

L5000Plus



Reference Guide



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Safety

These symbols on or inside the unit mean:



Use caution to avoid personal injury or damage to equipment.



Caution! Risk of electrical shock.



Always wear the required Personal Protective Equipment (including gloves and goggles that must be worn when potentially exposed to any hazardous materials and when carrying out hazardous work tasks). Turn the dispenser off during cleaning and note that parts may be contaminated with product. If possible, flush tubing out with water prior to carrying out any maintenance. For information on products that are used in this dispenser, please carefully read the product label and Material Safety Data Sheet (MSDS).



Disconnect all power to this unit before servicing. Electrical installation of this dispenser should only be performed by trained personnel in accordance with local electrical wiring regulations. Before working on this dispenser, isolate it from any electrical source and lock out/tag out.

Routine Service

The unit should be examined for leaks or split tubing at every opportunity. The pump head should also be checked to ensure that it is correctly fastened to the motor gearbox and neither fixing pin is loose.

The external enclosure should be wiped with a damp cloth on a regular basis to ensure a satisfactory appearance.

Cleaning Pump Box

Other than occasional wiping of external surfaces with a dry cloth, no cleaning of equipment is required.

Peristaltic Tube

Pump motor and Tube Replacement Schedule



Switch the L5000Plus power off at the pump box to ensure trigger signals do not initiate dosing during maintenance.

Because every installation is different, an exact tube replacement schedule is difficult to specify. With use, the tube slowly goes from round to oval, and the amount of chemical pumped decreases. By regularly checking the amount of chemical pumped, you can determine general tube life. We recommend that you closely monitor the time it takes the original tube to reach the end of its flex life, and then establish a replacement schedule. Once the flow rate goes down to 50% of its original flow rate, it has reached the end of its flex life and should be replaced. Replacing tubes at regularly scheduled intervals ensures more accurate product use and reduces service calls. In general, using short, large-diameter feed lines will improve pump tube life and tubes will last over a year with optimal hydraulic and chemical conditions.



It is very important not to let the tubes wear to the point where they tear and allow chemicals to leak.



To protect against pressurized chemical spray, wrap a rag around tube connections when replacing tubes.



We recommend that personal protective equipment (such as safety glasses, gloves, face shield and apron) be worn during servicing.



Before servicing, be aware of potential static head pressure and the possibility of chemical exposure from the manifold.



Other than occasional wiping of external surfaces with a dry cloth, no cleaning of equipment is required.



Switch the dispenser's power off at the pump box to ensure trigger signals do not initiate dosing during maintenance.

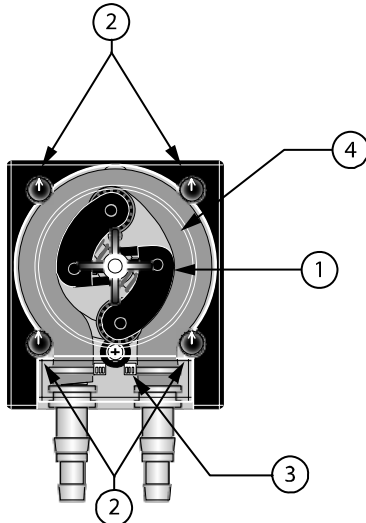
Replacing Pump Cartridges, Tubing and Motors

Note that each product has different delivery line configurations and squeeze tubes. Refer to the **L5000Plus Spare Parts Catalogue** for the available tubing sizes. Refer to the **Specifications** in the **L5000Plus Installation and Setup Guide** for tubing materials.



It is very important that the tabs are vertical and that you press them firmly enough to hear them click. Incorrect installation could damage the pump.

How to Replace 600 Series Pump Cartridges



Parts Identification

1. Roller assembly
2. Snap pins
3. Tie wrap
4. Pump tube

Figure 2. 600 Series SnapHead Pump

To Remove 600 Series Pump Cartridge

1. Turn off electrical power to the dispenser.
2. Remove the supply and feed tubes from the old cartridge fittings.
3. Remove the cartridge from the motor housing by twisting the four snap pins at top and bottom 90° clockwise or counter clockwise.

To Replace 600 Series Pump Cartridge

1. Align and engage the pump drive spline with the gearbox shaft by rotating the cartridge assembly. It might be necessary to squeeze the housing to get it to seat properly into the face plate.
2. Turn the snap pins so that the arrow is pointed up, then push until you hear a distinct click.

3. Connect the supply and feed tubes to the new cartridge fittings.
4. Turn the power back on.

How to Change 600 Series Pump Squeeze Tubing

1. Remove the pump cartridge as described above for 600 Series Pumps.
2. Pull the roller assembly rearward to release the pump squeeze tubing assembly.
3. Cut the cable ties securing the tube connection fittings and remove the fittings.
4. Install the fittings in the tubing and secure with cable ties.
5. Lubricate new pump squeeze tube with proper lubricant as indicated in Tube Selection Chart. See **Appendix** at the end of this document.
6. Place the pump squeeze tubing assembly into the housing and position the fittings into the housing.
7. Push the roller assembly into the housing by compressing the springs and rotating.

How to Remove and Replace 600 Series Pump Motors

1. Ensure power and all triggers are off/disabled.
2. Turn the four snap pins on pump cartridge assembly 90° left or right and remove pump cartridge assembly from the unit. Suction and discharge lines need not be removed. Support the cartridge as required.
3. Loosen the screw that fastens the front door, and open the front door (door will hang open).
4. Remove the gray plastic sheath from the pump motor.
5. Remove the two motor wire connectors from motor contacts for the pump motor/gearbox to be replaced. Note polarity.
6. Swing front door up and hold the door and pump motor while unscrewing the two motor mounting plate screws from the front of the unit.
7. Note the orientation of the red dot on the end of the motor. Remove motor/gearbox assembly and the gearbox mounting plate from the unit.
8. Follow these instructions in reverse order to replace pump motor.



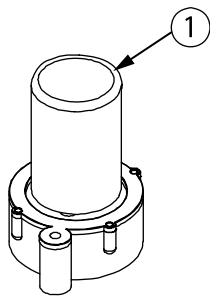
If the spline for the spinner in pump cartridge assembly is not aligned properly with the spline for pump gearbox assembly, the snap pins will not seat properly upon reinstallation. Also, the wiring harness accommodates both sizes of pumps. Select the connector that matches the motor contacts.

How to Retrofit 100 Series Pumps to L5000Plus



The standard L5000Plus ships with 600 Series pumps. The wire contact tabs on the 100 Series motor are smaller than those on the 600 Series motor. Because of this, the wire connectors on the L5000Plus might not fit snugly when connected to 100 Series pump motor contact tabs. To compensate for this, please use a wire adapter harness, code number 1206955 to correct for the difference in size between the 600 Series and 100 Series pump motor contact tabs.

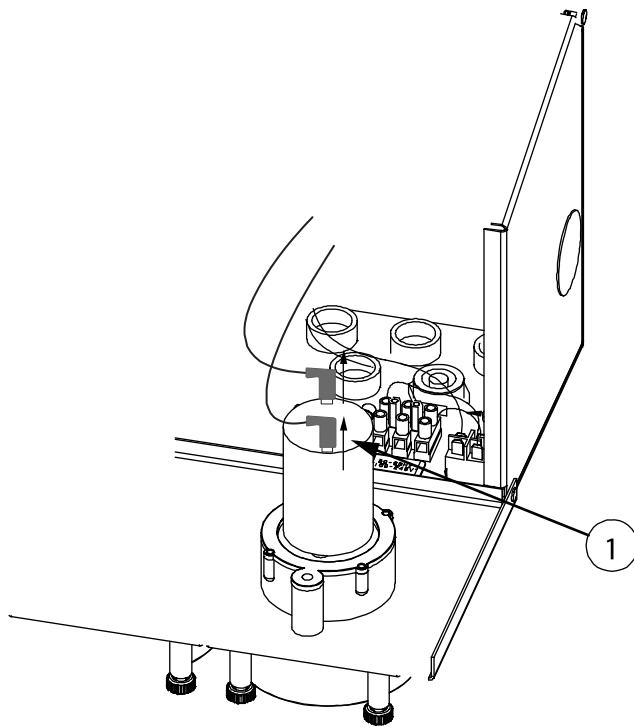
1. Turn off electrical power to the dispenser.
2. Remove the supply and feed tubes from the old cartridge fittings.
3. Remove the 600 Series pump cartridge from the motor housing by twisting the four snap pins at top and bottom 90° clockwise or counter clockwise (Refer to **Figure 2**).
4. Loosen the screw that fastens the front door, and open the front door (door will hang open).
5. Remove the gray plastic sheath from the pump motor.



1. Gray plastic sheath

Figure 3. 600 Series pump motor with Gray plastic sheath

6. Remove the two motor wire connectors from motor contacts for the pump motor/gearbox to be replaced. Note polarity.



1. Wire connectors on pump's wire tabs

Figure 4. Removing motor wire connectors from motor contacts on pump motor

7. Swing front door up and hold the door and pump motor while unscrewing the two motor mounting plate screws from the front of the unit.

1. Screws on pump mounting plate

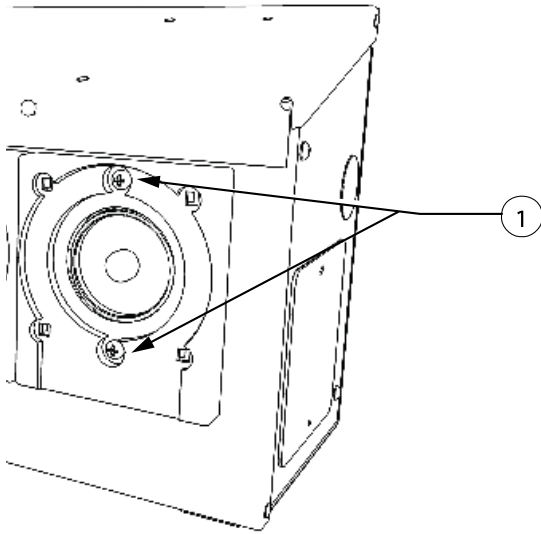


Figure 5. Screws on mounting plate to be removed.

8. Remove motor/gearbox assembly and the gearbox mounting plate from the unit.
9. Thread motor wires out through the motor mounting hole and attach wire connectors to 100 Series pump motor contacts. We recommend using a wire adapter harness, code number 1206955 to correct for the difference in size between the 600 Series and 100 Series pump motor contact tabs.
10. Insert 100 Series motor gearbox/front plate assembly into the hole from the front of the pump box. Wiggle front plate to ensure that it is firmly seated in the hole.

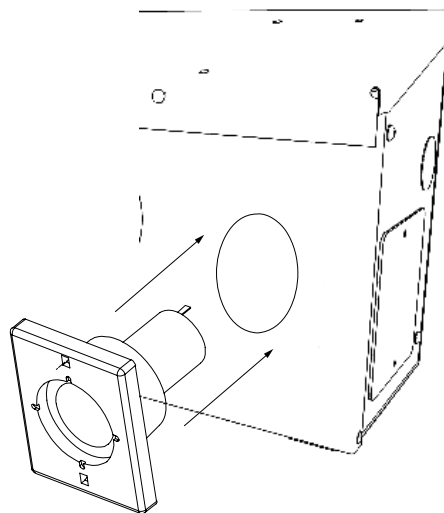


Figure 6. Inserting pump motor/front plate into hole on pump box

11. Insert 100 Series SnapHead onto front plate.
12. Recalibrate pumps. See **Speed Control and Pump Size** (Screen 9a) and **Pump Calibration** (Screen 9) in the **L5000Plus Programming Guide**.

Appendix: Pump Tube Selection

This reference lists pump tube availability for JDE peristaltic pumps.

Lubrication ***	Code	Lube	Application Instruction
	A	Dow Corning 111	Coat the surface of the tube that the roller will touch
	B	Vaseline	Coat the surface of the tube that the roller will touch
	C	None	N/A
	D	Dow Corning 111	Coat the inside radius of the cartridge which contacts the tube with 1 ml of the lube
	E	Dow Corning 111	Coat the entire outside surface of the tube
	F	Vaseline	Coat the entire outside surface of the tube

Material	Code	Fitting
	T	Tube and Nut Fitting
	B	Barb Fitting

Pump Model	Material	ID (mm)	ID (inch)	OD (mm)	OD (inch)	Color	Lube	Luton Item No.	Santa Cruz Item No.	Quantity
100 Series SnapHead (Small SnapHead)	PharMed-Low-Flow 1/8T-1/8T	.762	0.03	3.94	0.155	beige	C		094678	1
	Flex 6mmT – 6mmT	1.60	0.063	4.77	0.188	clear	D		092954	1
	Flex 1/8T – 1/8T	"	"	"	"	clear	D		092962	1
	Flex 4mmT – 4mmT	"	"	"	"	clear	D		097683	1
	Flex 4mm – 1/8T	"	"	"	"	clear	D		097684	1
	Flex 18ml with Inserts (x10)	"	"	"	"	clear	D	066935		10
	Flex 18ml with ties (x20)	"	"	"	"	clear	D	066937		20
	Flex 18ml (Tube Only)	"	"	"	"	clear	D	091756		1
	Silicone 1/8T – 1/8T	"	"	"	"	milk	C		058207	1
	Norprene 1/8T – 1/8T	"	"	"	"	black	C		039552	1
	Norprene 1/4T – 4mmT	"	"	"	"	black	C		097151	1
	EPDM (Nordel) 1/8T – 1/8T	"	"	"	"	black	C		058549	1
	C- Flex 1/8T – 1/8T	"	"	"	"	white	C		058547	1
	Viton 1/8T – 1/8T	"	"	"	"	black	B		058551	1
	Bi-Wall 1/8T – 1/8T	"	"	"	"	beige	C		098158	1
	Bi-Wall 1/4T – 1/8T	"	"	"	"	beige	C		096308	1
	Bi-Wall 6mm – 4mm	"	"	"	"	beige	C		096307	1
	Flex 1/4T – 1/4T	"	"	"	"	clear	D		092961	1
	Silicone 1/4T – 1/4T	3.18	0.125	6.35	0.25	milk	C		094623	1
	Norprene 1/4T – 1/4T	"	"	"	"	black	C		057203	1
	Norprene 1/4T – 1/8T	"	"	"	"	black	C		091364	1
	Norprene (Food) 1/4T – 1/4T	"	"	"	"	black	C		058778	1
	Bi-Wall 1/4T – 1/8T	"	"	"	"	beige	C		096305	1

Pump Model	Use	Material	ID (mm)	ID (inch)	OD (mm)	OD (inch)	Color	Lube	Luton Item#	Santa Cruz Item#	Quantity
100 Series SnapHead (Small SnapHead)	Sanitizer	Bi-Wall 1/4T – 1/4T	"	"	"	"	beige	C		096306	1
		Viton 1/4T – 1/4T	"	"	"	"	black	B		098269	1
	Detergent	Flex 6mm – 6mm	4.77	0.188	7.95	0.313	clear	D		093502	1
		Flex 1/4T – 1/4T	"	"	"	"	clear	D		092960	1
		Flex 150ml - no fittings	"	"	"	"	clear	D	091758		1
		Flex 250ml - no fittings	"	"	"	"	clear	D	093969		1
		Norprene 1/4T – 1/4T	"	"	"	"	black	C		039553	1
		Norprene 1/4T – 1/4T	"	"	"	"	black	C		093522	1
		Norprene (Food) 1/4T – 1/4T	"	"	"	"	beige	C		099267	1
		Norprene 150ml - no fittings	"	"	"	"	beige	C	037617		1
		Norprene 150ml with Inserts (x10) 6mmT – 6mmT	"	"	"	"	beige	C	066934		1
		Norprene 150ml with ties (x20)	"	"	"	"	beige	C	066936		20
		Norprene 150ml (Tube Only)	"	"	"	"	beige	C	037617		1
		EPDM (Nordel) 1/4T – 1/4T	"	"	"	"	black	E		058550	1
		EPDM (Nordel) 150ml							058545		1
		C-Flex 1/4T – 1/4T	"	"	"	"	white	C		058548	1
		Viton 1/4T – 1/4T	"	"	"	"	black	B		058552	1
		Bi-Wall 6mm – 6mm	"	"	"	"	beige	C		096310	1
		Bi-Wall 1/4B – 1/4B	"	"	"	"	beige	C		096311	1
		Bi-Wall 1/4T – 1/4T	"	"	"	"	beige	C		096312	1
		Bi-Wall 3/8" & 10mmB – 3/8 & 10mmB	"	"	"	"	beige	C		098903	1
		Silicone 1/4T – 1/4T	"	"	"	"	milk	C		058209	1
	Silicone 1/4B – 1/4B	"	"	"	"	milk	C		093709	1	
	Silicone 150ml - no fittings							058227		1	
	Flex 1/4B – 1/4B	6.35	0.25	9.53	0.375	clear	D		092963	1	
	Lg. Detergent	Flex 1/4T – 1/4T	"	"	"	"	"	"		087139	1
		Silicone	1.78	0.07	8.38	0.33	milk	B		026882	1
	600 Series SnapHead (Large SnapHead)	EPDM (Thick Wall)	"	"	15.8	0.622	black	E	099074		1
Viton 3/8" & 1/2"B-3/8" & 1/2"B		"	"	15.8	0.622	black	F		099270	1	
Viton - no fittings		"	"	15.8	0.622	black	F	094843		1	
C-Flex - no fittings		"	"	16.3	0.642	white	C		094844	1	
Beta Tube 3/8" & 1/2"B-3/8" & 1/2" B		"	"	16.0	0.63	beige	E		096171	1	
Bi-Wall 3/8" & 1/2"B-3/8" & 1/2" B		9.27	0.365	15.8	0.622	beige	E		096173	1	
Norprene (Food) 3/8" & 1/2"B-3/8" & 1/2" B		"	"	"	"	beige	E		099365	1	
Nordel - no fittings		"	"	"	"	beige	E	093884		1	
EPDM (Nordel-tube only)		8.64	0.336	16.0	0.63	black	E		099077	1	
EPDM (Nordel-tube only)		6.35	0.25	13.2	0.52	black	E	099074	099074	1	
Silicone 3/8" & 1/2"B-3/8" & 1/2"B		9.53	0.365	16.3	0.642	milk	F		096174	1	
Silicone - no fittings		"	"	"	"	milk	B		017434	1	
Silicone - no fittings		"	"	"	"	milk	B	069949		1	
Nut & Olive		6mm Tube-(X 20)								066930	
	4mm Tube-(X 20)								066931		20



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