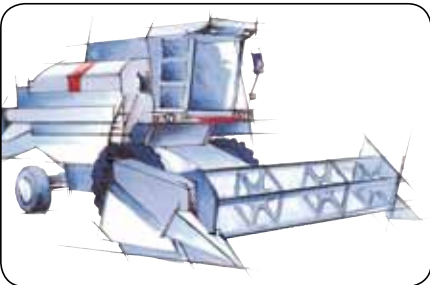
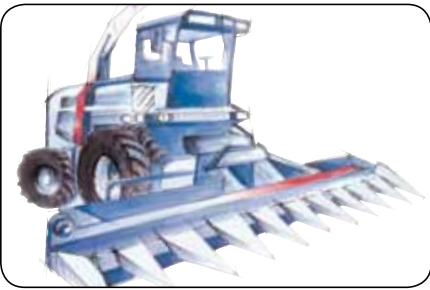


# Lubrication systems for agricultural machines



# Centralized lubrication

## The path to cost reduction

From a few lubrication points to a few thousand – Lincoln offers the complete range of lubrication equipment and systems for professional lubrication of construction and mining equipment.

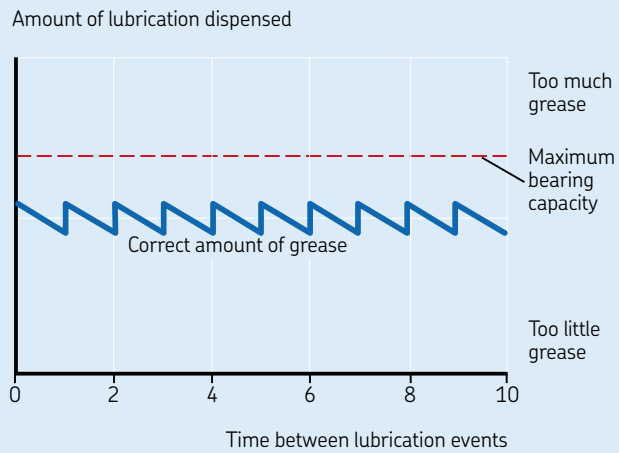
Lincoln lubrication systems are based on the principle of grouping lubrication points together that can be serviced from one supply point. Our modules build upon each other – enabling the system to grow in accordance with our customer’s requirements. This enables us to offer a custom-tailored lubrication solution for individual needs.

## Advantages of automated lubrication

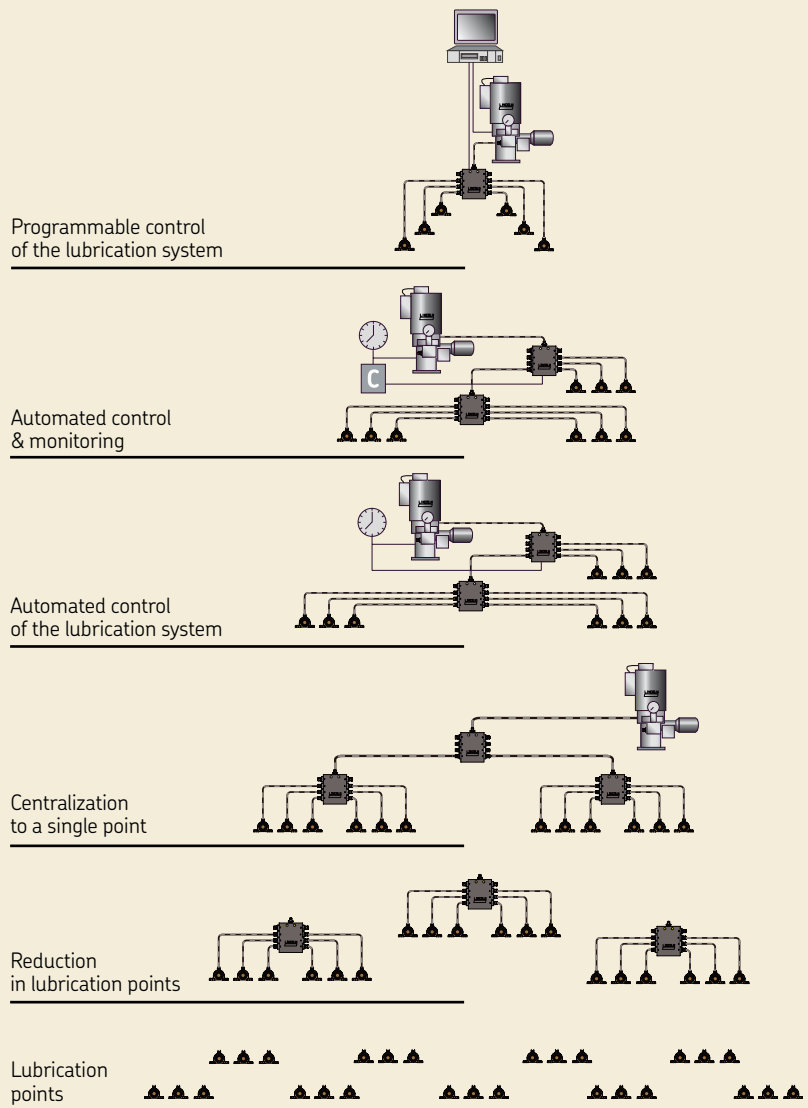
Centralized or automated lubrication offers several advantages when compared to manual lubrication.

- Increased profits and productivity
- Improved operating times; less costly downtime resulting from improper lubrication
- Lower costs for repairs and spare parts
- Exactly matched metering reduces the cost of lubricant
- Precise metering reduces the environmental impact. No dripping of “too much” lubricant
- Improved safety by minimizing slipping
- Hard-to-reach points are easily accessible from a convenient point – which also improves safety
- Reliable supply of all connected lubrication points. No point is “overlooked”

### Lubrication cycles



### LINCOLN optimization pyramid for centralized lubrication



## The new generation of Quicklub P203 pumps

The Lincoln Quicklub pump is the standard lubrication pump for all applications. Quicklub pumps supply small to mid-sized machines and systems with up to 250 lube points.

### Scores of product advantages are now standard equipped

- The new material of the pump housing is weather resistant and not susceptible to UV rays
- The pump housing has a larger filling port for easy filling of the reservoir
- The strong "Polar" stirring paddle ensures a good lubricant mixing, even at temperatures to  $-40\text{ }^{\circ}\text{C}$
- The strong spring of the S7 pump element is now used for all pump elements
- The filling adapter has a fixed, "captive" cap



### System characteristics

- 2, 4, 8 and 15 liter reservoir
- The filling of the reservoir occurs via the filling connection for cartridges – optional top-filling via the opening with lockable lid
- Reservoir with stirring paddle or with follower plate
- The pump is IP6K9K protected against damage and moisture
- Various pump elements with fixed or variable output
- Over-pressure valve – also equipped with an indicator and reservoir return
- Fully-automated option via integrated PCB
- Optional integrated display, touch pad and data logger function for the storage of important information such as operating time, faults or blockages and low-levels
- Installation can be performed with threaded or 350 bar rated Quicklinec plug-in type fittings

### Inquire about the special versions of our Quicklub pumps

- For oil
- Without PCB
- With microprocessor monitoring
- With adjustable run / pause times
- For trailer and semi-trailer applications
- With QuickData data logger for complete system diagnosis

## Progressive lubricant metering devices in solid-block construction

### SSV, SSVD and variants

- Block form – less prone to failure
- Leaks are avoided
- A higher operating pressure ensures reliability – even at minus temperatures
- Easy to monitor
- Error-free exchange as complete blocks are exchanged always
- Mistakes in connecting or in settings are avoided



### SSVD

Easy setting of the lubricant quantity via Lincoln metering screw technology

- Progressive metering device in solid-block form – with flexible metering
- Wide range of metering – leaves nothing to be desired
- Easy to alter metered quantities via metering screws – no disassembly and reassembly of metering device segments – also possible to do when the metering device is already fitted



SSVD metering devices are adjustable per outlet pair, thus enabling a much better match to the optimum lubricant requirements. The metering occurs within the metering block via metering screws that are available in 10 different sizes.

SSVD metering devices are available in the standard 6 to 22 outlets.

Metering screws per outlet pair are available in ten sizes – 0,08, 0,14, 0,2, 0,3, 0,4, 0,6, 0,8, 1,0, 1,4 and 1,8 cm<sup>3</sup> per outlet and stroke.

SSVD-V1 metering devices with internally connected outlet numbers 1 and 2 allow for additional better matching of applications with an uneven number of lube points.

### SSVE and SSVDE lubricant metering devices

Lincoln SSV and SSVD metering devices are also available in an “E” version with an emergency lubrication fitting on the front face of the block.

The “E” metering devices are ideal for single-nipple lubrication systems. The additional, easy to access lubrication fitting simplifies service and trouble-shooting tasks as a manual grease gun can be used. Also, additional emergency over-ride greasing is possible without having to change the system configuration.

### PowerLuber 14,4 V and 18 V cordless grease tools

Lincoln's new, heavy-duty 14,4 or 18 Volt PowerLuber gives you the power to lubricate just about anything, anytime, anywhere.

- Two-speed switch for high-pressure or high-volume delivery
- Cycle indicator pin to monitor grease output
- “Smart” charging system delivers reliable power

All the features you need, including comfortable grip and balanced design; hook for shoulder strap; built-in hose and coupler holder; and a slim, compact carrying case. Packed in a heavy-duty compact case molded from impact- and stain-resistant plastic, this package comes complete with the 14,4 V or 18 V PowerLuber and battery, a 230 volt one-hour “Smart” charger and a 760 mm flex hose with spring guard.



## Quicklub QLS 401

### Compact lubrication system for grease

The QLS 401 is a complete lubrication system that includes all necessary monitoring and control functions. All components including an internal overpressure valve are part of the complete package. The comprehensive list of standard features is a remarkable characteristic of the QLS 401. The integrated, all-in-one system concept reduces installation time and costs. A newly enhanced stirring paddle in the reservoir prevents grease separation – even with long service intervals.

The QLS 401 is designed for all industrial and mobile applications. Up to 18 lubrication points can reliably be supplied directly from the pump and monitored

### Multifunctional

The QLS 401 is versatile. An integrated circuit board optimally controls the pause time and the pump cycles to ensure a regular supply of lubricant. All settings are performed with ease via the keypad. Settings and messages are shown on the built-in LED display. The QLS 401 is also available in a “key lock” version that locks the programming function.

### Sturdy

The QLS 401 is shock and vibration proof and operates reliably, even when exposed to severe operating conditions such as temperatures ranging from –25 to +70 °C or high pressure wash-downs (IP6K9K, NEMA 4 protection).

### Compact

The QLS 401 is a high-pressure grease pump with a controller and monitoring, a function display and a divider block. All system components and all the functions that are needed to lubricate at a professional level are included.



*Also available in a “key lock” version that locks the programming function.*

### System Features

- 1 and 2 litre reservoir capacity
- Small compact, ready-to-install package
- Space requirements – 230 x 230 x 215 mm
- Integrated controller with monitoring – optional without controller
- Low-level control, optional
- Integrated display and keypad
- Easy refilling – please inquire for further information
- Built-in over-pressure valve with return
- Available for 12 or 24 V DC as well as 120 V AC, 60 Hz and 230 V AC, 50/60 Hz
- Attached divider block – optional with external divider block
- Internal outlet lubricant return possibility
- Large spectrum of usable lubricants – for multipurpose grease up to NLGI 2



Brush lubrication



EOS pump



EOT – the EOS controller

## Quicklub – chain lubrication for oil or grease

### Contact lubrication via guide blocks

The main applications for this genuine simple new lubrication system are transport/conveyor chains found in all industries. This system simultaneously cleans, guides and continuously lubricates the chain – and it has an extraordinary long life thanks to highly wearresistant plastics that are very robust and insensitive to contamination and knocks.

The system is patent pending and underlies protection of registered design No. 20210758.2.

### Brush lubrication

The Lincoln brush lubrication in conjunction with Quicklub pump provides an economical entry-level chain lubrication system.

The Quicklub range does however offer numerous add-on possibilities. As a result, it fulfils all expectations for an easy, maintenancefriendly and high quality lubrication system.

## Single-line oil system for chain lubrication

### EOS

The EOS is the reliable and most economical solution for the oil lubrication of chains. The system is a direct operating, electrically driven, single-line centralized lubrication system. The system is ideal for machines with chain drives and 12/24 V DC power supply – e.g. agricultural equipment such as balers. The metering elements supply the required oil quantity in timecontrolled intervals to brushes or felt pads which evenly apply the oil to the chain. The required metered quantity of oil can be adjusted to properly match the working condition, the size and length of the chain. The metering range selection of 0,1, 0,3, 0,4 or 0,5 cm<sup>3</sup> provides versatility to ensure that requirements are met.

#### System characteristics EOS

High supply volume in short time (circa 400 ml /min at 3 bar back-pressure)

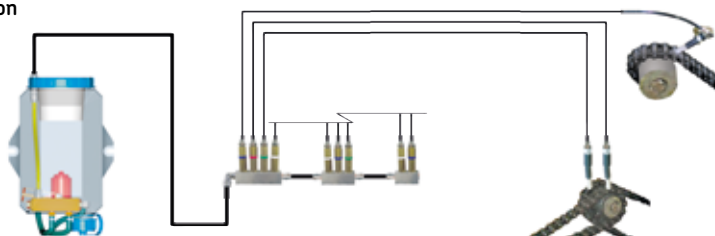
### EOT – the EOS controller

For machines without a controller, Lincoln offers a 12/24 V DC controller. The pause time is adjustable from 1 to 100 minutes. The controller enables a simple retrofit installment of the EOS oil lubrication system.

#### System advantages EOT

- Precise, metered quantities of oil reduces wear on the chain and drive
- Metered quantities can be selected to match the chain size and length as well as operating parameters
- 5 l reservoir provides extended filling intervals
- Push-in fittings provide quick & easy installation

### EOS single-line oil system for chain lubrication





## MOS/MOP 212 – MGP 101 Mechanical oil and grease lubrication system

The tandem pump especially for balers

### MOS/MOP 212

The MOS 212 oil lubrication system comprises a mechanically operated oil pump MOP 212 with up to 12 pump elements, that with metering rings, have 3 different output sizes.

A lubrication line ( $\varnothing$  4 mm) is connected directly from each pump element to the drive chain that requires lubrication.

The oil is applied with brushes or felt pads. The felt pads are especially advantageous for applying the oil to the entire chain.

Simultaneously, dirt particles are scrapped off the chain resulting in a more effective lubrication.

### System benefits

- Reduces wear on chains and chain drives with exact metered oil quantities
- Metered quantity is matched to chain size, length and demands
- Extended filling intervals with 5 l reservoir
- Mechanical drive – by means of the existing drive shaft of the machine, e. g. baler

### MGP 101

It is further possible to add a grease pump MGP 101 to the existing MOP 212 or to drive the MGP 101 via the MOP 212 as a drive pump.

The MGP 101 can also be used independently as a grease pump with a max. r/min of 20. The MGP 101 encompasses a K7 pump element and it can be equipped with downstream metering devices such as the SSV progressive metering device.

The pump uses 150/310 g lubricant cartridges or standard 400 g cartridges in a steel or transparent plastic tube. The result is a type of tandem pump for both oil and grease.



### Technical data MOS/MOP 212

Pump elements with different outputs:  
0,02, 0,04, 0,06 cm<sup>3</sup>

2 shaft types with different ratios  
(i = 7,7 and 19,53) to regulate lubricant  
that connect the drive shafts of the main  
unit

5 l reservoir

Useable oils: Mineral oil,  
Ester base Bio oil

Shaft connection  $\varnothing$ : 8 mm  
Rotational speed: 30 to 280 r/min  
Max. supply pressure: 10 bar  
Operating  
temperature: -10 to +70 °C

Oil viscosity: 40 cSt to  
max. 2 000 cSt

### Technical data MGP 101

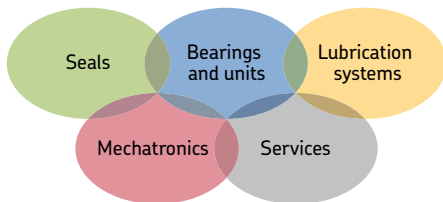
RPM range (via MOP 212):

shaft 1 (i = 19,53): 30 to 280 r/min  
shaft 2 (i = 7,7): 30 to 150 r/min  
or direct: up to 20 r/min

Max. supply pressure: 200 bar  
Lubricant: Grease up  
to NLGI 2  
Output: 0,22 cm<sup>3</sup>/stroke

### Description

Description	P/N
MOP 212 with 12 closure plugs	652-41120-6
Pump element for MOP 212	552-33238-1
Metering ring	452-71942-1
MGP 101	552-33463-1
MGP 101 with grease gunreservoir (steel)	552-33501-1
MGP 101 with grease gunreservoir (transparent)	552-33564-1



### The Power of Knowledge Engineering

Drawing on five areas of competence and application-specific expertise amassed over more than 100 years, SKF brings innovative solutions to OEMs and production facilities in every major industry worldwide. These five competence areas include bearings and units, seals, lubrication systems, mechatronics (combining mechanics and electronics into intelligent systems), and a wide range of services, from 3-D computer modelling to advanced condition monitoring and reliability and asset management systems. A global presence provides SKF customers uniform quality standards and worldwide product availability.

#### Important information on product usage

All products from SKF may be used only for their intended purpose as described in this brochure and in any instructions. If operating instructions are supplied with the products, they must be read and followed.

Not all lubricants are suitable for use in centralized lubrication systems. SKF does offer an inspection service to test customer supplied lubricant to determine if it can be used in a centralized system. SKF lubrication systems or their components are not approved for use with gases, liquefied gases, pressurized gases in solution and fluids with a vapor pressure exceeding normal atmospheric pressure (1 013 mbar) by more than 0,5 bar at their maximum permissible temperature.

Hazardous materials of any kind, especially the materials classified as hazardous by European Community Directive EC 67/548/EEC, Article 2, Par. 2, may only be used to fill SKF centralized lubrication systems and components and delivered and/or distributed with the same after consulting with and receiving written approval from SKF.

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