

ELECTRO-LUBER MD™ 2000

TITAN CL LUBER™

INSTALLATION INSTRUCTIONS

Working Principle

The **Electro-Luber MD™ 2000 TITAN CL** is a self-contained, microprocessor controlled, motor driven automatic lubricator. The operation of the **TITAN CL** lubricator depends upon the use of minor internal spring pressure forcing lubricant into a temperature compensating, fixed displacement pump. This dispenses the lubricant at pressures over 1000 psi. This pressure allows the **TITAN CL** to be used with long feed line pipework, and it can even cycle progressive distributors, allowing one **TITAN CL** to feed several bearings. When one or a combination of selector switches are turned on, the unit will activate at selected intervals. (see chart on page 3). At each interval, approximately 1.25grams (1.25cc) of grease will be dispensed to the bearings. This grease output is not affected by temperature or altitude. When the unit is empty, refilling is accomplished using a standard grease cartridge.

1 year replacement warranty - MUST USE ATS BATTERY PACKS TO MAINTAIN WARRANTY AND UL LISTED STATUS



General Information

On installation, using a hand grease gun and the same type of grease, pump a few shots of lubricant into the bearing. If fittings or grease lines are used, these also should be filled with the same lubricant. There is a grease nipple located on the "T" fitting mounted to the **TITAN CL**. This fitting should be used to prime the distribution block and all the lines.

All **TITAN CL** units have 1/8" NPT female threads.

If the **ELECTRO-LUBER MD™ TITAN CL** is remotely mounted, use minimum 3/8" O.D. by minimum 1/4" I.D. for tubing or pipe up to 35 feet in length.

It is important to make sure you prime all piping and lube points prior to installing the ELECTRO-LUBER MD™ TITAN CL.

For optimal performance, the **TITAN CL** unit works best with multi-grade (**synthetic**) lubricants. High temperature lubricants, with an NLGI 2 or higher rating, tend to harden at low temperatures, therefore, lower NLGI ratings are recommended (NLGI 1). In low temperature applications use Lowtemp lubricants with NLGI 0 or 1 rating.

To insure the success and reliability of your **ELECTRO-LUBER MD™ TITAN CL**, do not use in temperatures below -4° F or above 131° F (-20° C to 55° C), or in an application requiring over 1000 psi. The **TITAN CL** unit is designed to feed multiple points using progressive distribution blocks. (2, 3, 4, 6, 8, & 12 port block kits are available from **ATS Electro-Lube**). When using a distribution block, stay within a maximum of 20 feet.



This equipment is suitable for use in:

Class 1, Division 2, Groups A,B,C,D; Class II, Division 2, Groups F & G; Class III or non-hazardous locations only.
Maximum T-Code T6 55° C

In Conformity to European Norms
Ex nL IIC T3 II 3 G



WARNING: Explosion Hazard – substitution of any components may impair suitability for Class I, II & III, Division 2 locations.

WARNING: Explosion Hazard – batteries must only be changed in an area known to be non-hazardous.

CAUTION: The battery used in this device may present a fire or chemical burn hazard if mistreated. Do not recharge, disassemble, heat above 100° C (212° F) or dispose of in fire. Dispose of used battery promptly.

Starting Procedure

IT'S IMPORTANT TO TAMP DOWN THE GREASE IN THE CARTRIDGE before loading the grease cartridge into the **TITAN CL** (refer to page 4 for specific instructions). Referring to the dispensing rate chart on page 3, select the dispensing time and amount of lubricant required. Then set the appropriate switch or switches to the setting which corresponds to the period of time it takes to empty the unit. This action activates the unit, and within 1 minute the first cycle will commence dispensing. If the unit is used with a progressive distribution block to feed multiple bearings, the cycle time must be adjusted accordingly. (example: if the unit is feeding a 4 port block, set your **TITAN CL** to empty 4 times faster than if it were feeding a single bearing).

Operating Procedure

If it is desired to increase or decrease the lubricant dispensing rate during operations, simply click the switch or switches in use to OFF, Then click on the new switch setting for the revised rate.

To turn **OFF** the **ELECTRO-LUBER MD™ TITAN CL** set all switches to **OFF**.

The **ELECTRO-LUBER MD™ TITAN CL** can be removed at any time without lubricant discharge.

Switch 7 is the purge switch. If your bearing requires an immediate shot of grease, turn **ON** switch 7. When the **TITAN CL** unit starts operating, turn switch 7 **OFF**. The **TITAN CL** unit will run for approximately 2 minutes. If you require more purging, repeat the procedure.

LED LIGHT FUNCTIONS:

LED	SIGNAL	SIGNAL TIME	MEANING
Green	1 Flash	Every 20 Seconds	Operation OK
Green	1 Flash	Every 1 Second	Currently pumping grease
Red	1 Flash	Every 20 Seconds	If Internal limit switch counter is faulty, the unit will go into an operational timed failsafe mode.
Red	2 Flashes	Every 20 Seconds	Low battery. Must be replaced shortly.
Red & Blue	1 Flash each	Every 20 Seconds	Grease cartridge empty.
Blue	2 Flashes	Every 20 Seconds	Unit paused via remote control option (if used here)
Blue	4 Flashes	Every 20 Seconds	Unit paused due to low ambient temperature. Unit will resume operation when temperature goes above 5 degrees F (-15 degrees C).

NOTE – The lubricants dispensed by this equipment are to have flash points greater than 200°F.





Power

The battery packs for the **TITAN CL** must be changed after 2 empties. Please note that battery life is affected by temperature, bearing backpressure and unit setting. Life expectancy is based on standard installation; actual life varies. To change the battery pack, remove the top cover, unplug and remove the old battery, and then install and plug in the new battery pack. The battery packs, complete with connectors, may be purchased directly from the factory.

Optional alternate power sources are available, please consult the factory or your salesperson.

Comparison Chart

This chart compares the lubricant output rate of the **ELECTRO-LUBER MD™ TITAN CL** with several common manual lubrication schedules. The **ELECTRO-LUBER MD™ TITAN CL** switch settings indicated will provide comparable lubrication to that of the manual practice shown. **Do not over-lubricate bearing.** Some typical settings follow, see the charts on the next pages for all settings.

Manual Lubrication Schedule	MD TITAN CL Setting	
	Unit Life	Switch Setting
Daily lubrication 3 – 4 strokes	4 months (120 days)	
2–3 day lubrication 3 – 4 strokes	8 months (240 days)	
Weekly lubrication 8 – 10 strokes	12 months (360 days)	
Bi-weekly lubrication 8 – 10 strokes	24 months (720 days)	

A “Rule of Thumb” for Switch Setting

This chart offers a “Rule for Thumb” for selecting appropriate switch settings and lubricant output rate for some basic applications. Many variables must be considered when determining the best setting for your operating environment. Areas of high contamination and heavy water washout generally require a slight increase in lubricant flow rate. Because of the wide number of variables found in actual operating environments, this chart should only be considered as a guide in making the selection of the proper switch setting.

ALWAYS AVOID OVER-LUBRICATING.

Bearing Shaft Size	TITAN CL Setting	
	Days to Empty	Switch Setting
12” to 14 ¾”	15	
10 ¾” to 12”	30	
8 ½” to 10 ¾”	60	
6 ½” to 8 ½”	90	
4” to 6 ½”	120	
3 ¼” to 4”	240	
2 ¾” to 3 ¼”	360	
2 ¼” to 2 ¾”	720	

Selection of Switch Settings

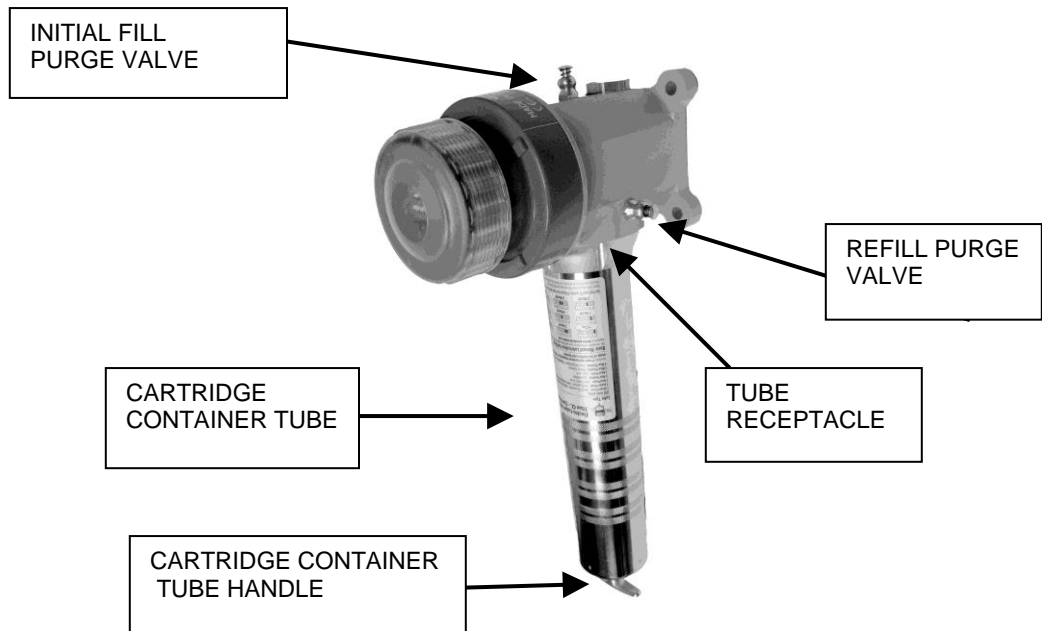
One stroke from a typical grease gun is equal to approximately one cubic centimetre (cc). To select the switch setting appropriate for your application look down the column for the desired output of lubricant, remembering that 1 cc is equal to approximately one stroke from a grease gun. The switch setting for your selection is shown in the right most columns labelled Switch1 to Switch7.

Electro-Luber MD 2000 TITAN CL Dispensing Rate Chart

Days to Empty	Cycle Time (hrs)	Approx. Daily Output		Switch 1 (15 day)	Switch 2 (30 day)	Switch 3 (60 day)	Switch 4 (120 day)	Switch 5 (240 day)	Switch 6 (480 day)	Switch 7 (purge)
		in CC's	in Cl's							
15	1.1	26.87	1.64	ON	OFF	OFF	OFF	OFF	OFF	OFF
30	2.2	13.43	0.82	OFF	ON	OFF	OFF	OFF	OFF	OFF
45	3.4	8.96	0.55	ON	ON	OFF	OFF	OFF	OFF	OFF
60	4.5	6.72	0.41	OFF	OFF	ON	OFF	OFF	OFF	OFF
90	6.7	4.48	0.27	OFF	ON	ON	OFF	OFF	OFF	OFF
120	8.9	3.36	0.20	OFF	OFF	OFF	ON	OFF	OFF	OFF
150	11.2	2.69	0.16	OFF	ON	OFF	ON	OFF	OFF	OFF
180	13.4	2.24	0.14	OFF	OFF	ON	ON	OFF	OFF	OFF
240	17.9	1.68	0.10	OFF	OFF	OFF	OFF	ON	OFF	OFF
300	22.3	1.34	0.08	OFF	OFF	ON	OFF	ON	OFF	OFF
360	26.8	1.12	0.07	OFF	OFF	OFF	ON	ON	OFF	OFF
480	35.7	0.84	0.05	OFF	OFF	OFF	OFF	OFF	ON	OFF
600	44.7	0.67	0.04	OFF	OFF	OFF	ON	OFF	ON	OFF
720	53.6	0.56	0.03	OFF	OFF	OFF	OFF	ON	ON	OFF

For other settings or special applications, please consult the factory or check our website for your nearest Distributor

TITAN CL FILLING INSTRUCTIONS



Initial Filling

1. Unscrew **CARTRIDGE CONTAINER TUBE** from the **TITAN CL**.
2. Pull up and lock the **CARTRIDGE CONTAINER TUBE** piston assembly using the handle on the end of the tube.
3. **TAMP DOWN GREASE IN CARTRIDGES**, uncap and insert a new grease cartridge in the **CARTRIDGE CONTAINER TUBE**.
4. Screw the **CARTRIDGE CONTAINER TUBE** back onto the **TITAN CL**, making sure the flat gasket is in the **TUBE RECEPTACLE**. NOTE: Best to store grease cartridge vertically to allow air to rise to discharge end for easier purging.
5. Unlock the tube piston assembly using the handle.
6. Hold in the **INITIAL FILL PURGE VALVE** until grease is present at the valve.
(Note: you may need to cycle the valve in/out and/or cycle the tube piston up/down using the handle.)
7. Repeat #6 with the **REFILL PURGE VALVE**.

Subsequent Re-Filling

1. Unscrew **CARTRIDGE CONTAINER TUBE** from the **TITAN CL**.
2. Pull up and lock the **CARTRIDGE CONTAINER TUBE** piston assembly using the handle on the end of the tube.
3. **TAMP DOWN GREASE IN CARTRIDGES**, uncap and insert a new grease cartridge in the **CARTRIDGE CONTAINER TUBE**.
4. Screw the **CARTRIDGE CONTAINER TUBE** back onto the **TITAN CL**, making sure the flat gasket is in the **TUBE RECEPTACLE**.
5. Unlock the tube piston assembly using the handle.
6. Hold in the **REFILL PURGE VALVE** until grease is present at the valve.
(Note: you may need to cycle the valve in/out and/or cycle the tube piston up/down using the handle.)

PATENTS: US# 625162; CA# 118980; JP# 1335155; EP# 000702493-0001; AU# 314786

For more information, please visit our website at www.atselectrolube.com

ATS Electro-Lube International Inc.
7388 Wilson Ave. Tilbury Industrial Park
Delta, B.C. V4G 1H3 CANADA

E.&O.E. Rev. 03/16

Factory Direct

Phone: 800-663-8141 Fax: 800 663-8140

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