

**LINCOLN**

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# Capabilities

INFORMATION FROM THE LEADER IN THE LUBRICATION INDUSTRY

## Lubrication Technology for Modern Agriculture

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# The Latest Technology

*from a name you trust*

Today's farmers face many of the same challenges their parents and grandparents faced—too much or not enough rain, market fluctuations, machinery breakdowns and grueling 24-hour workdays during planting, growing and harvesting. So many factors are beyond their control, threatening not only profitability but also their way of life.

To gain more control, farmers seek new solutions and product innovations including advanced computer technology, yield monitoring, platform and header controls, and global positioning systems. Still, reliance on the tried and true benefits that come from experience will never be replaced. The names of top equipment manufacturers and the value of a good reputation endure.

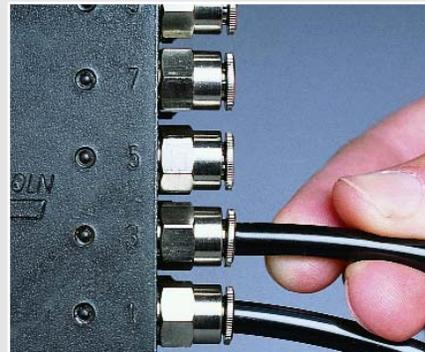
When addressing lubrication for agricultural equipment, farmers balance both innovation and experience. They look for the latest methods to protect their huge investment and at the same time want to rely on a company they know and trust.

## The Lincoln Advantage

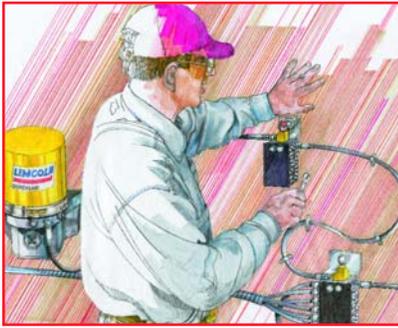
Lincoln has been inventing and improving lubrication practices for agriculture, automobiles and industry since 1910. The company has been awarded more U.S. patents for lubrication equipment than all other competitors combined.

With so many innovations in lubrication, and a worldwide network of knowledgeable support professionals, farmers trust Lincoln quality and service.

As the world leader in the lubrication industry, Lincoln provides numerous options. Lincoln designs and manufactures everything you need—from automated lubrication systems to a full line of manual lubrication tools and equipment.

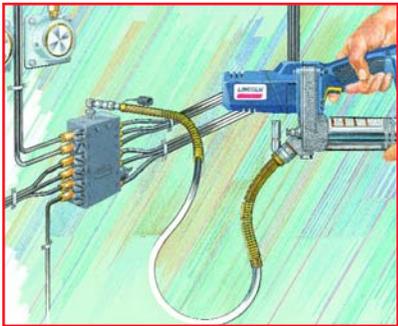


# It's Your Choice: 3 Lubrication Options



## Automated Lubrication: Feeds All Points on Equipment while it Is Operating

Automated lubrication combines a pump, controller, lubricant measuring devices, feed lines and fittings. The system delivers grease in small, precise doses at regular intervals to vital components while the equipment is operating. The optimal time to lubricate is during operation—when all the surfaces that bear the load are continuously being exposed. As a result, lubricant can penetrate the entire wear surface while continuously purging contaminants.



## Centralized Lubrication: Feeds Components from a Single Point

Centralized lubrication feeds a number of components from one location. A more efficient method of lubricating, the centralized approach is often lower in cost. The operator or mechanic uses a grease gun and applies lubricant to a conveniently placed central divider valve that feeds grease directly to every bearing without having to climb on or under the equipment.



## Manual Lubrication: Performed Point-by-Point

Manual lubrication defines the process of lubricating equipment one fitting at a time. Usually performed during routine maintenance before the equipment is taken out in the field, manual lubrication can take 30 minutes to an hour to lubricate every point. If performed consistently, manual lubrication can be effective.

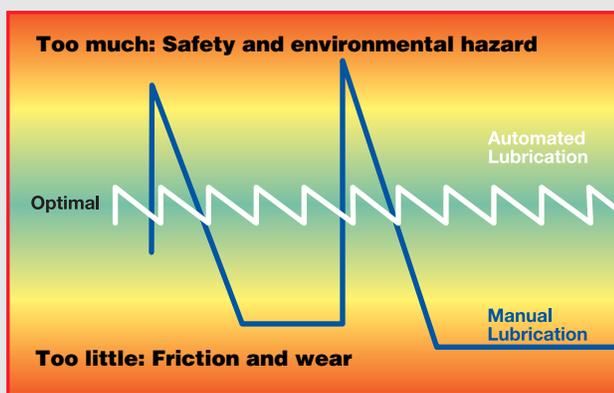
Proper lubrication involves the best use of all of these technologies to their full advantage. Your Lincoln representative can help you determine the best choices for you and your operation.

## What Automated Lubrication Can Do

### Improve Lubrication Practices

Automated lubrication applies small amounts of lubricant frequently, maintaining the correct amount of grease in the bearing at all times as

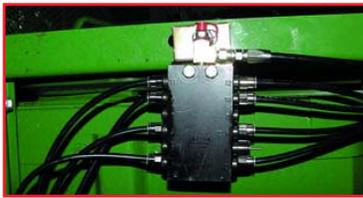
compared to the feast and famine conditions often associated with manual lubrication.



### Cut Operating Expenses

- Eliminate downtime costs for component-related failures
- Reduce labor costs associated with manual lubrication
- Increases time in the field by 1/2 to 1 hour per day
- An investment in automated lubrication will quickly pay for itself

# Farm Applications



## Combines

As you know, having your combine available and running at peak performance is critical during the harvest season. Due to severe weather conditions and other potential challenges, time in the field is critical.

Lincoln Quickclub® systems can:

- Save you time—30 minutes each day, which can give you yields of approximately five more acres a day.
- By not climbing all over the combine to manually lubricate hard-to-reach fittings, you can work safely and avoid getting greasy and dirty—before you climb in the cab.
- It never breaks down in the shed! Automated lubrication systems **significantly** reduce component failures.



## Tilling, Seeding and Planting

Most implements, due to their weight and size and exposure to field conditions, need to be lubricated once a day. Often these lubrication points are spread out and are underneath the equipment.

Centralized lubrication is often the most cost-effective solution for protecting this equipment. Each valve divides and proportions grease to the connected components.

- Saves time and ensures every point is lubricated.
- With a valve mounted in an accessible location, lubrication can be done standing up, using a Lincoln manual, pneumatic or electric grease gun. Complete the job safely and cleanly.
- A pump can be installed on your tractor to lubricate it and the centralized valves on your implements, allowing them to all be protected automatically.



## Hay Balers

Baling hay is a lot like harvesting crops. Uptime and availability is critical. Most baler manufacturers now offer centralized and automated systems as factory fit options covering the numerous body points and the knoter. Manual lubrication can take over an hour on these machines, which relates to 35 bales of hay production.

- Automated systems give back that hour per day, or 35 additional bales.
- Component failures and resulting downtime are significantly reduced.
- Dirty, greasy manual lubrication is eliminated. All you have to do is check the reservoir.



## Cotton Pickers

The advantages of automated lubrication are so clear, one major manufacturer, Case IH, makes Quicklub® a standard feature on every cotton picker they sell.

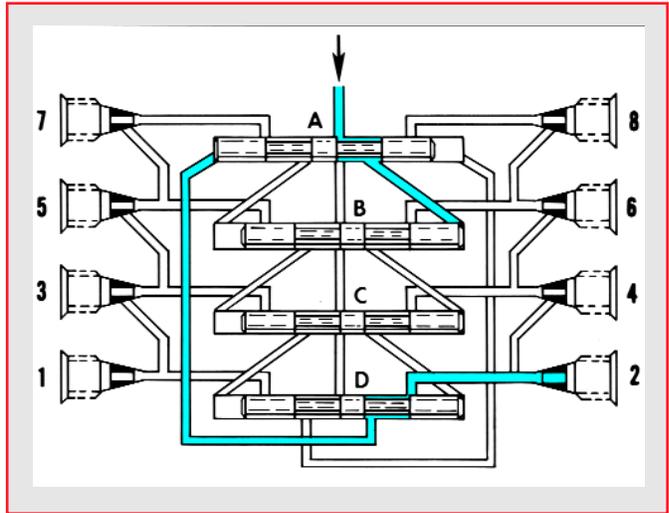
- Eliminating manual lubrication can save you an hour every morning, that equates to six more acres of work per day or more time for maintenance on your picker and other equipment.
- With the Quicklub system, you can maximize the life of your drum head components by eliminating premature wear on these costly high wear items.

# The System That's Right For You

## Quicklub® Automated Lubrication

Lincoln's Quicklub system gives you the ability to supply a precise amount of grease to each and every wear point on your equipment **while it's operating**. The heart of the system is the rugged, one-piece Quicklub SSV divider valve. This valve, utilizing unique internal pistons, "divides" the grease and sends the appropriate amount to each lubrication point.

As a system is designed for a specific machine, multiple valves are used, each one configured to meet the unique lubrication requirements of every lubrication point on the machine. The electric pump that powers the system is programmed to activate at regular intervals while the machine is working out in the field.



## Quicklub® 203 Electric Pump

Our best seller, the 203 pump, is perfect for equipment demanding a higher volume of lubrication. Top equipment manufacturers feature the Quicklub 203 pump as part of automated lubrication systems they offer as standard equipment, factory-fit option or as aftermarket options available through their dealer networks.

Some of the features include:

- Large, clear reservoir with available capacities of 2, 4 or 8 liters.
- Vibration and shock resistant
- Unique, lightweight synthetic housing
- Integrated timer with manual override



## Quicklub® QLS 301

If you require a system for machinery with less lubrication demand, the QLS-301 is for you. A complete system, the QLS 301 comes pre-assembled with a pump, integrated controls and a metering valve. It's compact, rugged, easy to install and easy to use.

By adding five secondary valves, the QLS 301 can lubricate a combine with 44 points using NLGI #2 grease. With a built-in safety valve, overfill protection, reservoir low-level alarm and blocked line detection capability, the QLS 301 is a great value.

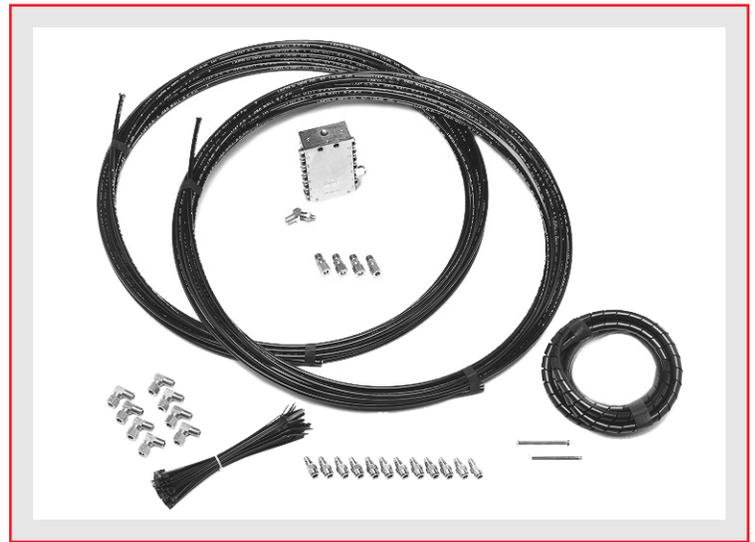


## Centralized Lubrication

Our single-point, centralized approach ensures quick and proper maintenance on combines, balers, tractors and implements. The results are dramatic: It reduces lubrication time by more than 90 percent and extends the life of all components. Because the cost is lower, you can easily justify adding centralized lubrication to your tillers, seeders, planters and other equipment you now lubricate one point at a time.

You have three options for using this approach: First, using a grease gun, you can supply lubricant to a single metering valve mounted in a convenient location. The valve in turn can supply up to 18 lubrication points. Second, you can set up a master metering valve to supply lubricant to several zoned valves, each capable of servicing up to 18 points. Third, the system becomes automatic when you add the electric grease pump and timer to your master valve and secondary valve arrangement.

A tractor equipped with a grease pump could supply automated efficiency to numerous implements equipped with centralized systems simply by setting the timer to meet the needs of each unit.



## PowerLuber®—Using a Grease Gun Will Never Be the Same!

If you haven't replaced your grease gun with a PowerLuber, you're working much harder than you have to. The 12-volt, battery-powered PowerLuber generates as much as 6,000 psi of working pressure, and each battery will dispense two tubes of grease. The convenient whip hose allows for easier access on hard-to-reach points and the comfortable trigger facilitates one-hand operation.

If you need extended battery use, order the 1244 in a case with two batteries, or select the 1215 battery charger that plugs into the accessory/lighter receptacle of your combine or tractor.

Back in your shop, attach the new PowerLuber 1163 air-powered grease gun to your compressor for maximum productivity.

Both the battery-powered and air-powered units can handle your manual lubrication applications faster and more efficiently than any lever grease gun. Plus, they're ideal for refilling reservoirs on your automated systems and supplying lubricant to machinery equipped with centralized lubrication.



# The Payback

Dealers and farmers have told us about the true “costs” related to manual lubrication of combines. We knew costs existed but based upon their experience and the calculations reflected below, we confirmed that over \$5,500 is spent each year for daily lubrication and repairs—money that can be saved by using Lincoln automated lubrication systems!



## **The Analysis**

### **Planned Down Time: Labor to manually lube a combine once a day**

$\frac{1}{2}$ hour per day x 20 acres	Time required to do the job right with a Lincoln grease gun Acres harvested per hour
10 acres lost	Additional acres that could be harvested instead of lubing
\$ 14.00 x 10	Net income (Harvested acre of wheat – Plains) Acres lost
\$ 140.00	Net income lost per day
\$ 140.00 x 30 days	Days of operation during harvest
<b>\$ 4,200.00</b>	<b>Annual cost for daily manual lubrication, not including hourly rate of operator</b>

### **Unplanned Down Time: Costs related to a failed component**

Replacement of one Fan Variable Pulley bearing

\$ 18.00	Material cost for replacement bearing
\$ 60.00	Labor to repair – 2 hours @ \$30.00
\$ 1,400.00	Missed income – 5 hours x 20 acres/hour x \$14/acre

**\$ 1,478.00** Actual cost to repair failed bearing

**\$ 5,678.00** Total Cost of Lubrication Related Downtime

\$ 3,000.00 – \$ 4,000.00 Cost of an installed Quicklub® Kit

**\$ 1,678.00 – \$ 2,678.00 First Year Net Savings with Quicklub®**

**\$ 5,678.00 Annual Net Savings Every Additional Year of Ownership**

## **Options You Need from Your Local Dealer**

You know and trust your local dealer and they know your equipment and your farm’s operational needs. They have the right products and parts to keep you on the move. They can either add an automated system to your order for new equipment from the factory, or supply aftermarket kits for application on machines not currently factory-fit.

## **Lincoln Can Solve Your Toughest Lubrication Problems**

Lincoln can design a centralized or automated system for any application. In addition, thousands of farm and industrial dealers around the country offer the grease guns and accessories you need. For more information go to [www.lincolnfarms.com](http://www.lincolnfarms.com) or call 1-800-435-9599.



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