					
Item	Order No.	Engineering No.	Description	Qty.	Notes
1	63801-7260	63801-7260	Reel Support	1	
2	63801-7261	63801-7261	Reel Boss	2	
3	63801-7262	63801-7262	Reel Disc	2	
4	63801-7263	63801-7263	Spring-Reel	1	
Hardware					
5	69907-3612	—	M6 by 12mm Long Wing Screw	2**	
** Available from an industrial supply company					

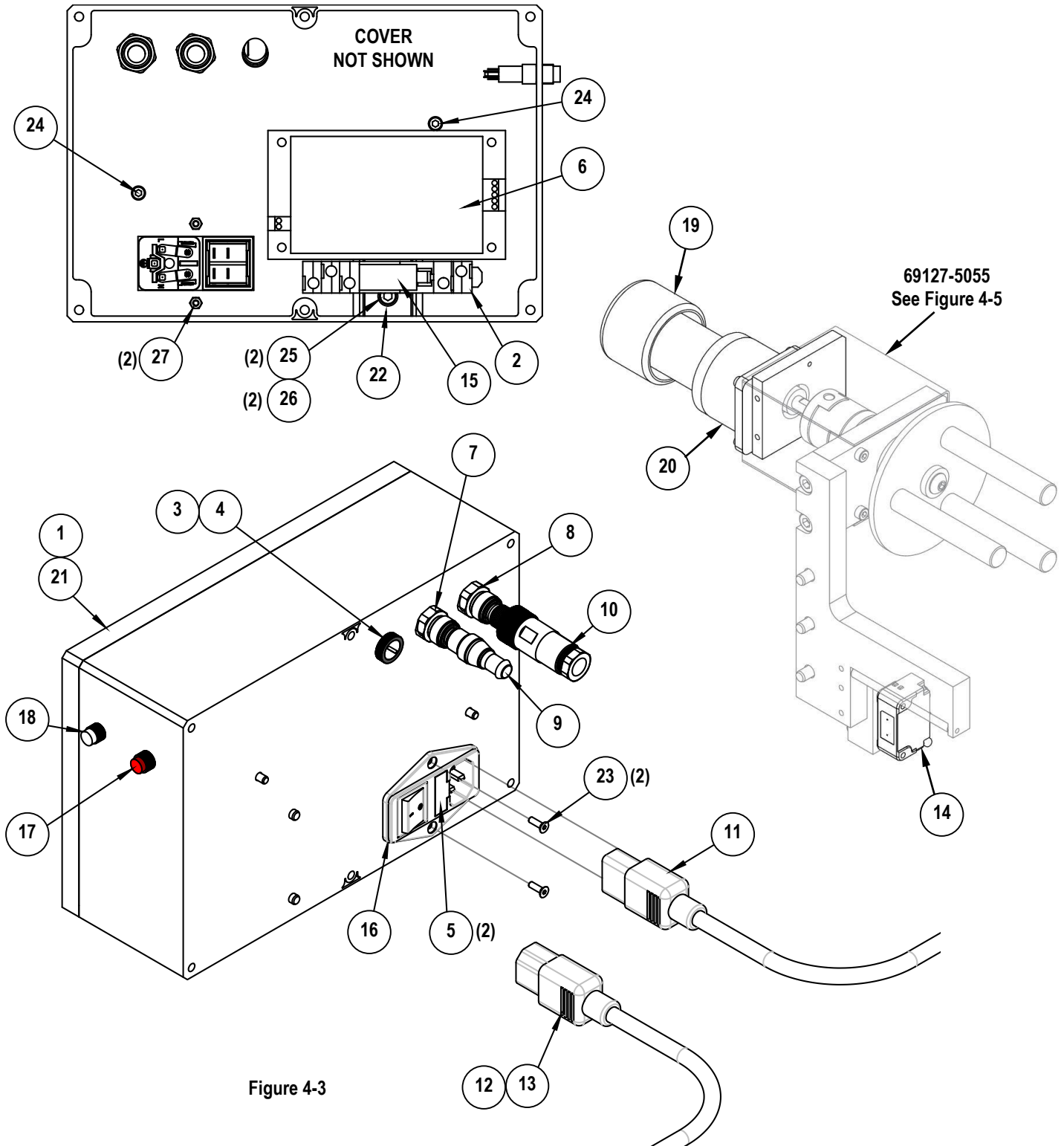


Control Box Parts List (Figure 4-3)

69127-0115 Control Box Assembly (Figure 4-3)					
Item	Order No.	Eng. No.	Description	Qty.	Notes
1	11-41-0264	KM241	Molex Logo Red 2.0 in.	1	Not Shown
2	62500-0960	62500-0960	Relay, G2R Type, DIN Rail MT Socket	1	
3	62500-3232	62500-3232	0.5 A Fast Acting, 0.25" by 1.25" Ceramic Tube	1	Not Shown
4	62500-3234	62500-3234	Fuse Holder for 0.25" by 1.25" Tube Fuses	1	
5	62500-3235	62500-3235	3 A Fast Acting 5 by 20mm Ceramic Tube	2	Not Shown
6	62500-3238	62500-3238	Power Supply, 12V 30W	1	
7	62500-3239	62500-3239	M12 4 Pin Female Receptacle	1	
8	62500-3240	62500-3240	M12 5 Wire Female Rev. Key Receptacle	1	
9	62500-3241	62500-3241	M12 2 Wire Male 2m Long Cable	1	
10	62500-3242	62500-3242	M12 5-Wire Reverse Keyed, Field Wireable Connector	1	
11	62500-3244	62500-3244	Power Cord (250V) Ireland	1	
12	62500-3245	62500-3245	Power Cord (250V) Europe	1	
13	62500-3246	62500-3246	Power Cord (125V) North America	1	
14	62500-3247	62500-3247	Sensor, Laser PNP	1	
15	62500-3259	62500-3259	SPDT 12VDC Coil, 10AMP Relay	1	
16	62500-3389	62500-3389	Power Entry With Red Illuminated Switch	1	
17	62500-3430	62500-3430	Pilot Light, 12VDC Red, 8mm Mounting	1	
18	62500-3431	62500-3431	MAINT. PB, White, SPDT, 8mm Mounting	1	
19	63700-4610	63700-4610	Vinyl Cap	1	
20	63600-5861	63600-5861	12VDC, 8RPM Motor	1	
21	69127-0138 Make from 62500-3237	69127-0138	Enclosure, PB14 DE-Tape	1	Make from 62500-3237
22	69127-0139	69127-0139	DIN Rail 75mm Long	1	
Hardware					
23	69903-1310	—	M3 by 10 Long FHCS	2**	
24	69901-1408	—	M4 by 8 Long SHCS	2**	
25	69901-1506	—	M5 by 6 Long SHCS	2**	
26	69908-1500	—	M5 Flat Washer	2**	
27	69907-1300	—	M3 Hex Nut	2**	

** Available from an industrial supply company

Control Box Assembly



Take-Up Unit Assembly Parts List (Figure 4-4)

69127-5055 Take-Up Unit Assembly (Figure 4-4)					
Item	Order No.	Engineering No.	Description	Qty.	Notes
1	69018-7110	69018-7110	Coupling	1	
2	69127-5061	69127-5061	Shaft Bearing	1	
3	69127-5085	69127-5085	Bearing Plate	1	
4	69127-5062	69127-5062	Shaft	1	
5	69127-5064	69127-5064	Pin	3	
6	69127-5065	69127-5065	Disc	1	
7	69127-5066	69127-5066	Motor Mounting Spacer	1	
8	69127-5073	69127-5073	Roller pin	1	
9	69127-5079	69127-5079	Roller	1	
10	69127-5084	69127-5084	Detape Base	1	
11	64016-0185	64016-0185	Sensor Mounting Bracket	1	
12	69127-5094	69127-5094	Motor Mounting Plate	1	
13	69127-5095	69127-5095	Coupling Cover	1	
Hardware					
14	69901-1108	—	M2.5 by 8 Long SHCS	4**	
15	69904-3304	—	M3 by 4 Long SSS	2**	
16	69902-1306	—	M3 by 6 Long BHCS	1**	
17	69901-1310	—	M3 by 10 Long SHCS	2**	
18	69901-1312	—	M3 by 12 Long SHCS	4**	
19	69901-1510	—	M5 by 10 Long BHCS	4**	
20	69901-1512	—	M5 by 12 Long SHCS	2**	
21	69901-1516	—	M5 by 16 Long SHCS	3**	
22	69908-1500	—	M5 Washer	3**	
23	63600-2979	—	M5 Washer Precision 3mm Thick	1**	
** Available from an industrial supply company					

Take-Up Unit Assembly (Figure 4-4)

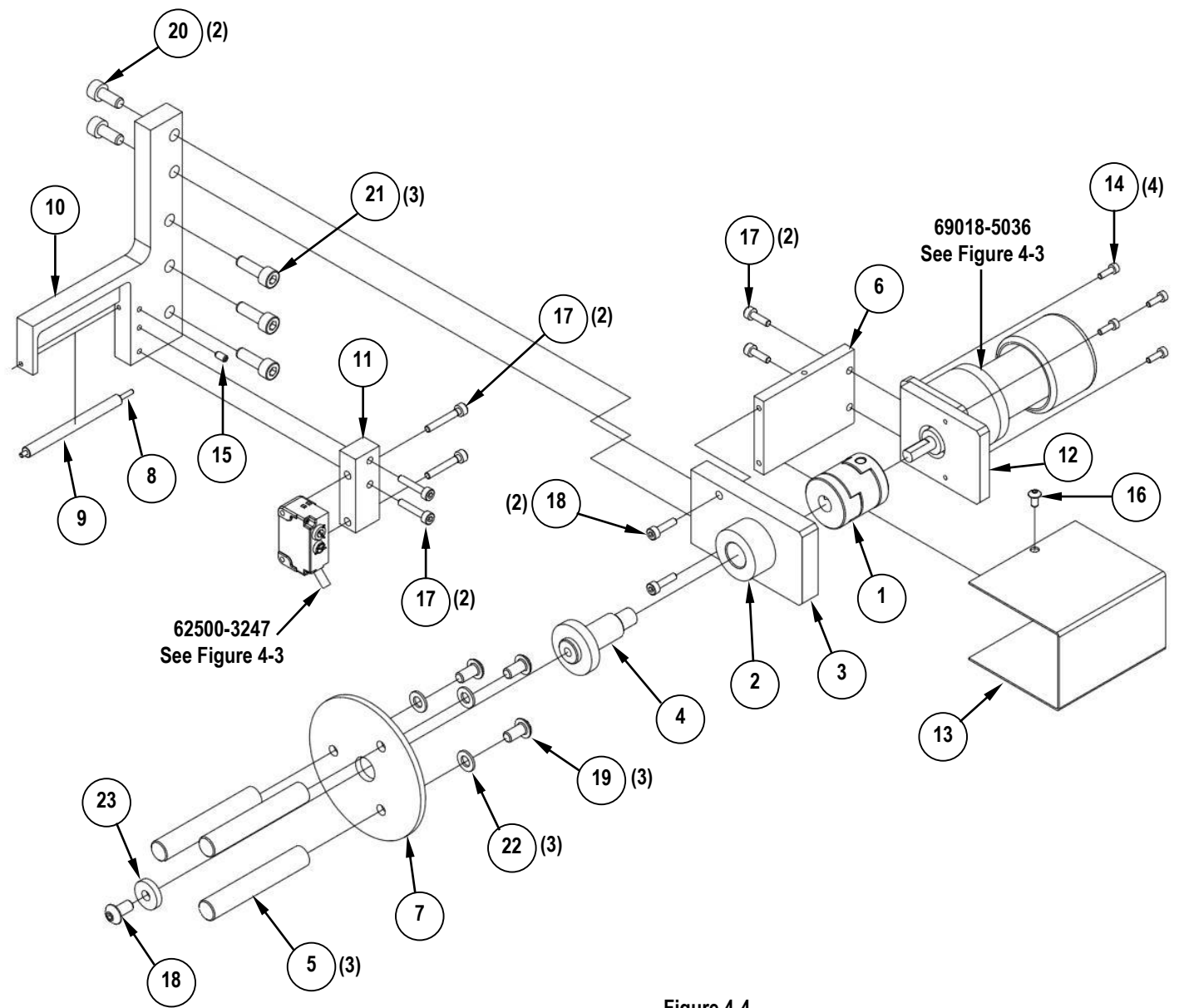


Figure 4-4

In-Feed Guide Assembly (Figure 4-5)

69127-5057 In-Feed Guide Assembly (Figure 4-5)					
Item	Order No.	Engineering No.	Description	Qty.	Notes
1	69127-5074	69127-5074	Infeed Chute	1	
2	69127-5089	69127-5089	Infeed Guide	1	
Hardware					
3	69904-3310	—	M3 by 10 Long SSS Cup Point	2**	
4	69901-1510	—	M5 by 10 Long SHCS	2**	
5	69908-1500	—	M5 Washer	2**	
** Available from an industrial supply company					

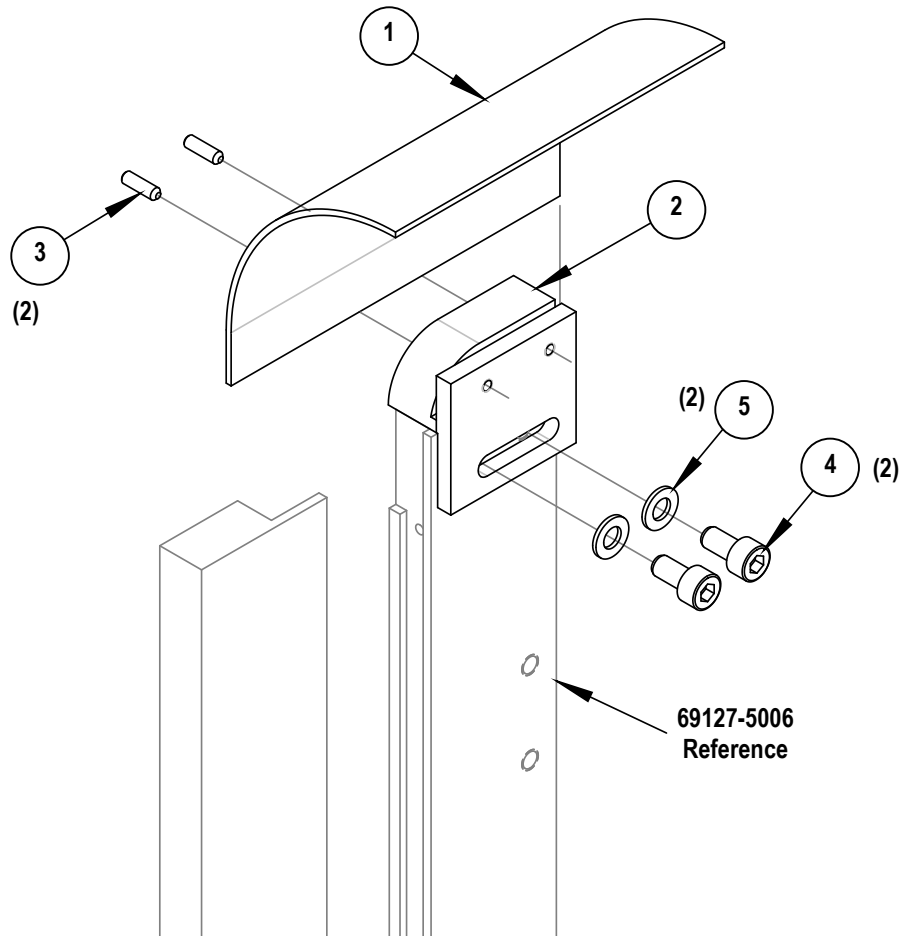
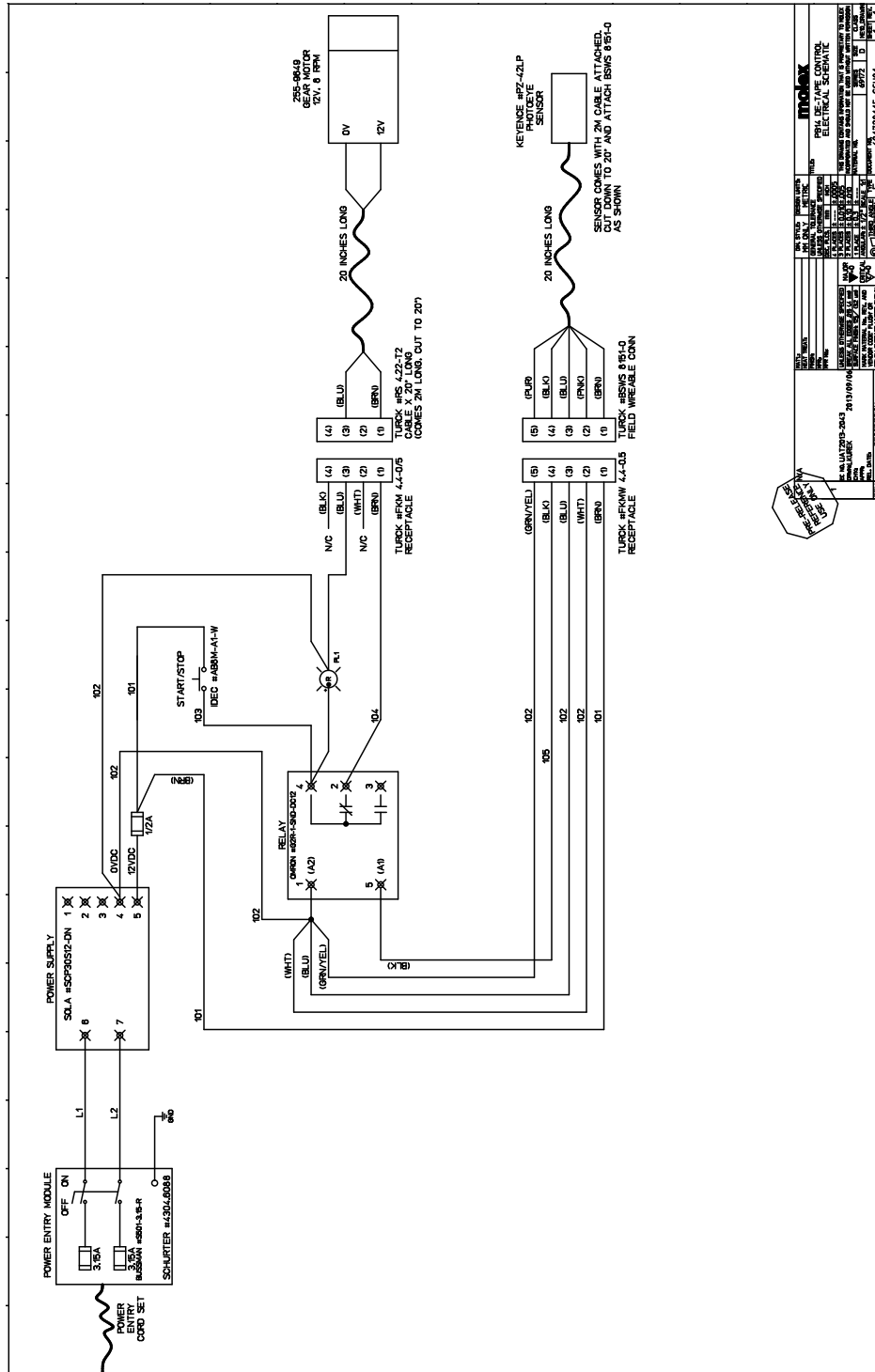


Figure 4-5

4.2 Schematic Drawing



Application Tooling Support

Phone: (402) 458-TOOL (8665)

E-Mail: applicationtooling@molex.com

Website: www.molex.com/applicationtooling

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