ELECTRO-LUBER ™ MD

TITAN II ™

INSTALLATION INSTRUCTIONS



Working Principle

The **Electro-Luber™ MD - TITAN II ™** is a self-contained, microprocessor controlled, motor driven automatic lubricator. The operation of the **TITAN II ™** 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 1000psi. This pressure allows the **TITAN II ™** to be used with long feed line pipework, and it can even cycle progressive distributors, allowing the **TITAN II ™** 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. When the unit is empty, refilling is accomplished using standard grease cartridges.

MUST USE A.T.S. 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 II.** This fitting should be used to prime the distribution block and all the lines.

It is important to make sure you prime all piping and lube points prior to installing the TITAN II ™.

All **TITAN II™** units have 1/8" NPT female threads

If the **TITAN II™** 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.

For optimal performance, the **TITAN II ™** 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 Low Temp lubricants with NLGI 0 or 1 rating.

To ensure the success and reliability of your **TITAN II**, do not use in temperatures below -4º F or above 131º F (-20º C to 55º C), or in an application requiring over 1000 psi. The **TITAN II ™** 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 55º C

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 100º C (212º F) or dispose of in fire. Dispose of used battery promptly in accordance with the regulations of your jurisdiction.

Starting Procedure

IT'S IMPORTANT TO TAMP DOWN THE GREASE IN THE CARTRIDGES before loading the grease cartridges into the **TITAN II** unit (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 II** 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 **TITAN II™,** set all switches to **OFF**.

The **TITAN II™** 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 II** unit starts operating, turn switch 7 **OFF**. The **TITAN II** 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 10 Seconds	Operation OK
Green	1 Flash	Every 1 Second	Currently pumping grease
Red	1 Flash	Every 10 Seconds	If Internal limit switch counter is faulty, the unit will go into an operational timed failsafe mode.
Red	2 Flashes	Every 10 Seconds	Low battery. Must be replaced shortly.
Red & Blue	1 Flash each	Every 10 Seconds	Grease cartridge empty
Blue	2 Flashes	Every 10 Seconds	Unit paused via remote option (if used here)
Blue	4 Flashes	Every 10 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.

WARNING – PRODUCT MUST BE SET UP AND USED WITHIN THE PARAMETERS STATED IN THE INSTALLATION INSTRUCTIONS. USE OF THE PRODUCT OUTSIDE OF THE STATED PARAMETERS CAN CAUSE THE UNIT TO BURST AND RESULT IN BODILY INJURY.

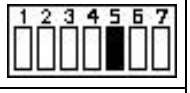
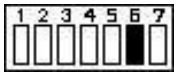
Power

The battery pack for the **TITAN II** ™ 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. Is is recommended that you have a spare battery pack to avoid a prolonged outage. The battery packs, complete with connectors, may be purchased directly from the factory. A.T.S. battery packs must be used to maintain warranty and UL listed status.

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

Comparison Chart

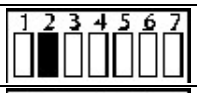
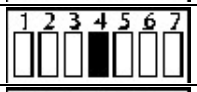
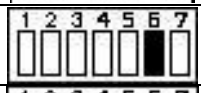
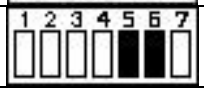
This chart compares the lubricant output rate of the **TITAN II** ™ with several common manual lubrication schedules. The **TITAN II ™** switch settings indicated will provide comparable lubrication to that of the manual practice shown. **Do not over-lubricate bearing.** Some typical settings follow,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

Manual Lubrication Schedule	TITAN II™ Setting	
	Unit Life	Switch Setting
Daily lubrication 3 – 4 strokes	8 months (240 days)	
2–3 day lubrication 3 – 4 strokes	16 months (480 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 II™ Setting	
	Days to Empty	Switch Setting
12” to 14 ¾”	30	
10 ¾” to 12”	60	
8 ½” to 10 ¾”	120	
6 ½” to 8 ½”	180	
4” to 6 ½”	240	
4” to 4 ¾”	360	
3 ¼” to 4”	480	
2 ¾” to 3 ¼”	720	

Selection of Switch Settings

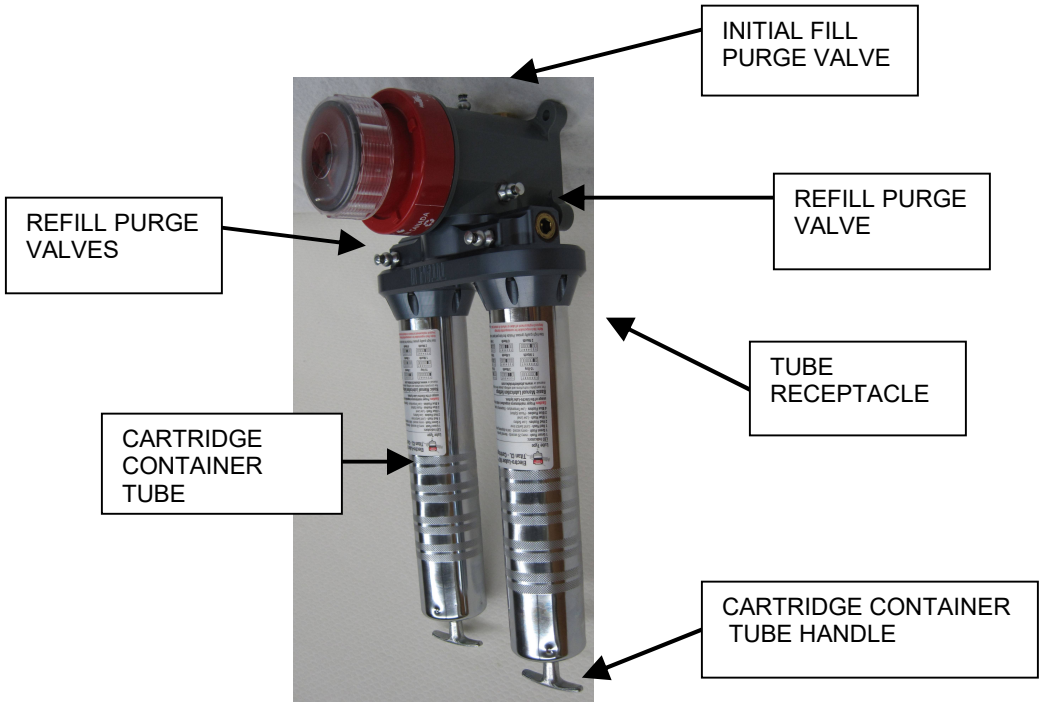
One stroke from a typical grease gun is equal to approximately one cubic centimetre (cc). To select the switch setting appropriate for your application look down the column for the desired output of lubricant, remembering that 1 cc is equal to approximately one stroke from a grease gun. The switch setting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

TITAN II ™ Dispensing Rate Chart

Days to Empty	Cycle Time (hrs)	Approx. Daily Output in cc's	Approx. Daily Output in ci's	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5	Switch 6	Switch 7
15	0.6	54.55	3.33	**ON**	OFF	OFF	OFF	OFF	OFF	OFF
30	1.1	27.27	1.66	OFF	**ON**	OFF	OFF	OFF	OFF	OFF
45	1.7	18.18	1.11	**ON**	**ON**	OFF	OFF	OFF	OFF	OFF
60	2.2	13.64	0.83	OFF	OFF	**ON**	OFF	OFF	OFF	OFF
90	3.3	9.09	0.55	OFF	**ON**	**ON**	OFF	OFF	OFF	OFF
120	4.4	6.82	0.42	OFF	OFF	OFF	**ON**	OFF	OFF	OFF
150	5.5	5.45	0.33	OFF	**ON**	OFF	**ON**	OFF	OFF	OFF
180	6.6	4.55	0.28	OFF	OFF	**ON**	**ON**	OFF	OFF	OFF
240	8.8	3.41	0.21	OFF	OFF	OFF	OFF	**ON**	OFF	OFF
300	11.0	2.73	0.17	OFF	OFF	**ON**	OFF	**ON**	OFF	OFF
360	13.2	2.27	0.14	OFF	OFF	OFF	**ON**	**ON**	OFF	OFF
480	17.6	1.70	0.10	OFF	OFF	OFF	OFF	OFF	**ON**	OFF
600	22.0	1.36	0.08	OFF	OFF	OFF	**ON**	OFF	**ON**	OFF
720	26.4	1.14	0.07	OFF	OFF	OFF	OFF	**ON**	**ON**	OFF
945	37.8	0.87	0.05	ON	ON	ON	ON	**ON**	**ON**	OFF

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

TITAN II™ FILLING INSTRUCTIONS



Initial Filling

1. Unscrew **CARTRIDGE CONTAINER TUBES** from the **TITAN II**.
2. Pull up and lock the **CARTRIDGE CONTAINER TUBE** piston assembly using the handle on the end of the tubes.
3. **TAMP DOWN GREASE IN CARTRIDGES**, uncap and insert new cartridges in the **CARTRIDGE CONTAINER TUBES**.
4. Screw the **CARTRIDGE CONTAINER TUBES** back onto the **TITAN II**, making sure the flat gasket is in the **TUBE RECEPTACLES**. NOTE: Best to store grease cartridges vertically to allow air to rise to discharge end for easier purging.
5. Unlock the tube piston assemblies 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 TUBES** from the **TITAN II.**
2. Pull up and lock the **CARTRIDGE CONTAINER TUBE** piston assemblies using the handles on the end of the tubes.
3. **TAMP DOWN GREASE IN CARTRIDGES**, uncap and insert new grease cartridges in the **CARTRIDGE CONTAINER TUBES.**
4. Screw the **CARTRIDGE CONTAINER TUBES** back onto the **TITAN II**, making sure the flat gasket is in the **TUBE RECEPTACLES**.
5. Unlock the tube piston assemblies using the handles.
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.)

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

A.T.S. ELECTRO-LUBE INTERNATIONAL INCORPORATED

BS EN ISO 9001:2015
FM 66860

Factory Direct

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A.T.S. Electro-lube International Inc. has a limited warranty. The full text of the warranty can be found on our website: www.atselectrolube.com

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