

AUTOMATIC LUBE SYSTEMS

CONSTRUCTION & MINING EQUIPMENT



AUTOMATIC LUBE SYSTEMS, INC.

www.automaticlubesystems.com

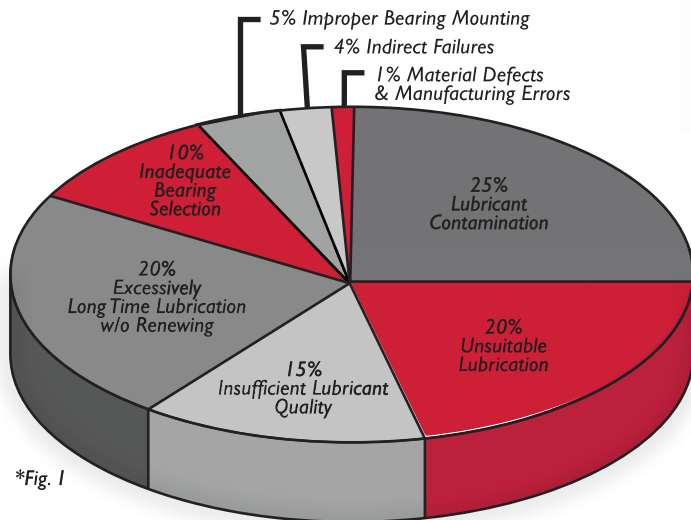
(844)-LUBESYS



WHY AUTO LUBE

An Automatic Lubrication System is a calculated and precise way of accurately administering grease to critical moving parts during machine usage for the most consistent and reliable grease application. By applying the right amount of grease for every grease point, you eliminate the feast and famine lubrication situations resulting in reduced failures. Auto lube provides constant positive grease displacement which keeps contaminants out. In an age where everyone is tasked to do more with less, Auto Lube can be that additional resource aiding in project completion and reducing costs.

COMMON BEARING FAILURE CAUSES



*Fig. 1

* Fig. 1 The Most Common Causes of Bearing Failure and the importance of Bearing Lubrication. RKB Technical Review, Feb. 2010, www.rkbbearings.com/admin/gest_docs_res/attach/1/1271884609.pdf

FAST FACT

Poor greasing practices are a leading cause of bearing failure. According to a recent study, up to 70% of bearing failures are caused by improper lubrication and contamination.



DAILY PRECISE MANUAL LUBRICATION IS DIFFICULT TO ACHIEVE

- ❖ Arbitrary amount of grease applied leads to over or under greasing. Eliminate human error. Eliminate the lubricant feast and famine. Different pin and bushing sizes require different amounts of grease. Too much grease can increase temperatures while too little grease can lead to premature component wear, both leading to component failure and downtime costs.
- ❖ Production demands get ahead of proper lubrication. Results and productivity are key drivers in today's world. The medial tasks often get overlooked when deadlines approach fast.
- ❖ Grease points are dirty and are rarely cleaned prior to manual lubrication. Grease attracts dirt. Every time a grease gun is coupled, dirt, rocks, sand and chemical contaminants will be pushed into the bearing. Those contaminants act as an abrasive and will eventually lead to premature bearing failure.
- ❖ Safety. Reduce risk. Greasing in the field has risks. Carrying a grease gun while climbing or slippery hand rails and surfaces, are just two examples of everyday greasing risks. Keep workers feet on the ground, it will reduce the risks of slips, trips, and falls.
- ❖ Varied Employee concern for proper lubrication. Eliminate neglect by operators who may be influenced to not grease because of production, weather, or lack of care for your equipment. Eliminate "the other guy will do it" syndrome.
- ❖ Poor Weather Conditions deter employees from proper lubrication. While human beings don't always like working in the hot or cold, or rain or snow, our IP69k rated pump will give you the same reliability no matter what the weather happens to be outside of the cab.

AUTOMATIC VS MANUAL LUBRICATION

Too Much Grease

Increased temperatures
Unnecessary Labor Cost
Excessive Lubricant Consumption

Results

Risking Failure and Downtime
Lost Productivity
Unnecessary Cost

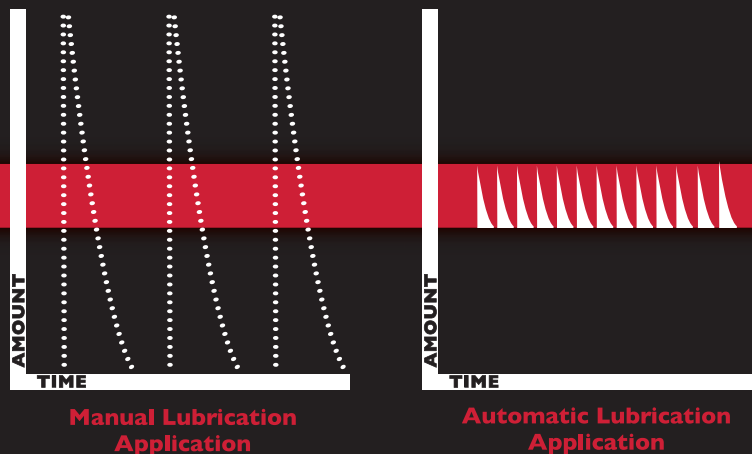
OPTIMAL LUBRICATION

Too Little Grease

Premature component wear
Increased Friction
Greater temperatures

Results

Risking Failure and Downtime
Greater Energy Consumption
Risking Failure and Downtime

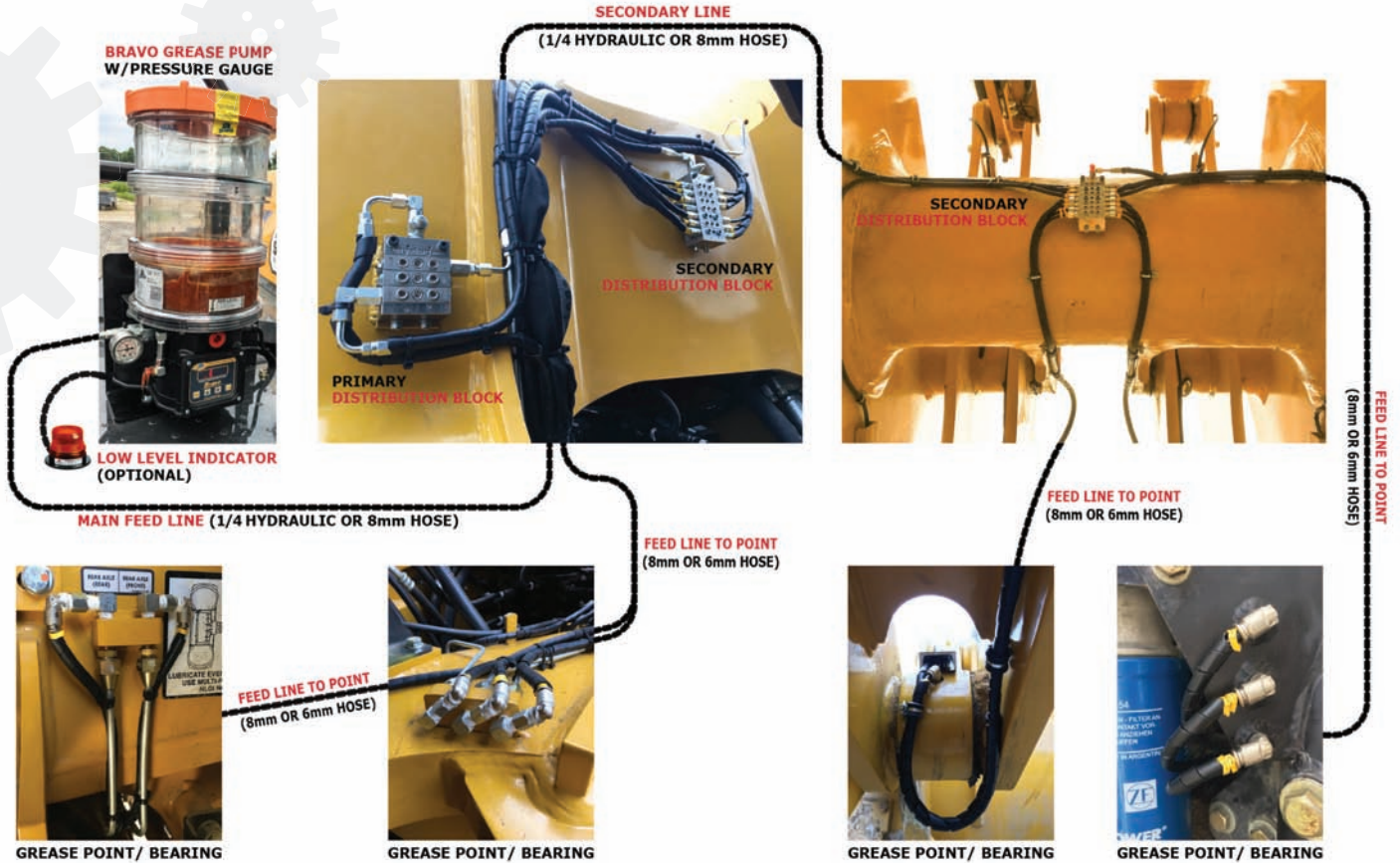


BENEFITS: ADD UP THE BENEFITS, IT SIMPLY MAKES SENSE.

- ❗ **Reliable and Permanent Grease Solution** – Clean calculated amounts of grease are applied to each grease point with precision, never forgotten, always lubricated. Avoid human error or neglect, our systems work in all weather and conditions.
- ❗ **Increased Productivity and Improved Operations** – According to a heavy equipment manufacturer, you can save 78 hours or nearly two weeks of greasing time for every 2500 machine hours on an average sized loader. Additionally, you can increase productivity by up to 10% versus manual greasing.
- ❗ **Increased Safety** – Climbing on and off construction equipment is the number one cause of injury for operators (54%). The average workers comp claim is \$40,000. Eliminate or minimize the time in environments where there is risk.
- ❗ **Reduced Repair and Maintenance Costs** – Parts, labor, downtime: the costs of component failure add up quickly, commonly exceeding thousands of dollars and rarely happen at the right time.
- ❗ **Optimal and Dynamic Lubrication** – Precisely lubricates a little amount of grease at a time, while moving, the most effective way to grease.
- ❗ **Extended Equipment Life** – Reduce lubrication failures by up to 70%. Control the 5 most common types of lubrication failure: too little grease, too much grease, contamination of grease, mixing grease types, and using the wrong type of lubricant.
- ❗ **Contaminant Reduction** – The system is nearly sealed. Positive grease pressure prevents air, dust, and moisture from getting into the system or the machine. Lubricant contamination accounts for approximately 25% of common bearing failures.
- ❗ **Higher Resale Value** – Less wear and better maintenance equates to higher residual value upon resale. Preventative maintenance can reduce machinery repair costs 25%.
- ❗ **Environmentally Friendly** – Potentially reducing grease usage up to 30% or more and a longer lifespan of components is better for the environment.

The bottom line: Save substantial time and money.

AUTOMATIC LUBE SYSTEMS SERIES PROGRESSIVE SYSTEM



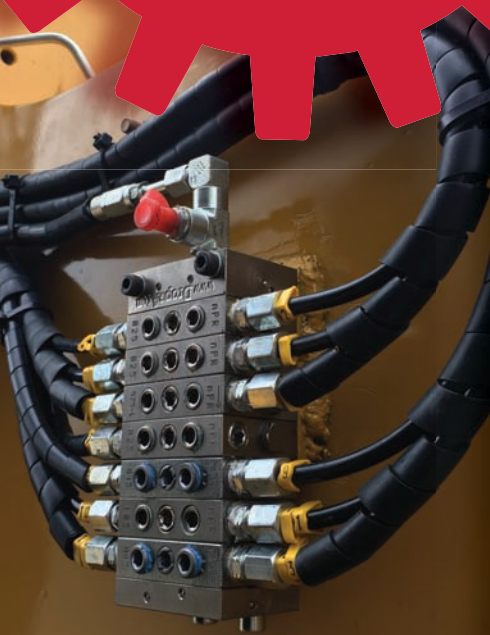
HOW IT WORKS

An automatic lube system dynamically lubricates individual grease points with metered amounts of grease. Automatic Lube Systems installations typically include a DropsA Bravo Pump that feeds custom series progressive distribution blocks. Grease is pumped from a central reservoir through the grease pump. The grease then travels down tubing that feeds a primary distribution block. Grease then travels to secondary distribution blocks where specific metered amounts of grease are delivered to each lubrication point. The metering valves are custom sized for each point to deliver the precise amount of lubricant. Each valve cycles one at a time and is dependent on the valve before it; this is a great way to trouble shoot the system. Should a point stop taking grease or if a line gets pinched, blocked, or stops delivering grease, the entire system stops working and the pump alerts you of a fault. This usually means no bearings will be lost. Unlike some auto lube systems out there, should a bearing not take grease, you will know. Our series progressive system will alert the pump of a fault which will display on the screen and activate an optional strobe light.



FAST FACT

According to a major equipment manufacturer, after 2500 machine hours, the operator of an average-sized loader has devoted 78 hours or two weeks to manual greasing.



RETURN ON INVESTMENT (ROI)

While the initial investment might seem fairly substantial, the Return on Investment is typically rather quick. In most heavy equipment applications, loaders, excavators, and crushers, ROI is routinely less than one year. Our calculator will demonstrate your total labor costs per year to manually lubricate and your total lost production value per year for your specific business. This will give your specific payback and future yearly cost savings.

RETURN ON INVESTMENT ANALYSIS

Cost Of Labor To Manually Lubricate Machine

Time to lube machine: (in minutes, ex. 30,20, 15):	25
Number of times weekly machine is manually lubed:	5
Number of weeks machine is used (yearly):	44
Estimated hourly rate for operator with benefits:	\$35
Total Yearly Labor Cost to Manually Lube:	\$3,208

Cost Of Lost Production To Manually Lube Machine

Hourly production of machine: (ex. \$180, \$120, \$90/hour):	\$120
Total Yearly Loss: Production Cost to Manually Lube Machine:	\$11,000

Total Yearly Cost to Manually Lube Machine

Total Yearly Cost to Manually Lube Machine:	\$14,208
---	----------

Total Savings from an Automatic Lube System

One Time Cost Automatic Lube System (Average \$7500):	7,600
Year 1 Savings: First Year Savings with Auto Lube Systems:	5,898
Yearly Savings, Year 2 and Beyond 95% Reduction in Manual Lube Costs:	13,498

Visit our website for a downloadable Excel version of this Return On Investment Calculator at <https://www.automaticlubesystems.com/auto-lube-calculator>. Plug your own variables to see how much auto lube can save your operation.

Not included in the calculator, although just as relevant, are the annual variable costs to repair failed components (ie Replacement pins and bushings), repair labor costs, lost production costs, and potential equipment rental costs. It may help to take a five-year average of these expenses to gauge your annual cost to repair failed components. These costs may be able to be reduced by as much as 70% with an automatic lube system.

SAFETY

Every year roughly 2.9 million workers are subject to a workplace caused injury or illness. In 2015, 55.6% of construction related fatalities are a result of falls, struck by objects or caught in-betweens. The optimal time to lubricate a bearing in any equipment is while it is moving. Unfortunately, a moving piece of equipment is significantly more dangerous and potentially impossible to grease.

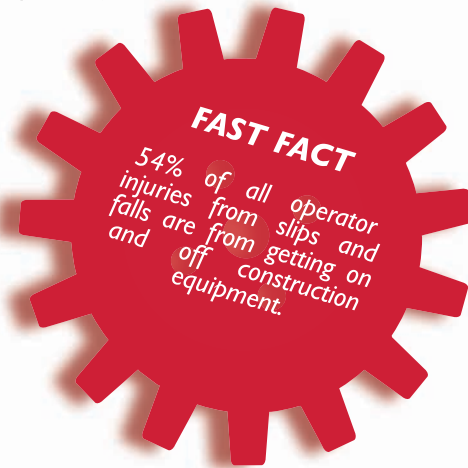
Greasing in the field has significant risks: Manually greasing can lead to one of the seven top ten workplace injuries:

- ⚙ Overexertion Injuries – Related to pulling, pushing, holding, carrying activities
- ⚙ Slipping/Tripping – Pertains to falls due to slippery surfaces
- ⚙ Falling from Heights – Happens from an elevated area
- ⚙ Reaction Injuries – Caused by slipping and tripping without falling
- ⚙ Falling Object Injuries – Occurs when object falls onto worker
- ⚙ Walking into Injuries – Happens when a worker accidentally runs into a solid object
- ⚙ Machine Entanglement – Caused by getting fingers and hands caught in machinery

<http://www.arbill.com/arbill-safety-blog/bid/202877/Top-10-Most-Common-Workplace-Injuries>

The goal of any safety program is to reduce hazards and risks. Reducing exposure to compromising positions. Recommendations to reduce accidents by leading safety experts: eliminate the need to climb on machines and equipment; if climbing is required, use 3 points of contact and don't carry any objects, this includes a grease gun, and keep surfaces clean.

An automatic lube system can be key to mitigating the risks of greasing in the field. Keep your employees' feet on the ground and reduce your liability.



Number and percentage of nonfatal lost-time injuries by accident class at surface mining locations, 2011-2015 (N=16,447)

Handling Materials	6044 (37%)
Slip or Fall of Person	4789 (29%)
Hand Tools	1568 (10%)
Powered Haulage	1405 (9%)
Machinery	1395 (8%)
All Other	1246 (8%)

Nonfatal injury cases classified under "Machinery" were reclassified as a "Fall of ground (from in place)" if the source of the injury was "Caving rock, ore, etc. This reclassification is consistent with how MSHA classifies similar incidents which resulted in a fatal injury. Sum of percentages may not equal 100 due to independent rounding. Excluded office employees. Data source: MSHA.

<https://www.cdc.gov/niosh/mining/UserFiles/statistics/15g07saa.svg>

According to the Center for Disease Control and Prevention (CDC) and the Bureau of Labor Statistics (BLS):

- ⚙ An estimated 20 – 30% of people who experience a slip and fall will suffer moderate to severe injuries such as bruises, hip fractures, or head injuries;
- ⚙ Slips, trips and fall accidents can also cause other complications including: Death, Incapacitation, Broken bones and fractures, Long-term medical complications, Head trauma and Spinal cord injuries;
- ⚙ 1 in 6 of all lost-time work injuries result from slips, trips and falls; According to OSHA, slips, trips and falls cause 15% of all accidental deaths; Slips, trip and fall injuries cost employers approximately \$40,000 per incident.

Think insurance will cover it? Think again. Insurance will typically cover the direct costs: workers compensation payments, medical expenses, and the cost for legal services. "Indirect costs of injuries may be 20 times the direct costs – Indirect costs include: training and compensating replacement workers; repairing damaged property; accident investigation and implementation of corrective action; scheduling delays and lost productivity; administrative expense; low employee morale and increased absenteeism; poor customer and community relations. Source: The American Society of Safety Engineers.

How do the indirect costs of workers compensation affect my business?

Say the indirect cost of workers compensation is an additional \$40,000 (a 1:1 vs direct costs) and your business' profit margin is 10%, you need an additional \$400,000 of revenue to offset that accident!

Cost Benefits to Safety Investments

- ⚙ OSHA's Office of Regulatory Analysis has stated: ...our evidence suggests that companies that implement effective safety and health programs can expect reductions of 20% or greater in their injury and illness rates and a return of \$4 to \$6 for every \$1 invested.
- ⚙ According to the American Society of Safety Engineers, every \$1 spent on prevention can lead to \$3-6 in loss avoidance [ASSE, 2010].

[http://emcis.mines.edu/UserFiles/File/MSHP/GuideforEstimatingtheTotalCostofAccidents%20FINAL\(8-10-11\).pdf](http://emcis.mines.edu/UserFiles/File/MSHP/GuideforEstimatingtheTotalCostofAccidents%20FINAL(8-10-11).pdf)



Quarry? Yes.
Sand pit? Yes.
Mine? Yes.
Shop? Of Course.

We come to you and your machine. Don't bother moving your machine.



WE INSTALL ANYWHERE!
**MOBILE, EFFICIENT,
NO HASSLE INSTALLATIONS**



INSTALLATIONS

How you install an auto lube system is important. Why? Longevity, durability, resilience.

At Automatic Lube Systems, we pride ourselves in our system installations. Our staff has completed hundreds of installs taking in to account the way the equipment moves, selecting the best guarding and protection, and mounting our components and lines in such a way that our system will have a long life.

Our DropsA Bravo pump is rated at IP69k and is unaffected by the operational environment and weather conditions which ensures precise lubrication regardless of exterior environments.

While our system installations are nearly bulletproof, things happen. That's why we design and use removable guarding and spiral wrapped hose to have quick easy access for repair – after all, we preach uptime and productivity.



WHO ARE WE

We are a first generation, small business, founded by two local owners, who focus on automatic lubrication solutions for a variety of applications. We believe in the benefits of auto lube; our company was born out of a desire to deliver quality and reliability. Our goal is to provide the best designs, solutions, installations, and service of auto lube products. We appreciate every customer, quote, opportunity and every project that we have the pleasure of working on. Thank you in advance for your business.

Our mission is increasing safety, uptime, and productivity while reducing costs through automatic lube system installations.

**Why Go “Aftermarket” vs. Factory?
Perfect for either a New Machine or an Older Machine.**

PRICE

ALS systems typically run 25-40% less expensive versus a factory system. Our systems are lower cost and give you better quality and serviceability.

SIMPLICITY

While ALS can add features such as an in-cab low level or fault warning, or data logging and diagnostic options, we stay simple to auto lube. Our systems are simpler to diagnose, have less that can go wrong, and IF something does go wrong, are much less expensive to fix.

Field Example: We recently had a client with a new loader that had an auto lube fault in the factory PLC. It cost the client over \$3,000 through the dealer with multiple days of down time.

SUPPORT/REPAIR

ALS is a local team committed to our customers and their operational auto lube systems. While we are less expensive than the dealer, we also provide better support. We are a phone call away; no call center, no struggling to find the right person.

AUTHORIZED DISTRIBUTOR FOR



Lube it or Lose it!



AUTOMATIC LUBE SYSTEMS
www.AutomaticLubeSystems.com
Sales@AutomaticLubeSystems.com
(844) 582-3797 (LUBESYS)
Westfield, MA

