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**PULSARLUBE**

FORM  
DOC#: PM-T-101  
Aug, 2007(Rev05)



## The Pulsarlube ML 500cc Electro-Mechanical Unit



**Product Number: ML500**

### General Description:

The ML500 consists of a vertical feed pump, motor/gear set, and Microprocessor control system, which delivers an outstanding operating pressure available of (280 psi, 20Kg-f/cm<sup>2</sup>) The lubricant is supplied in 500cc Pulsarlube grease pouches, which are replaceable along with a Pulsarlube battery pack. It offers 8 optional dispensing rates from ½ (Half) to 24 months in a single unit.

### Specifications:

- \* Operating temperature for Standard Battery: 14° F ~ 122° F (-10° C~50° C)  
Lithium Battery: -40°F~140°F (-40°C~+60°C)
- \* Normal operating pressure: 280psi (20kgf/cm<sup>2</sup>)
- \* Grease Capacity: 500cc
- \* 5 Standard greases available (OEM grease filling available)
- \* Variable Settings Available: ½, 1, 2, 4, 6, 12, 18, 24 months
- \* Default Setting: 1 Month
- \* D.C. 4.5-Volt Lithium Battery
- \* Service Pack Replacement
- \* LCD locking system included
- \* Can be used to lubricate multiple points (Up to 8 points).

**Dimensions:** 500cc Diameter: 3.6 inches, Height: 9.5 inches, Weight: 2.65Lb(1.20Kg)

**Packaging:** Each 500cc unit is individually packaged. (8 units per case; 23.00Lb/case)

### Replacement part #'s;

- \* **B001:** Standard Battery Pack  
Three 1.5V Duracell Alkaline Batteries create one DC 4.5V Standard Battery Pack
- \* **LTB001:** Lithium Battery (For low Temps, High Back Pressure & or 24 month settings)  
Three 1.5V Energizer Lithium Batteries create one DC 4.5V Standard Lithium Battery Pack.
- \* **P500:** Disposable 500cc Grease pouch.
- \* **D500:** 500cc Dust Cover (Transparent Plastic cover)
- \* **H500:** 500cc Top Housing (Transparent Plastic Housing)

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*ISO9001 Registered, Single Point Lubricator Company*



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## Disposable 500cc Service pack



### Initial Installation Procedure.

1. Make sure the lubrication point is manually lubricated with a grease gun to ensure that the bearing has a clear passageway before installing your 500cc unit. It is recommended that this procedure be conducted using either the same or a compatible lubricant with what is contained in the grease cartridge of the Pulsarlube M 500cc unit
2. If any doubts exist in regards to a clear lubrication flow, test the backpressure of the bearing with a grease gun connected to a pressure gauge. Ensure that the break – off pressure is below 500 psi (approx. 35 kg-f/cm<sup>2</sup>: 34.5 bar). Note that it is always desirable to keep the constant delivery pressure as low as possible.
3. Insert the Battery Pack into the battery compartment of the main unit. (Make sure that the battery is locked in place after insertion by turning the metal clip on top). Place the pointed open end of the Top Housing over the lubricators' top check valve and turn Top Housing clockwise until you hear the Top Housing "click".
4. Open Top Housing Cap and put 500cc grease pouch and replace Top Housing Cap.
5. Turn the Pulsarlube ML500 unit ON by depressing the Power Button for 2 seconds. To confirm that the LCD is working, make sure that the Red LED blinks once as soon as you press the "Power" button. The unit is working as long as the LCD displays information.
6. To test that the unit is functioning properly, simply follow the TEST MODE PROCEDURE:
  - Press the Power button first (for 2 seconds) to turn on unit, and then press the TEST button for 2 seconds. The unit will begin start dispensing grease. The unit will operate continuously in Purge mode and go through an entire cycle of (approximately 2 min).
  - To deactivate the TEST MODE FUNCTION, press the TEST button again. The unit will stop testing within the next 20 seconds.
  - If the unit is malfunctioning or if you encounter any difficulty, please refer to the troubleshooting guide.
7. Depress the **MODE** button to set the dispensing rate. Each time the **MODE** button is depressed, the dispensing rate changes in ascending order  
i.e. 1▶ 2▶ 4▶ 6▶ 12▶ 18▶ 24▶ H. **Note:** (H = Half month.)

**Note:** If you are unable to program a setting and a lock icon is displayed, press the mode button for 2 seconds until the lock icon disappears. Program your lubricator. The unit will automatically lock 60 seconds after you stop pressing any of the 3 programming buttons.



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8. Remove the grease nipple on lube point. Wrap some Teflon tape on the lubricator tip and install a 3/8" female NPT or BSP adaptor to bottom of unit. The other end of the adaptor must have the correct size of your zirk fitting. Make sure that the unit is snugly tightened to adaptor. The 3/8" brass thread of the unit is vibration proof. In other words, it ensures that the fitting will not snap off at the tip even under severe vibration or shock loads.
9. For installations that involve extreme vibration, excessive heat, or service locations that are considered hazardous, we recommend you use a remote mounting bracket (clamping device) and 1/4" line no longer than 10ft. (if possible) that is available at Pulsarlube.

**IMPORTANT:** Please make sure that the 1/4" line is pre-filled, prior to installation. Remote installation of over 10ft will reduce the ability of the unit to dispense against elevated backpressure.

### Special Features.

#### Automatic Locking System:

The Microprocessor locks the LCD within 60 seconds after having been programmed. A "Non – blinking lock I-Con is visible when the LCD is in "Lock – Mode". To **unlock** the LCD, press the "mode" button for 2 seconds until lock icon disappears.

#### Low Battery Sensing Capability:

A Red LED warning light next to the test mode button blinks every second when low battery exists.

#### Daily Dispensing Rate Display:

After selecting a monthly setting, the daily dispensing rate will display as shown on chart below. The LCD will automatically lock 60 seconds after the unit has been programmed. The LCD will then display days until end of cycle.

Setting	Daily Dispensing Rate	LCD Display
1/2	33.3	 33.3
1	16.6	 16.6
2	8.3	 8.3
4	4.2	 4.2
6	2.8	 2.8
12	1.4	 1.4
18	0.9	 0.9
24	0.7	 0.7



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**Pump dispensing cycles.**

	<b>Mode Settings</b>	<b>Cycles/time intervals (Cycles/day)</b>
<b>1</b>	½ (H month)	1 cycle / 15 min (96 cycles/day)
<b>2</b>	1	1 cycle / 30 min (48 cycles/day)
<b>3</b>	2	1 cycle / 1hr (24 cycles/day)
<b>4</b>	4	1 cycle / 2hrs (12 cycles/day)
<b>5</b>	6	1 cycle / 3hrs (8 cycles/day)
<b>6</b>	12	1cycle / 6hrs (4 cycles/day)
<b>7</b>	18	1cycle / 9hrs (2.66 cycles/day)
<b>8</b>	24	1cycle / 12hrs (2 cycles/day)
<b>9</b>	TEST Function	Press TEST button for 2 seconds

**Grease dispensing rate guide for 125cc, 250cc & 500cc lubricators.**

<b>Bearing Shaft Dia.</b>	<b>125CC</b>	<b>Grease Volume (cc's / day)</b>	<b>250CC</b>	<b>Grease Volume (cc's / day)</b>	<b>500CC</b>	<b>Grease Volume (cc's / day)</b>
230 - 330mm (9" - 13")	N/A	-	N/A	-	H Month	33.3
166 - 229mm (6 1/2" - 9")	N/A	-	H Month	16.6	1 Month	16.6
102 - 165mm (4" - 6 1/2")	H Month	8.3	1 Month	8.3	2 Months	8.3
90 - 101mm (3 1/2" - 4")	1 Month	4.2	2 Months	4.2	4 Months	4.2
77 - 89mm (3" - 3 1/2")	2 Months	2.1	3 Months	2.8	6 Months	2.8
65 - 76mm (2 1/2 - 3")	3 Months	1.4	6 Months	1.4	12 Months	1.4
					18 Months	0.9
51 - 64mm (2 ~ 2 1/2")	6 Months	0.7	12 Months	0.7	24 Months	0.7
25 - 50mm (1 ~ 2")	12 Months	0.3	N/A	-	N/A	-

**Pulsarlube M 500 cc unit Battery Selection Guide**

	<b>Standard Alkaline Battery</b>	<b>Lithium Battery</b>
<b>Temperature</b>	14°F~122°F (-10°C~+50°C)	-40°F~140°F (-40°C~+60°C)
<b>Back Pressure</b>	280psi or less Constant Back Pressure	Handles > Than 280psi Constant Back Pressure.
<b>Divider Block</b>	N/A	Upto 8 points
<b>Distance</b>	10ft or less for remote installations	Handles greater than 10ft/line for remote