

Commercial Vehicle
Lubrication
Systems



JSG Industrial Systems
quality industry solutions

Lubrication
Management
Systems

Material
Dispensing
Management
Systems

Hose & Cable
Management
Systems

Diesel & Fluid
Management
Systems

Fire
Extinguisher
& Suppression
Systems

Onboard
Weighing &
CCTV Systems

Flow
Measurement
Systems

General
Lubrication
& Exhaust
Extraction



JSG INDUSTRIAL SYSTEMS
THE COMPANY

JSG Industrial Systems is a subsidiary of the John Sample Group which has been established for over 90 years. Since 1968, the John Sample Group has been able to call on its extensive experience in the automotive and industrial markets when supporting the needs of the professional drivers in the supply of quality equipment, service and support, with the ability to provide the right cost solution to many issues in establishing the most effective maintenance practices.

JSG Industrial Systems provide fully designed cost effective solutions and systems along with fully guaranteed quality installation, service and repair work for your on road equipment.

To support JSG Industrial Systems in delivering a high level of service to the region, a well-trained and very skilful network of Distributors has been developed, located in major cities and in remote areas nationally and internationally where the JSG Industrial Systems products are widely used.

With the support of this network the ability to provide immediate needs regarding products, parts, service and repair is further assured. Technical support is also offered locally by our in-house engineering team for workshop design, product service and repairs.

From simple solutions to highly sophisticated monitored systems and backed by world leading manufacturers of industrial systems, JSG Industrial Systems will recommend the best technology for the user's application and budget.



Grease and Fluid Grease Lubrication Systems

JSG Industrial Systems have both truck and trailer lubrication systems that are capable of delivering greases of varying viscosities. The systems available are Manual Single Point lubrication Systems, Manual Centralised Lubrication Systems and Automated Centralised Lubrication Systems.

Grease Viscosity and System Selection

The system type to be used on the vehicle depends greatly on what grease and the viscosity of the grease required for the correct lubrication of the bearings. The selection of the grease is usually obtained from the vehicle manufacturer or the bearing manufacturer.

It is important to note that the vehicle's warranty may be void if the grease in the automated system is of the wrong viscosity.

There are several types of grease used in automated systems on vehicles. These greases have different properties and viscosities. The greases can be described either by their NLGI Viscosity Rating or by the description of the grease, as in the below table.

NLGI Rating	Grease Description
000	Fluid
00	Semi-fluid
0	Very soft
1	Soft
2	Normal

The NLGI consistency number expresses a measure of the relative hardness of a grease used for lubrication, as specified by the standard classification of lubricating grease established by the National Lubricating Grease Institute (NLGI).

The NLGI consistency number is just one factor in determining the suitability of a grease to a specific application, other properties that will have an effect on the system selection are as ambient temperature, bearing type, bearing speed, apparent grease viscosity and grease pumpability.

Load-bearing Capacity of Grease

The load-bearing capacity of NLGI 2 grease is much greater than that of NLGI 000 fluid grease. This is especially important in preventing premature wear. Bearings with high loads are found for example on loading cranes, hoists, tippers, special truck bodies and long haul trucks.



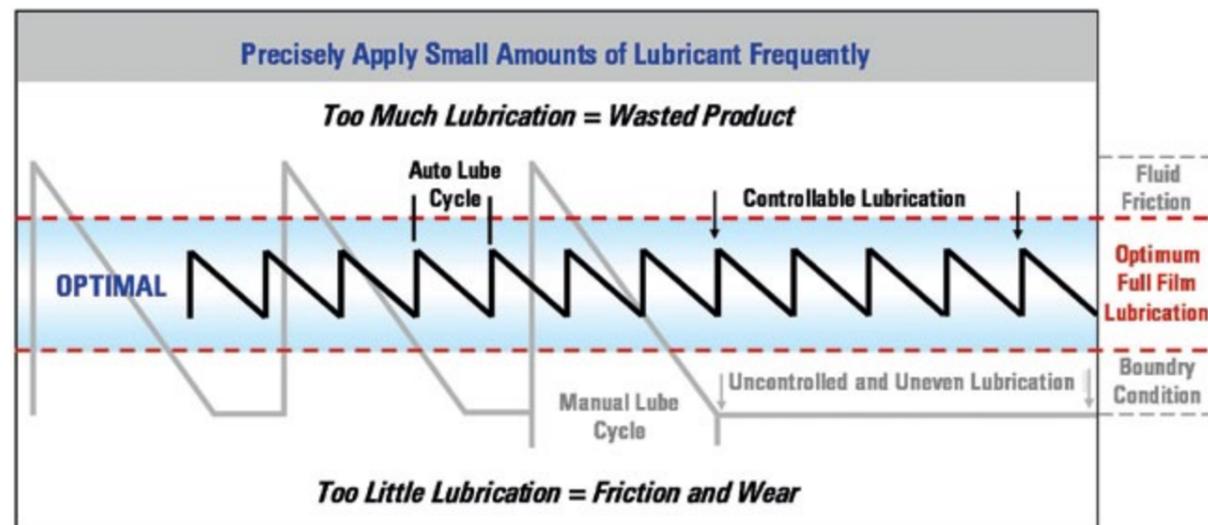
Automated Lubrication Advantages Versus Manual Lubrication

The main difference between automated and manual lubrication is that in the case of manually applied lubricants, mechanics or operators tend to lubricate on schedule (once a day, week, month, year, etc.) rather than when the bearing needs it.

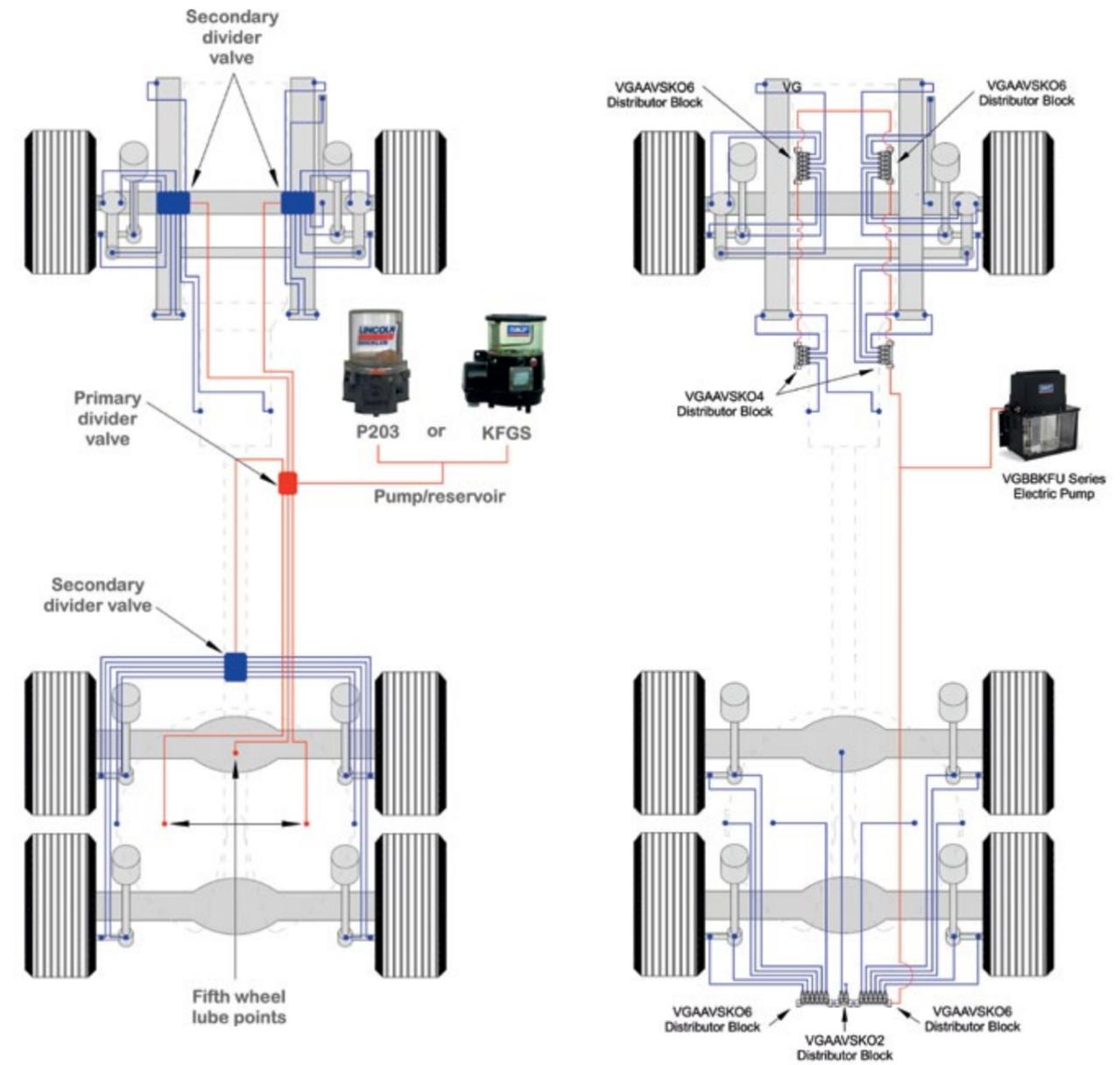
To compensate, the operator often will fill the bearing until he sees lubricant seeping out. The lubricant could be effectively "spent" by the time the operator gets back to it again. This sets up an over lubrication and under lubrication scenario. Conversely, automated lubrication provides lubricant constantly at an appropriate amount that allows the bearing to operate at its optimum. When the bearing is properly lubricated in this manner, it also helps to seal the bearing from contaminants.

Advantages

- Time between lubrication events is short, assuring the optimum amount of lubricant in the bearing at all times
- Small measured amounts of lubricant are dispensed, purging the bearing of any contaminants and keeping the bearing seals intact
- For critical bearings, flow sensors allow added protection, monitoring lubricant flow at the bearing
- Substantially increases pin and bushing life through improved lubrication methods
- Gain 30 minutes a day of productivity by eliminating daily manual lubrication – lubricate the bearings while in motion
- Eliminates labour cost for daily lubrication and reduces repairs
- The cost to replace one pin and bushing can pay for an Automated Lubrication System
- Increases the value of your machine for resale
- Cuts grease consumption by delivering exact amount required for each pin and bushing



Automatic Lubrication System Versions - Progressive & Single line



One Person - One Point - One Minute

Centralised Manual Lubrication

Centralising your lubrication points to a single lube point ensures that all of the connected grease points are being lubricated. This can be done by one person, at one centralised lubrication point, in one minute.

Reduces Lubrication Time – from manually lubricating many points to lubricating one point allowing greater time to carry out other tasks.

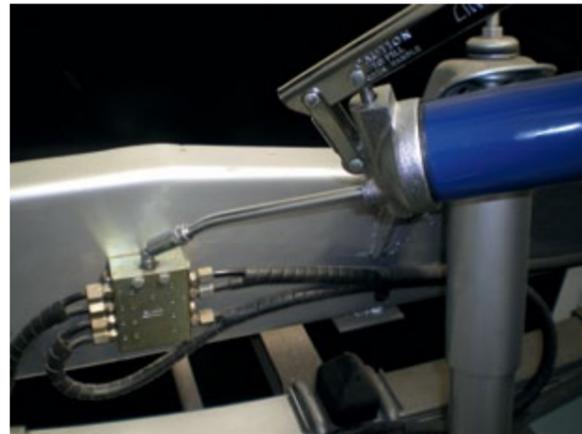
Enables Regular Lubrication - Every time the driver stops for a rest, in one minute, another shot of lubricant can be applied to all connected grease points.

Reduces Need to Enter Hazardous Areas – lowers potential for workers compensation as the need to grease near moving parts or under equipment is removed.

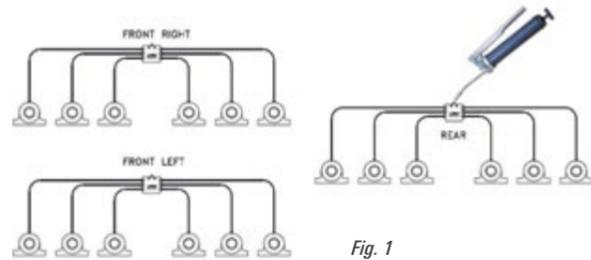
Reduces Lubricant Costs – no wastage through over greasing.

Reduces Contamination Risk – system is sealed.

Low Cost Installation – able to be installed in-house.



Manual Lubrication System

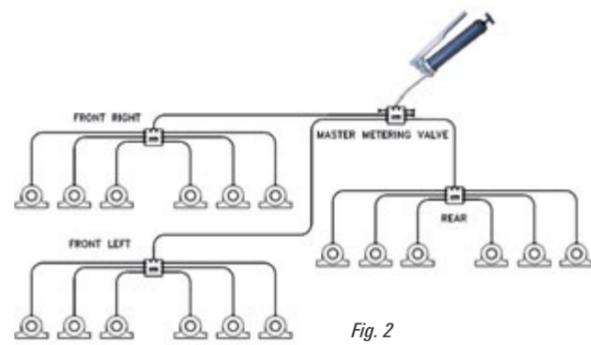


Helps Maintain Long Term Machine Performance – the positive displacement of grease through the progressive system ensures each grease point receives the correct quantity of grease.

Easily Upgraded to Fully Automated System – JSG upgrade kits available.

Successful Expandable Systems – The Quicklub and Proflex Progressive systems can be designed in various steps. By grouped single lubrication points in single-nipple groups (Fig.1), or as a single-nipple centralised lubrication system (Fig.2), manual lubrication tasks are considerably reduced.

Manual Centralised Lubrication System



01-001142AUS
450g Grease Gun



01-083513KIT
20Kg Air Grease Pump Kit



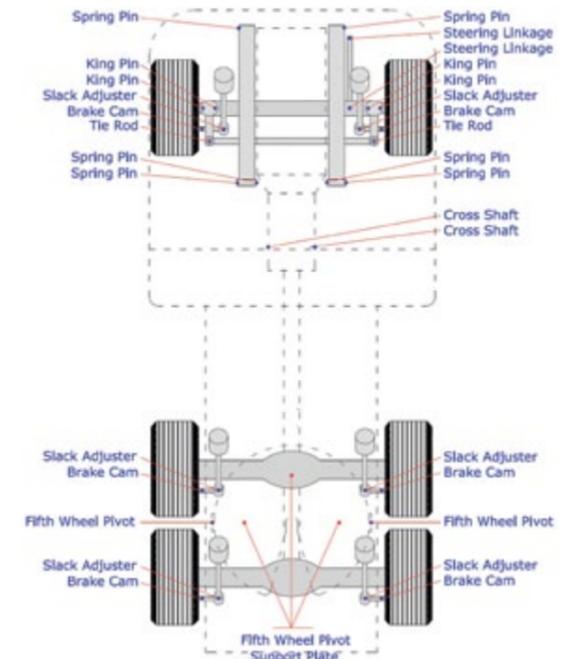
01-001133AUS
450g Grease Gun



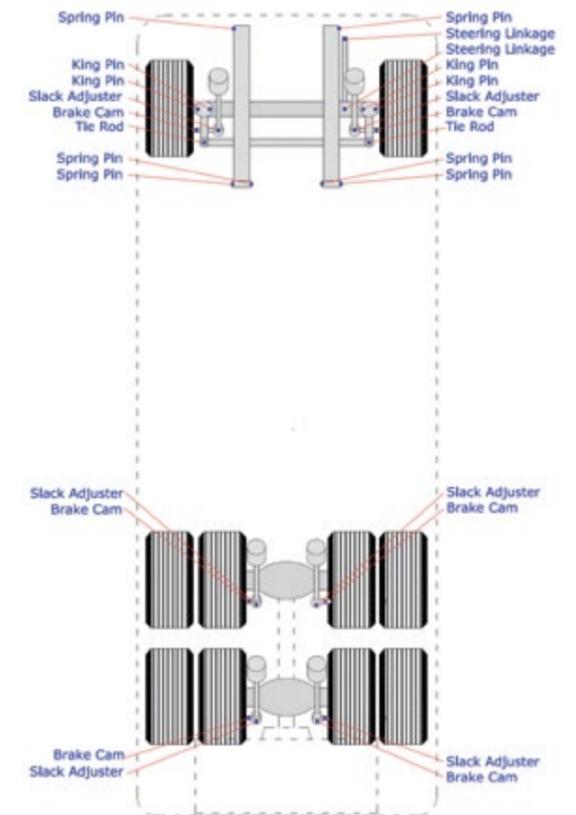
01-001242AUS or 01-G121AUS
Rechargeable battery operated
450g Grease Gun

Standard Vehicle Points Serviced

Truck Tractors



Buses



Automated Lubrication Systems for Grease NLGI Grades 000,00 & 0

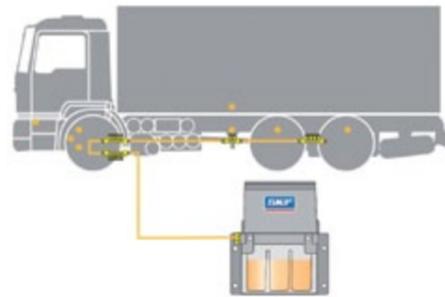


SKF MonoFlex Single-line Automated Lubrication Systems for Commercial Vehicles

The SKF Centralised Lubrication System is a single line system with the main components consisting of a gear pump, control unit and single line parallel metering block (VKSO series). KFUS series pump has an integrated controller. Nearly every size of system on commercial vehicles can be supplied by one single pump. Semitrailers or trailers can be connected using an interconnected system.

Function

- The gear pump supplies lubricant to the VKSO blocks via the main line network when the pump is in operation
- As soon as the metering chambers of the VKSO blocks are full, the excess lubricant flows back into the reservoir via the safety valve
- At the end of the pump running time (start of the interval time), the pressure relief valve opens so that the pressure in the main line can drop to a residual pressure of 0.2 to 1.0 bar
- The spring-loaded pistons of the VKSO blocks can now deliver lubricant from the metering chambers to the lubrication points



Electric Gear Pumps KFU / KFUS

These pump units are designed to supply normal as well as especially large systems.

Various versions are available:

- KFUS – with integrated control unit
- KFU – with external control unit VGEEIG502-2-E+912/924

Units with 2.7-litre and 6-litre reservoirs are available to suit the system's lubricant needs and fit in with the vehicle's maintenance intervals. The reservoir is filled with lubricant via a filler socket, that keeps dirt out during the filling process.

Appropriate lubricant is grease, including the biodegradable type, comprising NLGI grades 000 or 00.

The lubricant supplied by the pump is distributed to the individual lube points independently of each other by way of 2-, 4- or 6-port piston distributors with metering rates of 0.1 to 0.4 cm³.



Part Number	Description	Control Unit
VGBBKFU2-40+912	SKF Electric Pump 2.7L Res. 12VDC No Timer	External
VGBBKFU2-40+924	SKF Electric Pump 2.7L Res. 24VDC No Timer	External
VGBBKFU6-20+912	SKF Electric Pump 6L Res. 12VDC No Timer	External
VGBBKFU6-20+924	SKF Electric Pump 6L Res. 24VDC No Timer	External
VGBBKFUS-64+912	SKF Electric Pump 2.7L Res. 12VDC with Timer	Internal
VGBBKFUS-64+924	SKF Electric Pump 2.7L Res. 24VDC with Timer	Internal

System Controllers

Information on system controllers is located on page 20.

Automated Lubrication Systems for Grease NLGI Grades 000,00 & 0



SKF MonoFlex Single-line Piston Distributors, VKSO Series Parallel Metering Blocks

The distributors meter and distribute the lubricant from the pump to the individual lubrication points. They do so independently of each other. Single Line Parallel Metering blocks (VKSO Series) make it possible to adapt the quantity to the amount of lubricant required by the friction point.

The cycle number, i.e. the number of pump strokes per time unit of the lubrication system, also permits further co-ordination of the lubricant quantity with the friction point and entire system.

The metering blocks come standard at 4cc/cycle.



VGA AVKS02-102



VGA AVKS04-106

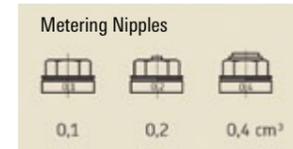


VGA AVKS06-104

Metering Nipples

The metered quantity can be seen from the shape of the metering nipple and code number.

Part Number	Description
VGA AVKU010-K	SKF Metering Nipples 0.1 cm ³
VGA AVKU020-K	SKF Metering Nipples 0.2 cm ³
VGA AVKU040-K	SKF Metering Nipples 0.4 cm ³



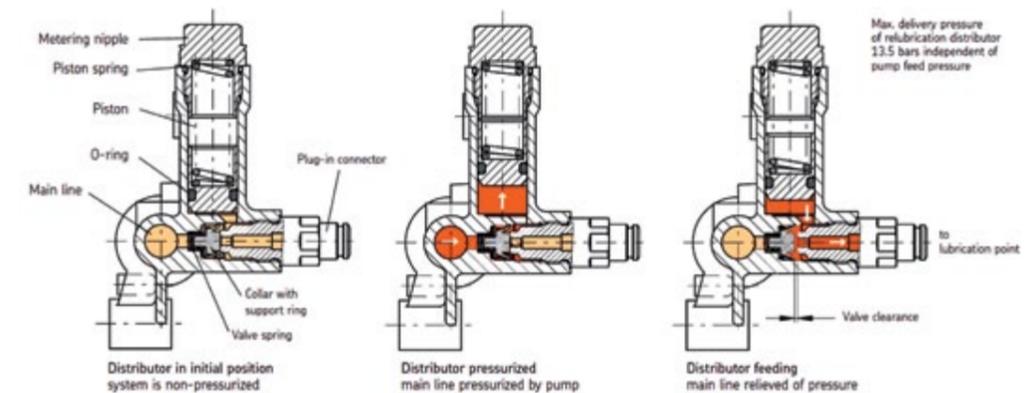
Metering Block Operation

- Lubricant is only delivered under spring pressure after the end of the pump operation when the pressure is relieved.
- A collar (change-over valve) in the distributor closes the outlet to the lubrication point during the delivery stroke
- Lubricant is stored beneath the piston
- Change-over valve opens the outlet as soon as the pressure drops in the main line

When installing a system, arrange the lines and distributors in such a way that any air in the system can escape by itself via the lubrication points. For this purpose, distributors with horizontal outlet ports or with outlet ports pointing upward must be installed at a position suitable for bleeding of the entire system.

Assign only one lubrication point to each distributor outlet port.

Connect the secondary line (connection: Metering Block – lubrication point) to the lubrication points only after bubble-free lubricant emerges from the tubing after the pump is repeatedly actuated. Fill long secondary lines before-hand if necessary.



Automated Lubrication Systems for Grease NLGI Grades 1 & 2



Lincoln Quickclub® Progressive Automated Lubrication Systems for Commercial Vehicles

Quickclub Systems have been designed to meet the severe requirements of on-road vehicles, agricultural, construction machinery and mining equipment lubrication. Their operation is based on the reliable progressive principle in which the grease is dispensed by a piston pump via progressive plunger metering devices to the lubrication point.

The lubrication occurs in metered, timed intervals through an integrated timer at a maximum pressure of 350 bar. Thus the lubrication of bearings with high back-pressures is also guaranteed.

The Lincoln P203 pump can serve up to three independent lubrication circuits consisting of numerous lubrication points with grease up to NLGI 2

Operating Voltage	12 or 24 V DC
Max. Back Pressure	350 Bar
Operating Temperature	-25 °C to +70 °C
Reservoir Capacity	2, 4, 8 or 15 Litre
Enclosure Rating	IP69K
Number of Outlets	3
Lubricant	Grease to NLGI 2



Lincoln P203 Pumps

Part Number	Reservoir Capacity (L)	Voltage	Description	Level Alarm
02-644-41077-2	2	12 V DC	P203-2XL-...-24-1A1-10-V10 Basic	No
02-644-40657-3	2	24 V DC	P203-2XN-...-24-2A1-10-V10 Basic	No
02-644-40753-6	4	12 V DC	P203-4XNBO-...-12-2A1-10-V10 Basic	No
02-644-40599-9	4	24 V DC	P203-4XNBO-...-24-2A1-10-V10 Basic	No
02-644-40753-5	4	24 V DC	P203-4XLBO-...-24-2A1-10-V10 Basic	Yes
02-644-40833-7	8	12 V DC	P203-8XNBO-...-12-2A1-10-V10 Basic	No
02-644-40610-7	8	24 V DC	P203-8XNBO-...-24-2A1-10-V10 Basic	No
02-644-40683-4	8	24 V DC	P203-8XLBO-...-24-2A1-10-V10 Basic	Yes
02-644-41046-2	15	24 V DC	P203-15XL-...-24-2A1-10-V10 Basic	Yes
02-644-41046-7	15	24 V DC	P203-15XBF-...-24-2A1-10-V10 Basic	Yes

Pump Elements

Part Number	Output p/min. (cc)	Description
02-600-26875-2	2.00	Pump Element
02-600-26876-2	2.80	Pump Element
02-600-26877-2	4.00	Pump Element
02-600-26877-2	0.70 ~ 3.00	Adjustable Pump Element

Pressure Relief Valve

Part Number	Description
02-624-28894-1	350bar Safety Relief Valve 6mm
02-624-28895-1	Safety Relief Valve with Nipple R/H 6mm
02-624-28897-1	Safety Relief Valve with Nipple L/H 6mm

Upgrade Kits

JSG have pre-designed kits available to allow you to upgrade from Manual or Manual Centralised systems to Fully Automated lubrication systems.

JSG have Fast Fill pump kits available to allow reservoirs to be filled faster than a standard grease nipple. Speak to a JSG representative for more information.

Automated Lubrication Systems for Grease NLGI Grades 1 & 2



Lincoln Quickclub® SSV Divider Valves—(set output 0.2cc)

SSV are piston-type metering devices that reliably divide the supplied lubricant into predetermined individual quantities. Coupled with the numerous variations of the Quickclub 203 pump they create the industry standard lubrication system. The progressive system is used for the lubrication of small to large commercial vehicles.

A special feature of the SSV progressive metering devices, is that the previous outlet must fully deliver its lubricant before the next outlet can. When the SSV outlet is closed with a closure plug, the next outlet below is automatically supplied with lubricant. The internal combining of outlets enables a variety of metering possibilities.

- Operates with grease up to NLGI 2 or Oil minimum 40oC, mm2/s (cSt) 105
- Can be used without problems at high back pressure
- Suitable for a wide range of temperatures
- High operating pressure of 350 bar
- Available from 6 to 22 outlets
- Easy to visually or electrically monitor
- Lincoln progressive metering devices do not have seals



Part Number	Description	Cycle Indicator
02-619-26473-1	SSV6 Divider Valve	No
02-619-25730-2	SSV8 Divider Valve	No
02-619-26841-1	SSV10 Divider Valve	No
02-619-25731-2	SSV12 Divider Valve	No
02-619-28862-1	SSV14 Divider Valve	No
02-619-28863-1	SSV16 Divider Valve	No
02-619-28864-1	SSV18 Divider Valve	No
02-619-28865-1	SSV20 Divider Valve	No
02-619-28866-1	SSV22 Divider Valve	No

Part Number	Description	Cycle Indicator
02-619-26474-3	SSV6K Divider Valve	Yes
02-619-25754-4	SSV8K Divider Valve	Yes
02-619-26842-2	SSV10K Divider Valve	Yes
02-619-25755-4	SSV12K Divider Valve	Yes
02-619-28871-1	SSV14K Divider Valve	Yes
02-619-28872-1	SSV16K Divider Valve	Yes
02-619-28873-1	SSV18K Divider Valve	Yes
02-619-28874-1	SSV20K Divider Valve	Yes
02-619-28875-1	SSV22K Divider Valve	Yes

Progressive Automated Lubrication Systems for Grease NLGI Grades 000, 00, 0, 1 & 2

Lincoln Quicklub® SSVD Divider Valves – adjustable output 0.08cc-1.80cc)

Single-block progressive metering device allows easy adjustment of lubricant output with the Lincoln metering screw technology allowing flexible metering. The SSVD progressive system is used for the lubrication of small to large commercial vehicles.

The adjustable SSVD lubricant dividers are available in the standard sizes from 6 to 22 outlets and are adjustable per outlet pair, thus enabling lubricant requirements to be better met. The metering occurs within the metering block via metering screws that are available in 10 different sizes.

For each lube cycle, the output of the metering piston and the control piston is dispensed on one outlet. The metering piston stroke and the related output can be adjusted by means of metering screws of different lengths. Short metering screws allow for a long stroke of the metering piston, i.e. with the shortest metering screw you achieve the maximum output.

Metering screws per outlet pair are available in 10 sizes – 0.8cm, 0.14cm, 0.2cm, 0.3cm, 0.4cm, 0.6cm, 0.8cm, 1.0cm, 1.4cm and 1.8cm per outlet and stroke.



SSVD Metering Valves

Part Number	Description	Cycle Indicator
02-649-29485-1	SSVD 6 Divider Valve	No
02-649-29486-1	SSVD 8 Divider Valve	No
02-649-29487-1	SSVD 10 Divider Valve	No
02-649-29488-1	SSVD 12 Divider Valve	No
02-649-29489-1	SSVD 14 Divider Valve	No
02-649-29587-1	SSVD 16 Divider Valve	No
02-649-29588-1	SSVD 18 Divider Valve	No
02-649-29589-1	SSVD 20 Divider Valve	No
02-649-29590-1	SSVD 22 Divider Valve	No

Part Number	Description	Cycle Indicator
02-649-29505-1	SSVD 6K Divider Valve	Yes
02-649-29506-1	SSVD 8K Divider Valve	Yes
02-649-29507-1	SSVD 10K Divider Valve	Yes
02-649-29508-1	SSVD 12K Divider Valve	Yes
02-649-29509-1	SSVD 14K Divider Valve	Yes
02-649-29595-1	SSVD 16K Divider Valve	Yes
02-649-29596-1	SSVD 18K Divider Valve	Yes
02-649-29597-1	SSVD 20K Divider Valve	Yes
02-649-29598-1	SSVD 22K Divider Valve	Yes

SSVD Metering Screws

Part Number	Description
02-549-34254-1	SSVD Metering Screw, 0.08cc
02-549-34254-2	SSVD Metering Screw, 0.14cc
02-549-34254-3	SSVD Metering Screw, 0.20cc
02-549-34254-4	SSVD Metering Screw, 0.30cc
02-549-34254-5	SSVD Metering Screw, 0.40cc
02-549-34254-6	SSVD Metering Screw, 0.60cc
02-549-34254-7	SSVD Metering Screw, 0.80cc
02-549-34254-8	SSVD Metering Screw, 1.00cc
02-549-34254-9	SSVD Metering Screw, 1.40cc
02-549-34255-1	SSVD Metering Screw, 1.80cc
02-549-34255-2	Bag of assorted SSVD Metering Screws (Pkt of 20)

Automated Lubrication Systems for Grease NLGI Grade 2



SKF ProFlex®, Progressive Automated Lubrication Systems for Commercial Vehicles

SKF ProFlex® systems are designed for all sizes of commercial vehicles. A feed pump or flow limiter supplies lubricant to the distributor that serves each outlet progressively, with a defined amount of lubricant. Each distributor outlet can also serve a secondary distributor that divides the amount into smaller portions for progressive delivery to their outlets.

- To control the system's function, only one metering piston has to be controlled on a frequency basis
- SKF ProFlex® progressive lubrication systems are designed for up to 150 lubrication points with grease
- SKF ProFlex® includes a wide range of progressive distributors based on a block, segmental or modular design with 2 to 20 outlets, Flow rates of 0,01 cc to 1.2cc/cycle
- System pressures as high as 300 bar

The pumps comprising the KFGS Group have 3 lubricant outlets for the connection of 3 progressive feeder circuits independent of each other. A separate pump element is required for each outlet port.

Operating Voltage	12 or 24 V DC
Max. Back Pressure	300 Bar
Permissible Operating Temperature	-25 °C to +70 °C
Reservoir Capacity	2, 6 or 10 Litre
Type of Enclosure DIN 40050, T9	IP56K
Number of Outlets	3
Lubricant	Grease



VGKFGS1-5W1

Four pump elements with different delivery rates are available so that the amount of grease can be adjusted to the needs of the individual circuits. This assures that the lubrication points are supplied with an adequate amount of grease in the course of every lubrication cycle.

The functioning of the pump elements is assured even at temperatures of –25 °C due to an agitator driven by the gear motor.

The transparent reservoir makes it easy to check the level of lubricant while an overflow tube serves as overfill protection and as a vent. As an optional feature, piston pumps comprising the KFGS series can be equipped with a low level indicator.

Control is provided by an integral control and monitoring unit; it can be operated in a time or load (pulse) dependent mode, and with or without monitoring.

VGKFGS Pump Unit					
Part Number	Reservoir Capacity	Description	Voltage	Control System	Outlet Ports
VGBRKFSG1-5W1+924	2 Litre	VGKFGS Pump Unit Pump Unit and Level Monitor	24V DC	Without Controller	3
VGBRKFSG3-5W1+924	6 Litre	VGKFGS Pump Unit Pump Unit and Level Monitor		Without Controller	
VGBRKFSG5-5W1+924	10 Litre	VGKFGS Pump Unit Pump Unit and Level Monitor		Without Controller	

Note: Use Controller VGIG502-2-E

VGKFG/VGKFGS Pump Elements		
Part Number	Description	Delivery Rate cc/min
VGBPKFG1.U0	KFG Pump Element	5.0
VGBPKFG1.U1	KFG Pump Element	2.5
VGBPKFG1.U2	KFG Pump Element	1.8
VGBPKFG1.U3	KFG Pump Element	1.3
VGBPKFG1.U4	KFG Pump Element	0.8

Pressure Relief Safety Valve	
Part Number	Description
VGGV161-210-012	Safety Valve 300bars, 6mm Tube
VGGV161-210-014	Safety Valve 300bars, 6mm Tube with grease nipple
VGGV161-210-018	Safety Valve 300bars, 8mm Tube
VGGV161-210-025	Safety Valve 300bars, 8mm Tube with grease nipple
VGGV161-210-016	Safety Valve 300bars, 10mm Tube

Progressive Automated Lubrication Systems for Grease NLGI Grade 2



SKF ProFlex® VPM Modular Progressive Metering Device

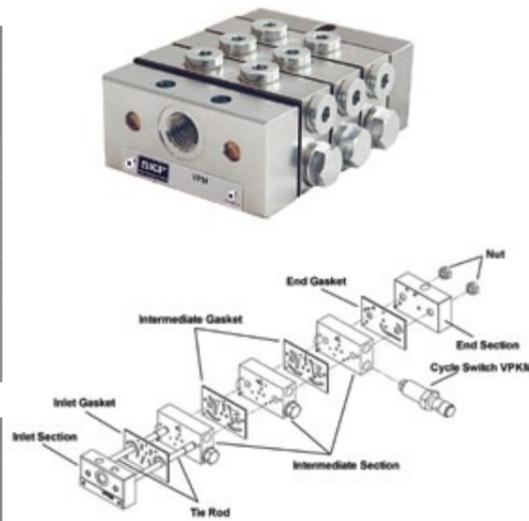
VPM Progressive Metering Devices are available for use on commercial vehicles in three groups that differ not only in size but also in design. A section-type progressive feeder consists of at least three sections to a maximum of ten. In each feeder section there is one piston for the apportioning and delivery of the lubricant. The next piston will only receive its lubricant after the preceding one has discharged its lubricant. This makes it simple to monitor lubricant delivery.

The delivery rate in cm³ and length of the cycle (pump running time) determine the absolute quantity fed to the individual lubrication points. The pistons of the progressive feeders execute one or more strokes in this connection.

In this group, the metering device sections have two outlets on each side but only one may be used. The second outlet must always be kept closed. These metering device are supplied with a built-in check valve.

VPM Single Outlet Intermediate Section			
Designation	Part Number	Description	Output per Outlet (cc)
1S	VGAB-VPM-K-1S-PS	Intermediate Section	0.10
2S	VGAB-VPM-K-2S-PS	Intermediate Section	0.28
3S	VGAB-VPM-K-3S-PS	Intermediate Section	0.38
4S	VGAB-VPM-K-4S-PS	Intermediate Section	0.50
5S	VGAB-VPM-K-5S-PS	Intermediate Section	0.60
6S	VGAB-VPM-K-6S-PS	Intermediate Section	0.70

VPM Twin Outlet Intermediate Section			
Designation	Part Number	Description	Output per Outlet (cc)
1T	VGAB-VPM-K-1T-PS	Intermediate Section	0.05
2T	VGAB-VPM-K-2T-PS	Intermediate Section	0.14
3T	VGAB-VPM-K-3T-PS	Intermediate Section	0.19
4T	VGAB-VPM-K-4T-PS	Intermediate Section	0.25
5T	VGAB-VPM-K-5T-PS	Intermediate Section	0.30
6T	VGAB-VPM-K-6T-PS	Intermediate Section	0.35



VPM Accessories	
Part No.	Description
VGDV177-300-091	VPM Piston Sensor (Cycle Switch)
VGDV179-990-603	Piston Sensor Cable – 10m

VPM Metering Valve Specifications								
No. of Possible Outlets	No. of Intermediate Sections	Inlet Section	End Section	Inlet Gasket	Intermediate Gasket	End Gasket	Tie Rod (2 req.)	Hex. Nut (2 req.)
6	3	VGABVPKM-E	VGABVPKM-A	VGABVPKM.07	VGABVPKM.08	VGABVPKM.09	VGABVP.93	VGKDDIN985-M8-6
8	4						VGABVP.94	
10	5						VGABVP.95	
12	6						VGABVP.96	
14	7						VGABVP.97	
16	8						VGABVP.98	
18	9						VGABVP.99	
20	10	VGABVP.100						

Progressive Automated Lubrication Systems for Grease NLGI Grade 2



SKF ProFlex® VPBM Modular Progressive Metering Block

SKF® VPBM Progressive distributors are piston-type metering devices that reliably divide the supplied lubricant into predetermined individual quantities. The progressive system is used for the lubrication of small to large commercial vehicles

Features

- Block-type design, smallest feeder group, used mainly for grease-lubricated machines and equipment.
- Uniform metering: 0.13 cm³
- Two outlets opposite each other can be connected at a later date by screwing out the plug in the outlet on the right (outlet ports on top as viewed from the lubricant inlet) and closing one of the two outlets.
- Two or more adjacent outlets are combined with external crossporting bars.
- No built-in check valves.
- No alternative outlets.
- Operating pressure: 5 bars min. / 400 bars max.



VPBM Metering Block		
Part Number	Description	No. Max. Outlets
VGAB-VPBM-3	VPBM Metering Block	6
VGAB-VPBM-4	VPBM Metering Block	8
VGAB-VPBM-5	VPBM Metering Block	10
VGAB-VPBM-6	VPBM Metering Block	12
VGAB-VPBM-7	VPBM Metering Block	14
VGAB-VPBM-8	VPBM Metering Block	16
VGAB-VPBM-9	VPBM Metering Block	18
VGAB-VPBM-10	VPBM Metering Block	20

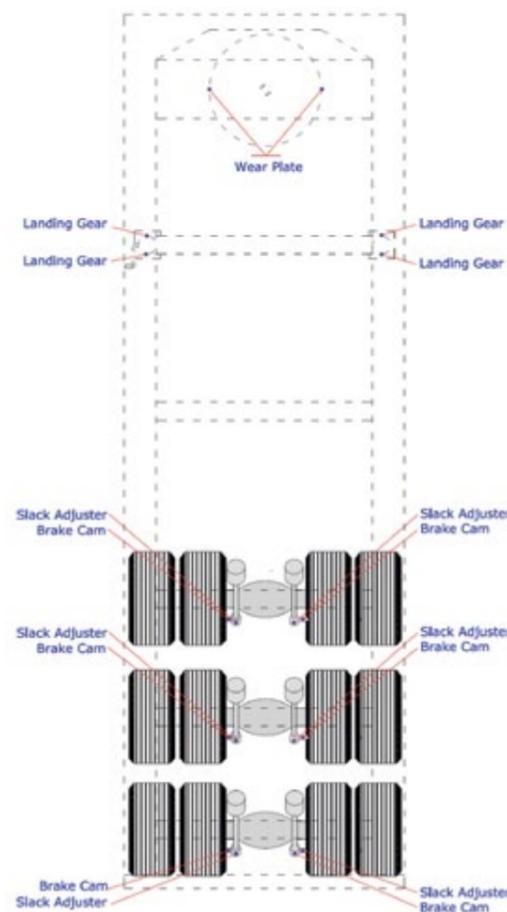
Trailer Lubrication Systems

The trailer lubrication systems are designed to increase the component life and overall productivity of your equipment, while reducing labour costs related to the traditional method of point-by-point lubrication.

Automated trailer lubrication can free up mechanic's time for inspections and other repairs while extending maintenance intervals.

Automated lubrication can also:

- Decrease component failures
- Reduce road failures
- Increase truck usage
- Extend truck life
- Improve fleet safety and reliability
- Increase the life of brake linkages



Trailer Lubrication Systems for Grease NLGI Grades 000 & 00

SKF MonoFlex KFB/KFBS Electrically Actuated Pump for Single Line Systems

Electrically operated, the KFB/KFBS compact unit consists mainly of a gear pump with DC gear motor, relief and safety valve, control unit, push button for manual triggering, and lubricant reservoir.

- The lubricant reservoir comes with an overfill release valve and vent and is available with fill level monitoring
- Reservoir Capacity 1.4 litres or 1.0 litres with level monitoring
- Models available with either 4 or 6 port piston distributor
- Reservoir is filled via a filler
- The KFBS pump unit is controlled by the integrated control and monitoring unit

Function

The automatic cycle consisting of the interval time and pump running time is started after the KFB/KFBS unit has been connected to the vehicle's electrical system and the ignition turned on.

When the ignition is on, the pump motor is switched on at the end of the interval time and the pump running time started.

During the pump running time, the gear pump delivers lubricant from the reservoir to the metering chambers of the distributors. As soon as the metering chambers of the distributors are full, the surplus lubricant flows back into the reservoir via the safety valve. The pressure in the distributor feed (main line) drops to a residual pressure of 0.2 to 1 bar via the open relief valve.

The spring-loaded pistons of the distributors can now deliver lubricant from the metering chambers to the lubrication points.

All further lubrication operations are repeated on a cyclic basis in the order described.



VGKFB1



VGKFB1

VGKFB/VGKFBS Piston Pumps			
Part Number	Reservoir Capacity	Description	Control System
VGBAKFB1+912	1.4	KFB1 12V DC Compact Pump	Without controller
VGBAKFB1+924	1.4	KFB1 24V DC Compact Pump	
VGBAKFBS1+912	1.4	KFBS1 12V DC Compact Pump	With integrated controller
VGBAKFBS1+924	1.4	KFBS1 24V DC Compact Pump	
VGBAKFB1-W+912	1.0	KFB1 12V DC Compact Pump with level monitoring	Without controller
VGBAKFB1-W+924	1.0	KFB1 24V DC Compact Pump with level monitoring	
VGBAKFBS1-W+912	1.0	KFBS1 12V DC Compact Pump with level monitoring	With integrated controller
VGBAKFBS1-W+924	1.0	KFBS1 24V DC Compact Pump with level monitoring	
VGBAKFB1-4-S1+912	1.0	KFB1 12V DC Compact Pump with pre-installed 4-port piston distributor	Without controller
VGBAKFB1-4-S1+924	1.0	KFB1 24V DC Compact Pump with pre-installed 4-port piston distributor	
VGBAKFBS1-4-S1+912	1.0	KFBS1 12V DC Compact Pump with pre-installed 4-port piston distributor	With integrated controller
VGBAKFBS1-4-S1+924	1.0	KFBS1 24V DC Compact Pump with pre-installed 4-port piston distributor	
VGBAKFB1-6-S4+912	1.0	KFB1 12V DC Compact Pump with pre-installed 6-port piston distributor	Without controller
VGBAKFB1-6-S4+924	1.0	KFB1 24V DC Compact Pump with pre-installed 6-port piston distributor	
VGBAKFBS1-6-S4+912	1.0	KFBS1 12V DC Compact Pump with pre-installed 6-port piston distributor	With integrated controller
VGBAKFBS1-6-S4+924	1.0	KFBS1 24V DC Compact Pump with pre-installed 6-port piston distributor	

End of Line Pressure Switch	
Part Number	Description
VGDBDS-E20-S1	20bar End of Line Pressure Switch

End of Line Pressure Switch	
Part Number	Description
VGDBDS-E25-S1	25bar End of Line Pressure Switch

Trailer Lubrication Systems for Grease NLGI Grades 000, 00, 0, 1 & 2

Trailer lubrication systems are similar to truck chassis systems covering brake cams, slack adjusters and spring shackle pins. There are two common trailer lubrication systems, single point and automated systems.

Lincoln Quicklub® Single Point Systems

Typical for most trailers. Cost-effective system designed to service up to 18 points from a single grease fitting using the SSV divider valve technology. Delivers precise amounts of lubricant, fully monitored with the divider valve's cycle indicator pin.

Lincoln Quicklub® QLS 421 Automated Lubrication System

Accurate lubrication without the need for continuous power. Controller card that keeps track of the time a trailer is in use by monitoring its vibration. Delivers the precise lubrication an OTR trailer requires exactly when it is needed – by using the power of the trailer's brake lights. The system keeps lubricating each time the trailer's brakes are applied until its controller card adds up the "on times" and determines that the pre-set time for a complete lubrication cycle has been reached.

QLS 421 features

Operating Voltage	12 and 24 V DC
Operating Current	12 V DC / 2.0 A or 24 V DC / 1.0 A
Operating Temperature	-10° to 158°F / -25° to 70°C
Number of Outlets	6, 12 or 18
Reservoir Capacity	61 in ³ / 1.0 L
Protection	NEMA 4
Time Between Cycle	1 hour to 16 hours
On Time Range	1 to 32 min.
Timer Memory	Indefinite
Maximum Operating Pressure	3000 psig / 205 bar
Output per Outlet per Valve Cycle	approx. 0.012 in ³ / approx. 0.2 cm ³
Lubricant	up to NLGI 2 grease
Weight	12.5 lbs. / 5.7 kg



Lincoln QLS 421 Pump Specifications					
Part Number	Voltage	Valve Type	Reservoir Size	Valve Mounting	Cable
02-P421 31402531	24V DC	SSV6	1 Litre	Back	6 Meters
02-P421 91402531	24V DC	SSV18			
02-P421 61202531	12V DC	SSV12			
02-P421 91202531	12V DC	SSV18			
02-P421 61222531	12V DC	SSV12	2 Litre		

Trailer Lubrication Systems for Grease NLGI Grade 2

The SKF Proflex® trailer progressive lubrication system covers brake cams, slack adjusters and spring shackle pins. The trailer systems use either VPM or VPBM distributors designed to handle greases up to NLGI 2.



SKF ProFlex® KFA/KFAS Mini-Pump for Progressive Systems

The pumps come in two versions:

- KFA – with external control unit,
- KFAS – with integrated control unit in the pump housing.

The KFA and KFAS pump units are equipped with a 1-litre reservoir and come with a maximum of 2 outlet ports for the connection of 2 independent lube circuits. A separate pump element is required for each outlet.

Three pump elements with different delivery rates are available so that the volume of grease can be adjusted to the needs of the individual circuits. This makes sure that every lube point is supplied with an adequate amount of grease in each lubrication cycle.

Control is provided by an Integrated control and monitoring unit; it can be operated in a time or load (pulse) dependent mode, and with or without monitoring.

The control system provides the following advantages:

- Non-volatile memory with PIN-code protection
- Storage of residual interval and lubricating cycle
- Storage of fault signals (diagnosis memory)
- Data save in event of a power failure
- Connection for external push-button
- Connection for inductive cycle switch
- Interval and contact times can be set independently of each other, even with monitored systems
- Electrical connections are easy via 7-pole plug connector



VGBRKFA1

VGKFGS Pump Unit					
Part Number	Reservoir Capacity	Description	Voltage	Control System	Outlet Ports
VGBRKFA1+912	1 Litre	KFA1 Mini Pump Unit	12V DC	Without Controller	2
VGBRKFA1+924		KFA1 Mini Pump Unit	24V DC	Without Controller	
VGBRKFA1+912		KFA1 Mini Pump Unit	12V DC	With Integrated Controller	
VGBRKFA1+924		KFA1 Mini Pump Unit	24V DC	With Integrated Controller	
VGBRKFA1-W+912		KFA1S Mini Pump Unit with level monitoring	12V DC	Without Controller	
VGBRKFA1-W+924		KFA1S Mini Pump Unit with level monitoring	24V DC	Without Controller	
VGBRKFA1-W+912		KFA1S Mini Pump Unit with level monitoring	12V DC	With Integrated Controller	
VGBRKFA1-W+924		KFA1S Mini Pump Unit with level monitoring	24V DC	With Integrated Controller	

KFA/KFAS Pump Elements		
Part Number	Description	Delivery Rate cc/min
VGBPKFA1.U1	KFA Pump Element	2.0
VGBPKFA1.U2	KFA Pump Element	1.5
VGBPKFA1.U3	KFA Pump Element	1.0

Pressure Relief Safety Valve	
Part Number	Description
VGGV161-210-012	Safety Valve 300bar, 6mm Tube
VGGV161-210-014	Safety Valve 300bar, 6mm Tube with grease nipple
VGGV161-210-018	Safety Valve 300bar, 8mm Tube
VGGV161-210-025	Safety Valve 300bar, 8mm Tube with grease nipple

Controllers for Automatic Lubrication System Pumps

While it is recommended that commercial vehicle lubrication systems use pumps with integrated controllers there are times where there is a need to have the timer controls located in the cabin or away from the grease pump.

SKF System Controller

In the case of the KFU group, the VGEEIG502-2-E control unit is installed separately. It controls and monitors the pump's running and also signals any malfunctions via an indicator light. The electronic control unit has a microprocessor that stores all of the operating states even after the power has been switched off.

Specifications

Control Voltage	12 or 24 V DC
Max. Contact Load, Terminal M	10 A
SL-Output	4 W
Type of Enclosure	IP40, DIN 40050
Temperature Range	-25 °C to 75 °C
Max. Fusing	5 A
Programmable Interval	0.1 to 99.9 h



VGEEIG502-2-E+912 (12 V)
or VGEEIG502-2-E+924 (24 V)

JSG Lube Management Controller

The JSG Lube Management Controller is a universal lubrication system controller capable of handling all common lubrication systems from the simplest run - pause timer through progressive, single and dual line systems. Innovative algorithms also give new flexibility and greater control over traditional single line systems.

Event Monitoring and Downloading

The practical layout gives clear indication of exactly what is happening at any time and the advanced diagnostics will help to pin point any faults quickly, while data logging records critical setup and fault conditions. Which then can be downloaded to PC or Data Shuttle via the RS232 port.

Specifications

Control Voltage	10 to 30 V DC
Current Drain	150ma MAX (no load) 70ma nominal
Pump Output	7A rms.MAX
Lamp Output	3A MAX
Switching	Solid state short circuit protected
Fuse	8 Amp fast blow 20mm glass
Connection	14 way MOLEX MINIFIT - JR
Communications	RS232 Type
Dimensions	70mm X 145mm X 38mm (including mounting bracket)
Weight	300g
Protection	IP54
Temperature Range	25°C to 80°C



13-002002

JSG Controllers	
Part Number	Description
13-002002	JSG Lube Management Controller and Cable Kit
13-002002-1	JSG Lube Management Controller no cable
13-002002-2	Wire Harness for JSG Lube Management Controller

Lincoln Quicklub & SKF Proflex Lubrication Systems Fittings & Accessories



02-223-12484-9 6mm Tee Piece



02-303-17499-3 Closure Plug



02-223-12482-9 Union 6mm x 6mm



02-223-12485-9 Elbow Connector
6mm x 1/8"bsp



02-628-36062-3 Tube Filter



02-223-12270-7 Straight Connector
6mm x 1/8"bsp



02-504-30344-4 Outlet Check Valve



02-432-23031-1 Threaded Sleeve



VGGV-VPKM-RV-S4 VPKM Outlet
fitting with c/valve



02-432-24162-1 Straight Hose Stud



02-532-30739-1 Hose Stud 90°



02-504-36033-3 KF300 High-pressure
Hose



VGKA406-403 VPKM Inlet Fitting



02-111-35306-1 Spring Coil 9mm x
1.5mm



02-113-35075-3 Plastic Helix



SSVD Metering Screws



VGKA-406-413 VPM Inlet Fitting



02-504-36041-2 6 x 1.5 Plastic Tube
Max Pressure 89 bar

Note: Other specialised fittings available on request.

SSVD Metering Screw Part Numbers

Part Number	Description & Output Volume
02-549-34254-1	SSVD4 Metering Screw, 0.08CC
02-549-34254-2	SSVD4 Metering Screw, 0.14CC
02-549-34254-3	SSVD4 Metering Screw, 0.2CC
02-549-34254-4	SSVD4 Metering Screw, 0.3CC
02-549-34254-5	SSVD4 Metering Screw, 0.4CC
02-549-34254-6	SSVD4 Metering Screw, 0.6CC

Part Number	Description & Output Volume
02-549-34254-7	SSVD4 Metering Screw, 0.8CC
02-549-34254-8	SSVD4 Metering Screw, 1.0CC
02-549-34254-9	SSVD4 Metering Screw, 1.4CC
02-549-34255-1	SSVD4 Metering Screw, 1.8CC
02-549-34255-2	Bag of assorted Metering Screws (2 of each)

SKF Monoflex Fittings and Accessories



VGKE410-603 Re-inforcing Socket for 10mm Plastic Tube



VGKE410-611 Tapered Sleeve for 10mm Plastic Tubing



VGKC410-612-MS Socket Union for 10mm Plastic Tube



VGKA506-145 16mm x 1.5 Banjo Fitting



VGKGDIN7603-A16X20CU Copper Washer for M16 Fittings



VGMAWVN716-RO4X0.85 4mm x 0.85 Plastic Tube



VGMAWVN715-RO10X1.5 10mm x 1.5 Plastic Semi-Rigid Tube



VGDBDS-E20-S1 20bar Pressure Switch



VGKADAR510 16 x 1.5 Straight Tube to Tube Connector



VGKADAT510 16 x 1.5 Tee Tube to Tube Connector



VGKADAK510-S1 16 x 1.5 Multi-Cross Tube Connector



VGKE450-204-002 4mm Plug Pin



VGKA451-004-498-VS 4mm Tube x M8 x 1 Straight Connector



02-226-13752-1 4mm Tube x 1/8" bsp Straight Connector



02-226-13752-1 4mm Tube x 6mm Straight Connector



02-226-13753-3 4mm tube x 1/8 bsp 90° elbow



VGKA404-663K M6 Male x M8 Female Reducer



VGKE881-280-008 VPM Mounting Bracket



VGKE995-002-140 KFJ and PEF Pump Mounting Bracket



VGKE881-280-009 VPM Mounting Bracket 60 x 80mm

Grease Guns and Reservoir Filling Accessories



01-001142AUS 450g Lever Grease Gun



01-001133AUS 450g Pistol Grip Grease Gun



01-001163AUS Air Grease Gun



01-G121AUS 12V Electric Grease Gun



01-001442AUS 14V Electric Grease Gun



01-001842AUS 18V Electric Grease Gun



03-085830-20L ALS 20:1 Fill Pump 20KG



28-R200R-LONG P203 Grease Receiver for 4 and 8L P203 Pumps



Hand Vacuum Pumps and Kits

Mityvac offers a selection of hand-held vacuum/pressure pump models; each is differentiated by a combination of features and options. You can choose the features that best meet the requirements of your application.

Fluid Evacuators

Mityvac fluid evacuators are ideal for removing fluids from small tanks and reservoirs. These units are lightweight and portable, and include integrated reservoirs with capacities ranging from 1.8 litres to 8.8 litres. Applications include evacuating engine oil, coolants, trans-axle grease power steering, transmission, and brake fluid.

Brake and Clutch Bleeding Equipment

Mityvac offers several great options to meet your unique hydraulic brake and clutch bleeding requirements. The manual pressure bleeder, and selection of manual and compressed air-operated vacuum bleeders provide a clean, economic one-person method of removing old fluid and trapped air from hydraulic systems.

Engine Diagnostic and Compression Testing Equipment

In addition to the original Mityvac vacuum test kits, on offer is an outstanding selection of cylinder compression and fuel system pressure test kits to meet the needs of professional service technicians, world wide. Product range includes the MV5536 electronic diesel compression tester, with up to 12 cylinder memory and back-lit LC display.

Cooling System Equipment

All Mityvac cooling system test, evacuation, and refill equipment utilize our specially designed universal cooling system adapter that conveniently adapts to a wide variety of cars, trucks and SUV's. The flexible stepped design provides the most economical, efficient means for performing routine testing and maintenance.



Sydney

Unit 1, 21 Amour St Revesby NSW 2212
PO Box 333 Milperra NSW 2214
Ph: (02) 9914 8720 Fax: (02) 9914 8798
Email: jsgindustrial@jsg.com.au

Melbourne

3/62-68 Garden Drive Tullamarine VIC 3043
Ph: (03) 8809 1300 Fax: (03) 9310 4886
Email: jsgvic@jsg.com.au

Perth

2 Holder Way Malaga WA 6090
Ph: (08) 6240 5800 Fax: (08) 9249 9027
Email: jsgwa@jsg.com.au

Brisbane

Unit 1/20 Lancashire St Acacia Ridge QLD 4110
Ph: (07) 3273 3433 Fax: (07) 3273 3369
Email: jsgqld@jsg.com.au

Adelaide

Suite 3, 8 Greenhill Rd Wayville SA 5034
Ph: 0448 730 886 Fax: (08) 8240 3966
Email: jsgsa@jsg.com.au

Cessnock

Level 1/426 Macdonalds Rd Pokolbin NSW 2325
Ph: 0447 277 755
Email: jsghv@jsg.com.au

Townsville

Level 1, 1/5 Woolcock St Hyde Park Townsville QLD 4810
Ph: 0419 021 892 Fax: (07) 4724 5951
Email: jsgfnq@jsg.com.au

Mackay

C03 216 Harbour Rd Mackay QLD 4740
Ph: (07) 4944 0588 Fax: (07) 4953 3959
Email: techcq@jsg.com.au

Indonesia

PT JSG International
Jl. Ciputat Raya, No. 1C RT.003/RW. 010 Kebayoran
Lama Selatan, Kebayoran Lama, Jakarta Selatan 12240
Ph: (62-21) 7239 511 Fax: (62-21) 7289 5623
Email: sales@ptjsg.co.id

Your authorised JSG distributor:

Lubrication
Management
Systems

Material
Dispensing
Management
Systems

Hose & Cable
Management
Systems

Diesel & Fluid
Management
Systems

Fire
Extinguisher
& Suppression
Systems

Onboard
Weighing &
CCTV Systems

Flow
Measurement
Systems

General
Lubrication
& Exhaust
Extraction

Technical data specifications & photographs contained in this brochure were correct at time of printing. Pictures shown are for illustration purposes only. Technical information, specifications & products shown maybe subject to change without prior notice. (Errors & omissions excepted). WARNING: For sale & proper use consult instructions, the supplier or JSG. Contact your nearest JSG Industrial Systems P/L distributor for latest information.

Unit 1, 21 Amour St Revesby 2212 Australia
T: +61 2 9914 8720 F: +61 2 9914 8798
E: jsgindustrial@jsg.com.au
W: www.jsgindustrial.com



CV0113