



Rotating Equipment Tips from
RESCO Solutions, Inc.



Helping businesses get the most out of their assets – both human and capital

You may freely reprint or distribute this REeZine™ to anyone as long as it is printed in full without editing or any alteration.

What are the differences between various Automatic Grease Lubricators in the market?

Are you a user of rotating equipment and having problems keeping them properly lubricated? Manual lubrication with a grease gun almost always over or under lubricates bearings. You can reduce costly downtime significantly by using Automatic grease lubricators. Learn about these devices in this newsletter.

There are several types and brands available in the market? Using some of these lubricators may offer satisfactory while others less than satisfactory to total disappointing results! How does one go about choosing the “right” automatic grease lubricator? I have received many enquiries from the users as to how they should evaluate the various lubricators. Therefore, I have compared the capabilities of various types and compiled the desirable specifications that a motorized single point grease lubricator should have.

There are basically three types of automatic grease lubricators: Mechanical – Spring Loaded; Chemical – Gas Powered; and Motorized – Battery Operated. Their features are tabulated below for easy comparison:

Lubricator Type	Mechanical	Chemical	Motorized
Single Point Lubrication	✓	✓	✓
Labor Savings	✓	✓	✓
Providing sealing action	✓	✓	✓
Programmable		✓	✓
Reuse	✓		✓
Provision for Switching the Unit ON/OFF			✓
Indicator for monitoring operation	Passive - Visual through translucent grease cup. Active - No	Passive - Visual through translucent grease cup. Active - Yes. Light indication.	Passive - Visual through translucent grease cup. Active – Yes. Light indication.
Dispensing action	Constant spring load continually pressurizes grease.	Electro-chemical reaction produces gas at preset frequency that pressurizes grease.	Microprocessor controlled motor pushes grease at a preset frequency.
Amount of grease dispensing depends upon	The machine shaft RPM and bearing condition.	Length of chemical reaction and frequency.	Microprocessor setting activating motor.
Malfunction occurs when	Reduced spring stiffness decreases or stops grease dispensing. Grease stiffens in and around the spring and obstructs its movement.	Low battery charge reduces or stops the chemical reaction that exerts pressure on the grease. Excessive grease stiffening causes high resistance beyond the level of gas pressure.	Low battery charge stops the motor from exerting pressure on the grease. Grease stiffens beyond the capability of the motor. However, the indicator light indicates malfunction.

Motorized – Battery Operated Automatic Grease Lubricators

There are several makes and brands of the Motorized – Battery Operated Automatic Grease Lubricators. Some of these manufactures are PermaLube, Bijur, Memolub, Electrolube, Pulsarlube, Lubetec, SKF, EasyLube, etc. Select the lubricator that provides the best convenience, most reliability and least cost for your application. The following are some of the essential features that your selection must have:

Reusable: All motorized lubricators are reusable; however, the battery pack replacement must not be interlinked with the lubricant replenishment. Grease and battery should be in two independent compartments so that they can be replaced independently.

Refillable: All motorized lubricators are refillable; however, the user should be able to fill its grease cup with the in-house lubricant. Some lubricators require grease cartridges from the lubricator supplier. Additionally the lubricator should be sufficiently versatile to use all NLGI grades 00, 0, 1, 2, and 3. Some lubricators do not allow application of wide NLGI range. Many high temperature applications require the use of NLGI grade 3, which not every lubricator allows.

Battery Pack: The battery pack should be a standard off-the-shelf item that can be purchased at almost any battery store. Some lubricator manufacturers warn of warranty breach in the event of not using their batteries.

Supervision: Most lubricators have some means of indicating lubricator operation and malfunction. In addition to providing a means of malfunction indication, the light indicator should also be able to troubleshoot the cause of malfunction.

Frequency & Amount of Lubricant: All lubricators have a fixed amount of grease dispensing stroke/cycle. Large bearings require more lubricant, which is provided by higher frequency of dispensing. Dispensing frequency is varied according to the application. Small amounts of grease at high frequency are always better for bearings than large amounts at low frequency.

Dispensing Pressure: All these lubricators are for single point application. They cannot be used for multi-point applications. A multi-point application requires high discharge pressure from the lubricator and a distributor at its discharge to maintain uniform and even grease dispensing to all the points. However, the indicator light on the single point lubricator will not provide reliable malfunction information when it is used in a multi-point application. The dispensing pressure of the single point lubricator should be sufficient to push grease into the bearing but not too high to cause seal failure.

Size & Weight: Too large a size exerts excessive forces on the connecting nipple while too small a size requires too frequent filling of the grease cup. A 150 ml lubricator is generally the right size making it sturdy, compact and with good capacity. Single point lubricators with 150 ml grease capacity are well suited for most grease-lubricated bearings.

Vibration & Shock Bearing Capability: Lubricators on rolling contact bearings encounter impact forces. They should be manufactured to withstand high vibration levels.

Explosion Proof: Many lubrication applications are in explosive environment. Lubricators should have UL certification for use explosive environment. This makes these units more versatile as motorized grease lubricators.

Warranty: Most manufacturers of lubricators offer a 1-year warranty; there are some lubricators with a 2-year warranty.

Price: The lubricator with lowest price that meets all features listed above gets selected.

When you are evaluating automatic grease lubricator for your plant application, it would be prudent to look at the lubricators from all the manufacturers and summarize their properties and compare them on the basis of the above features.

Selecting the right automatic grease lubricator will ensure proper lubrication to grease lubricated bearings in your plant resulting in convenience, reliability and savings.

Rotating Equipment Tips from
RESCO Solutions, Inc.

This REeZine™ is written to emphasize that plant reliability comes from reliable operation of rotating equipment that are supported by reliable, convenient and simple tools. Automatic Grease Lubricator is one such device that has proved itself repeatedly.

If you are interested in more specific information on shaft alignment, bearings or lubrication, contact us by mail at reezine@re-sco.com or phone at (248) 219-4246.

Hope this letter provides some value to our readers.

Thank you.

Vidhu S. Gairola

RESCO Solutions, Inc.

We Build Customers – Our Customers Build Us

Phone: (248) 219-4246

Bloomfield Hills, Michigan

www.resco-solutions.com

PS: We will furnish you with pricing, delivery and other technical information about Easylube 150™ (Single Point Motorized – Battery Operated Automatic Grease Lubricator) for your plant requirement.

Our book on Shaft Alignment is available. Go to www.resco-solutions.com for details.

This REeZine™ © trademark and all its contents are copyright of RESCO Solutions, Inc., all rights reserved. We allow readers to freely reprint this REeZine™ as long as it is printed in full without editing or any alteration. We request that you include this notice and our contact information when using or distributing our REeZine™.