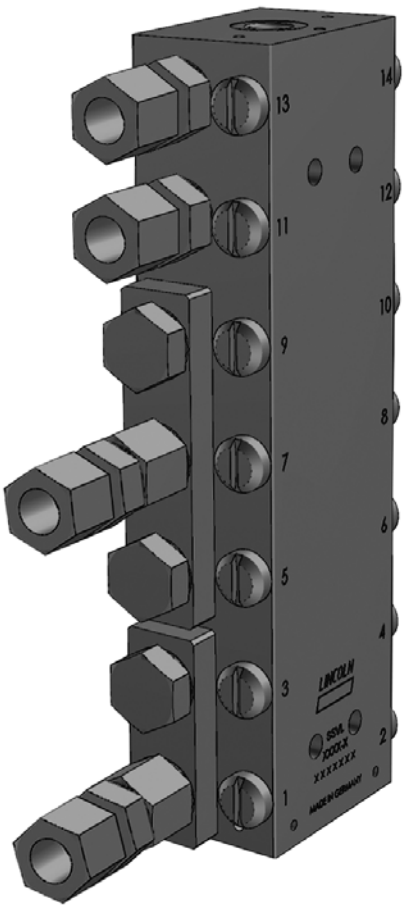
2.2EN-20004-C11

Quicklub - Progressive Metering Devices for Grease and Oil

Model SSV L



B-SSVL-000a10

Subject to modifications

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Technical Description Quicklub - Pump 203
Technical Description for "Electronic Control Units" of pump 203:

Printed-Circuit Board 236-13857-1 - Model H [1)]
Printed-Circuit Board 236-13862-1 - Model V10 - V13 [1)]
Printed-Circuit Board 236-13870-3 - Model M 08 - M 23 [1)]
Installation Instructions
Parts Catalogue
List of Lubricants
Planning and Layout of Quicklub Progressive Systems

[1)] The model designation of the printed-circuit board is part of the pump model designation indicated on the pump nameplate, e. g. : P 203 - 2XN - 1K6 - 24 - 1A1.10 - **V10**

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Introduction

Explanation of Symbols Used

The following description standards are used in this manual:

Safety Instructions

Structure of safety instructions:

- Pictogram
- Signal word
- Danger text
  - Danger note
  - How to avoid danger

The following pictograms are used in this manual and are combined with the corresponding signal words:

 1013A94	 4273a00	 6001a02
- ATTENTION **- CAUTION** **- WARNING**	**- ATTENTION** **- CAUTION** **- WARNING**	**- NOTE** **- IMPORTANT**

The signal words give the seriousness of danger if the following text is not observed:

ATTENTION	refers to faults or damages on machines.
CAUTION	refers to bad damages and possible injuries.
WARNING	refers to possible dangerous injuries.
NOTE	indicates improved operation of the device.
IMPORTANT	indicates special operating features of the device.

Example:


1013A94

ATTENTION!

When making use of other than the tested spare parts, serious damage may affect your device.

Therefore, for the operation of your device always use original parts made by Lincoln GmbH.

Furthermore, you will find the following text symbols in this manual:

- Listing of applicable statements
  - Subpoint of applicable statements

1. Determination of the number or sequence of contents

➲ Procedural instruction

User's Responsibility

To ensure the safe operation of the unit, the user is responsible for the following:

1. The pump / system shall be operated only for the intended use (see next chapter "Safety Instructions") and its design shall neither be modified nor transformed.
2. The pump / system shall be operated only if it is in a proper functioning condition and if it is operated in accordance with the maintenance requirements.
3. The operating personnel must be familiar with this User Manual and the safety instructions mentioned within and observe these carefully.

The correct installation and connection of tubes and hoses, if not specified by Lincoln GmbH, is the user's responsibility. Lincoln GmbH will gladly assist you with any questions pertaining to the installation.

Environmental Protection

Waste (e.g. used oil, detergents, lubricants) must be disposed of in accordance with relevant environmental regulations.

Service

The personnel responsible for the handling of the pump / system must be suitably qualified. If required, Lincoln GmbH offers you full service in the form of advice, on-site installation assistance, training, etc. We will be pleased to inform you about our possibilities to support you purposefully.
In the event of inquiries pertaining to maintenance, repairs and spare parts, we require model specific data to enable us to clearly identify the components of your pump / system. Therefore, always indicate the part, model and series number of your pump / system.

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Safety Instructions

Appropriate Use

Use the SSV L lubricant metering devices only for dispensing lubricants in centralized lubrication systems.

Suitable Lubricants

- The progressive metering devices model SSV can be used for dispensing
  - mineral oils of at least 40 mm^2/s (cST) or
  - greases up to the penetration class NLGI 2
  - see User Manual 2.0-40001

6001 a02

IMPORTANT

It must nevertheless be ensured that the oils or greases used do not alter their consistency significantly in the course of time or under the influence of temperature or pressure.

General Safety Instructions

- The progressive centralized lubrication system connected to the Quicklub pump model 203 must always be secured with a pressure relief valve.
- Lincoln SSV L lubricant metering devices are state of the art.
- Incorrect use may result in bearing damage caused by poor or over-lubrication.
- Each outlet that will be used must be equipped with a screw fitting GE8LR1/4“, GE10LR1/4“ or GE12LR1/4“ (GERV).
- Due to the functional order of its pistons, progressive metering devices SSVL6 to 14 will seize if the outlets positioned directly at the metering device housing are closed.
- Modifications or changes to an installed system are not admissible. Any modification must be subject to prior consultation with the manufacturer of the lubrication system.
- Use only original Lincoln spare parts (see Parts Catalogue) or the parts approved by Lincoln.

Regulations for Prevention of Accidents

- To prevent accidents, observe all city, state and federal safety regulation of the country in which the product will be used.
- Avoid the operation with
  - unapproved parts.
  - insufficient or contaminated lubricants.

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CAUTION!

Danger of injury in the case of serious corrosion of metering device surfaces:
An increasing corrosion of the surfaces will cause the balls pressed in to lose their hold. Under pressure, they may suddenly burst out and cause injuries.
For applications in corrosive environments, use metering devices in stainless steel version only.

Operation, Repair and Maintenance

Repairs should only be performed by authorized personnel who are familiar with the repair instructions.

Installation

- Install the metering devices at a suitable location in accordance with the lubrication diagram.
- It is recommended that the metering devices be installed in such a way that the outlets are not close to the chassis or the attaching plate. This will facilitate troubleshooting in the case the system is blocked.
- The main metering devices with indicator pin must be installed in such a way that the indicator pin is easily visible.
- Use only the main and feed lines specified by Lincoln and adhere to the specified system pressures.

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Installation

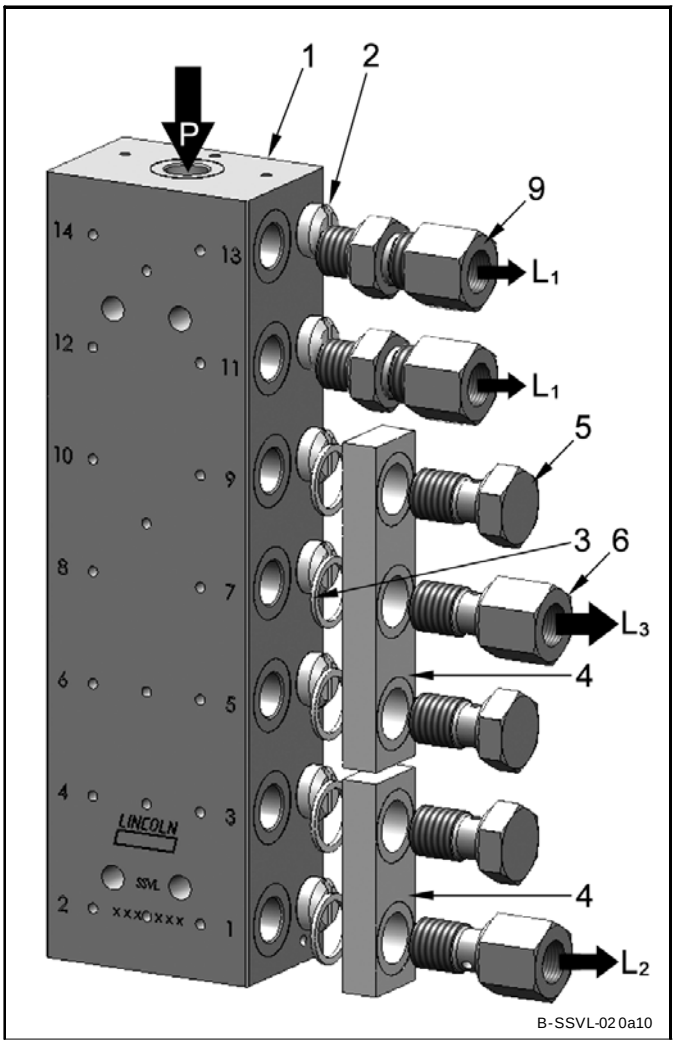

Fig. 1-1 Single parts of the SSVL

1-14 Numbering of the outlet bores

1 - Metering device housing
2 - Control piston – Closure plug
3 - Rubber-lined sealing washer
4 - Connecting bars (external combining of lubricant volumes)
5 - Outlet closure screw (1/4“ thread)
6 - Outlet tube fitting (1/4“thread) incl. integrated check valve
9 - Screw fitting (GERV)

L_1 - Single outlet volume
L_2 - Double outlet volume
L_3 - Triple outlet volume
P - Lubricant supply (R1/4“ thread)

Connection Fittings, Screw-Type

- for main- and secondary metering devices

Inlet tube fittings

- As inlet fitting (on item P, Fig. 1-1) use only tube fittings R1/4“ thread.

Outlet tube fittings

- Mount at any required outlet a common screw fitting GE8LR1/4”, GE10LR1/4“ or GE12LR1/4“ (GERV) with 1/4“ thread (see pos. 9).
- Then follow the lubrication plan and install a hose line DN8 or DN10 to the corresponding lubrication point.
- For single lubricant amount connect the screw fitting 9 directly to the metering device housing 1.

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IMPORTANT

Due to the functional order of its pistons, progressive metering devices SSVL6 to 14 will seize if the outlets positioned directly at the metering device housing are closed.

- For combining lubricant volumes externally (double or triple lubricant volume) use a connecting bar 4, outlet closure screw(s) and the outlet tube fitting 6 (incl. integrated check valve) and a straight outlet fitting (1/4“) with the necessary tube fitting.
- Mount a rubber-line sealing washer 3 to each outlet bore between the connecting bar 4 and the metering device housing 1.
- For each connecting bar 4 there can be combined 2 or 3 neighbouring outlet bores (1-3-5-7-9-11-13 or 2-4-6-8-10-12-14) in order to receive the double (L_2) or triple (L_3) outlet volume. On the connecting bar the positions of the closure screw(s) 5 or the outlet fittings 6 can be defined freely.

Hose fittings

- For the hose connection to the SSVL metering device provide hose fittings **8 mm** for GE8LR1/4“, **10 mm** for GE10LR1/4“ **or 12 mm** for GE12LR1/4“ (GERV) and the respective screw sleeves or crimp sleeves corresponding to the straight fittings or the screw fittings.

High-pressure hoses

- For connection to the metering device, between the metering devices and to the lube points, use hoses of nominal width DN6, DN8 or DN10 corresponding to the straight fittings or screw fittings used.

Control piston – Closure plugs

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IMPORTANT

A control piston’s closure screw 2 can be removed only in exchange for a piston detector 7 (Fig. 5-3).

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Description

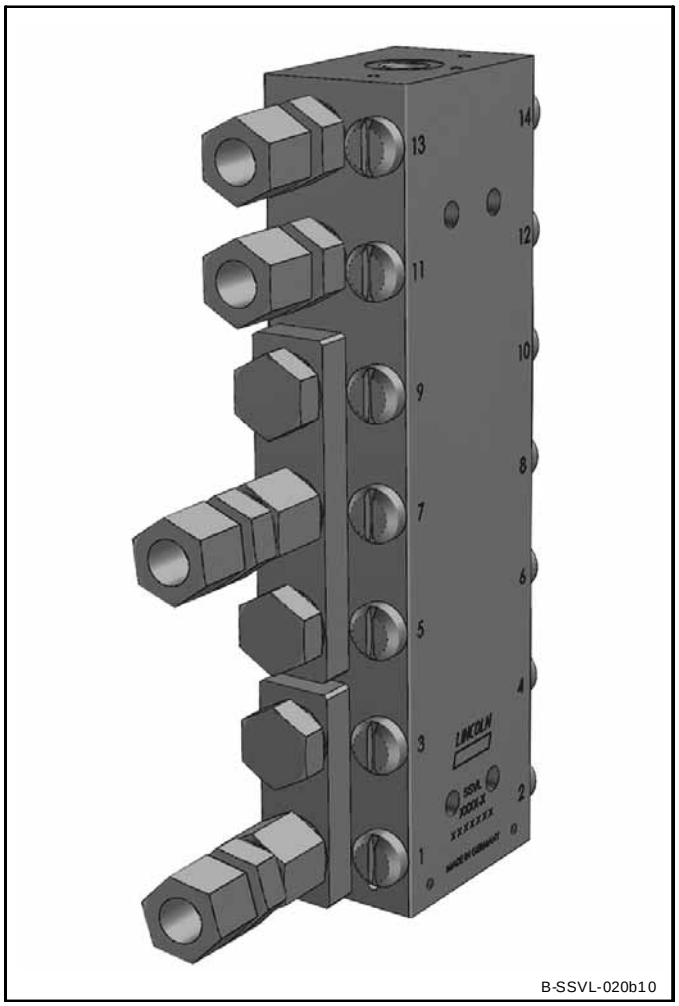

Fig. 2-1 Example of an SSV L 14

SSVL Progressive Metering Device

General

- The progressive metering devices
  - are piston-operated metering devices;
  - automatically (progressively) dispense the lubricant fed by the pump to the connected lubrication points;
  - have a lubricant output of 0.2 ccm per outlet and piston stroke;
  - can supply double or triple the lubricant volume by closing single outlets externally (see below „Combining of outlets“);
  - are available with 6 to 14 outlets;
  - offer the option of combining several lubrication points to one centralized lubrication point.
  - meter the supplied lubricant into predetermined single quantities.
  - can be monitored visually or electronically
- Any blockage in a lubrication circuit is indicated by grease leaking from the respective pressure relief valve on the pump.

Features of a Progressive Metering Device

- The term ”progressive” refers to the special features of the lubricant distribution within the metering devices, e.g.
  - the successive movements of the individual pistons within the metering device due to the supplied lubricant being under pressure;
  - the pistons move in a predetermined order and the cycles are repeated constantly;
  - each piston must have completed its movement fully before the next piston can be moved, no matter whether the lubricant is dispensed continuously or intermittently;
  - the pistons operate interdependently of one another;
  - no lubrication point which is connected to the system is omitted

Rating

Lubricant output per outlet and per stroke ..... 0.2 ccm
Max. operating pressure ..... 350 bar
Min. operating pressure ..... 20 bar
Max. differential pressure between two outlets ..... 100 bar
Outlet connection for hose/tube Ø ..... 8, 10 or 12 mm

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Operation

Applications

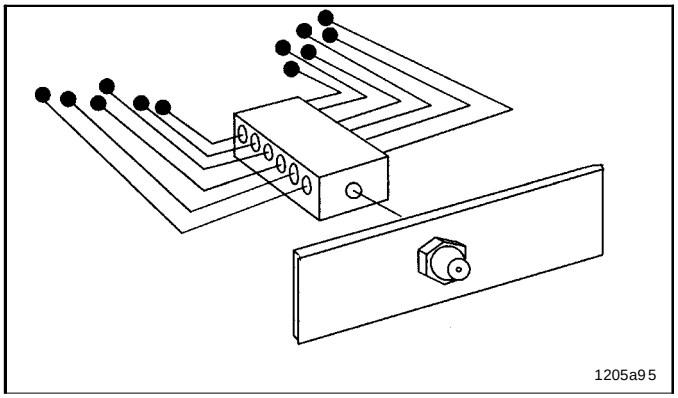

Fig. 3-1 Central lubrication point

- Quicklub progressive metering devices offer the option of combining several lubrication points on a machine to one or more central lubrication points, as shown in Fig. 3-1, which illustrates this basic feature.

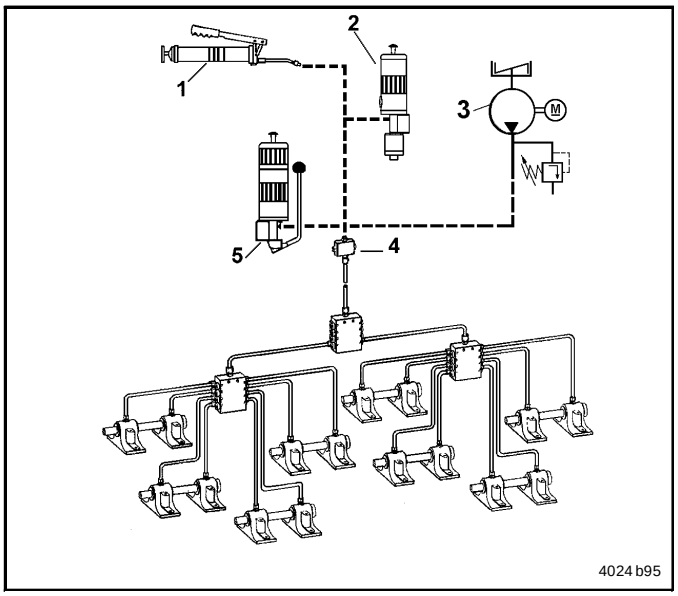

Fig. 3-2 Possible pump connections

- When they are used in connection with hand-operated pumps, pneumatic or electric pumps the progressive metering devices are a simple and low-cost centralized lubrication system (see Fig. 13).

1 - Hand-operated pump
2 - Pneumatically operated pump
3 - Electrically operated pump
4 - Lubrication fitting block
5 - Hand-operated filling pump

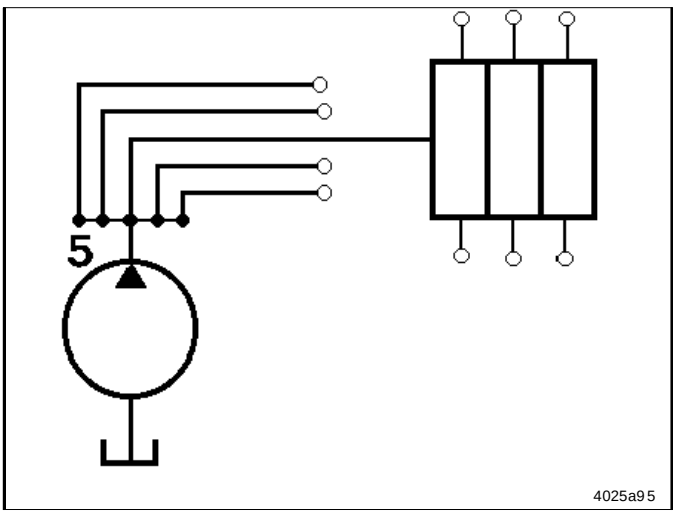

Fig. 3-3 Multiline pump expanded by a progressive metering device

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Operation, continuation

Applications, continuation

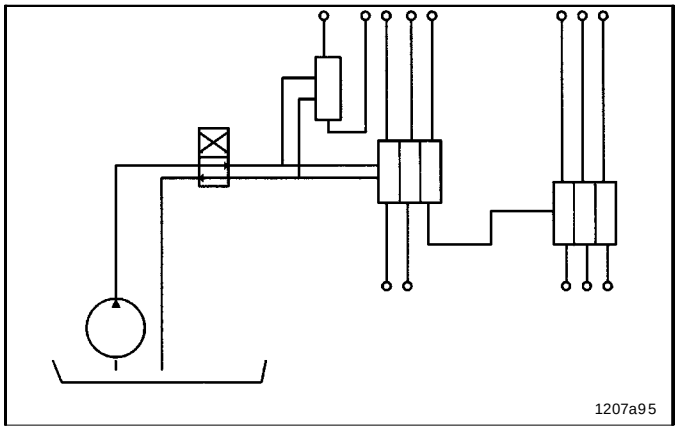

Fig. 3-4 Two-line system expanded by a progressive metering device

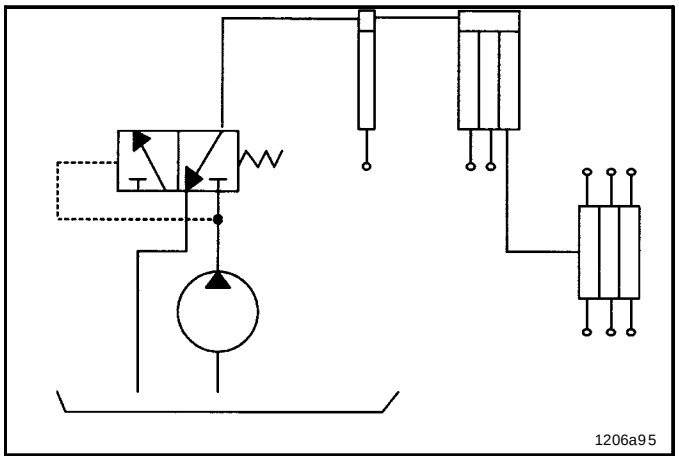

Fig. 3-5 Single-line system expanded by a progressive metering device

- Progressive metering devices can be used in two-line or single-line centralized lubrication systems in order to increase the number of outlets of multiline pumps or to subdivide the single metering devices and measuring valves (Fig. 3-1 to 3-5) also as secondary metering devices in large and small oil circulating systems.

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Operation, continuation

Lubricant Distribution within the metering Device

The 5 following illustrations show the piston movements and the depending lubricant distribution to the individual outlets.

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NOTE

The illustrations fig. 4-1 to 4-5 show the sequence of delivery only of outlets 2, 7, 5, 3 and 1. The delivery of the residual outlets 8, 6 and 4 is derived from the logical pumping until the complete divider cycle has finished.

When the lubricant supply is interrupted

- the pistons come to a halt;
- the lubricant is no longer dispensed to the lubrication point.

When the lubricant is fed again to the metering device, the cycle begins from the point where it had been interrupted.

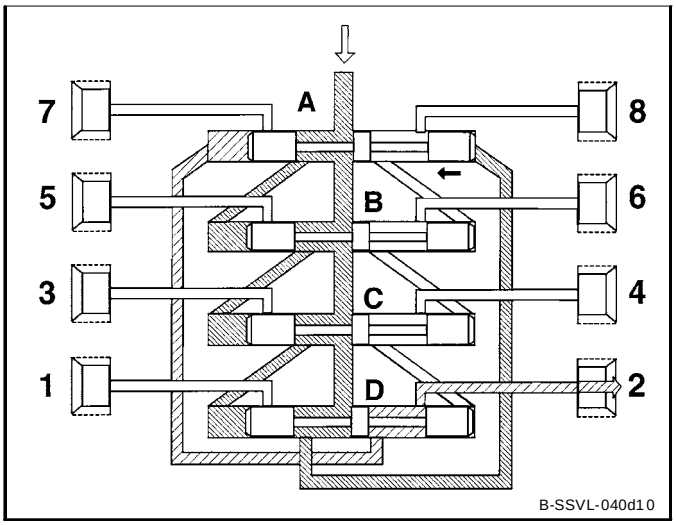
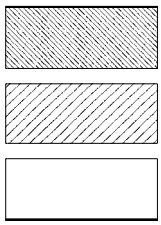


Fig. 4-1 Phase 1

Phase 1

- The lubricant enters the metering device from above (white arrow) and flows to the right-hand end of piston A.
- Piston A (black arrow) is moved to the left under the pressure of the lubricant, causing the lubricant ahead of the left-hand end of piston A to be dispensed to outlet 2 (dashed arrow).



Lubricant under pump pressure

Lubricant under delivery pressure of the piston

Lubricant, pressureless

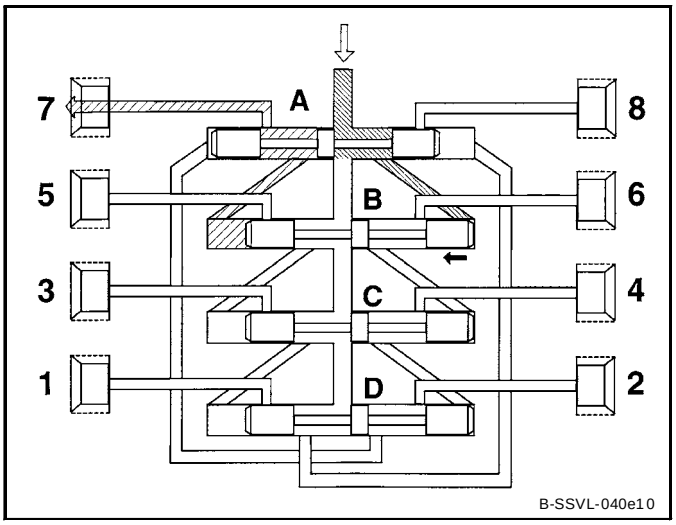
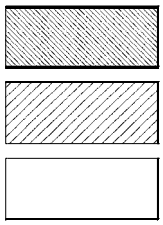


Fig. 4-2 Phase 2

Phase 2

- Once piston A has reached its left-hand final position, the junction channel to the right-hand end of piston B is opened.
- The lubricant which arrives from above (white arrow) also moves piston B (black arrow) to the left, causing the lubricant quantity ahead of the left-hand end of piston B to be dispensed to outlet 7 (dashed arrow).



Lubricant under pump pressure

Lubricant under delivery pressure of the piston

Lubricant, pressureless

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Operation, continuation

Lubricant Distribution within the Metering Device, continuation

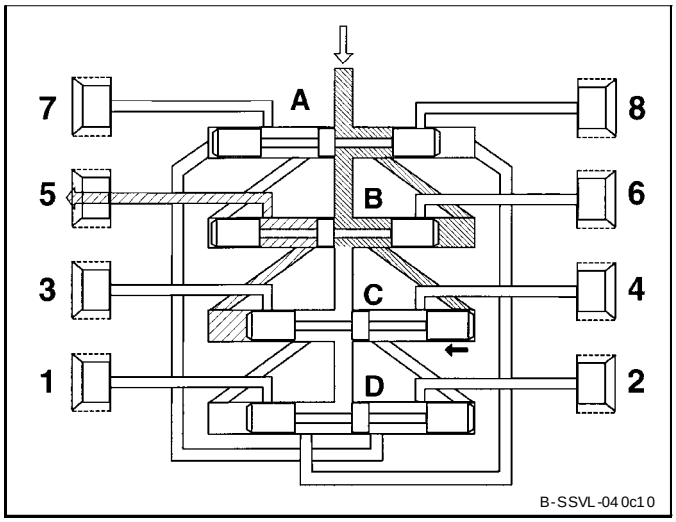

Fig. 4-3 Phase 3

Phase 3

- Once piston B has reached its left-hand final position, the junction channel to the right-hand end of piston A is opened.
- The lubricant, which flows from above (white arrow) moves piston C (black arrow) to the left, causing the lubricant quantity ahead of the left-hand end of piston C to be dispensed to outlet 5 (dashed arrow).

Lubricant under pump pressure

Lubricant under delivery pressure of the piston

Lubricant, pressureless

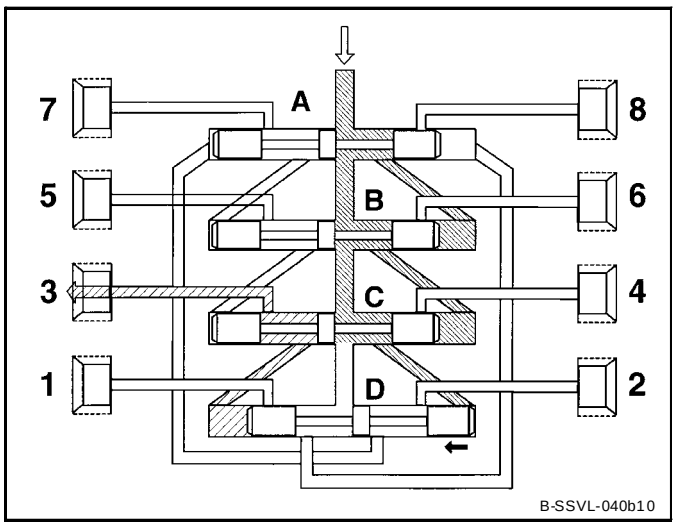

Fig. 4-4 Phase 4

Phase 4

- The channel to the right-hand end of piston D is now open (black arrow).
- The lubricant which is fed from above (white arrow) moves piston D to the left, causing the lubricant quantity ahead of the left-hand end of piston D to be dispensed out of the metering device via outlet 3 (dashed arrow).

Lubricant under pump pressure

Lubricant under delivery pressure of the piston

Lubricant, pressureless

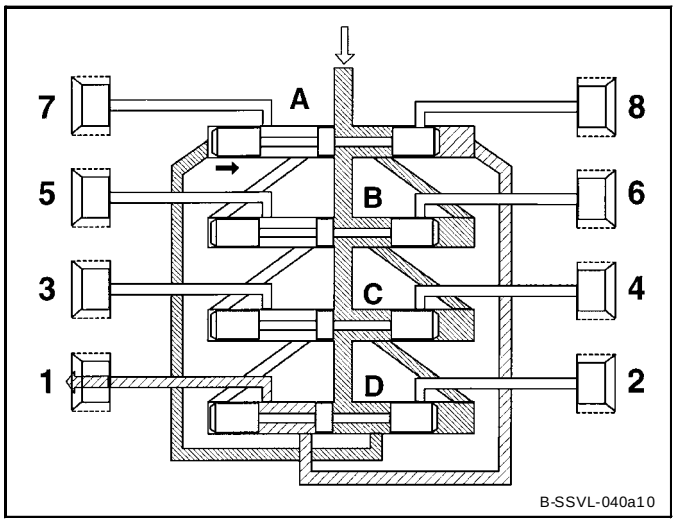

Fig. 4-5 Phase 5

Phase 5

- In phase 4, piston D had opened the junction channel to the left-hand end of piston A.
- The lubricant flowing in (white arrow) moves piston A to the right (black arrow), causing the lubricant quantity to be dispensed to outlet 1(dashed arrow).
- In the subsequent distribution sequence, pistons B - D are moved from the left to the right one after the other.
- A complete distribution sequence is finished and a new cycle can begin.

Lubricant under pump pressure

Lubricant under delivery pressure of the piston

Lubricant, pressureless

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Operation, continuation

Monitoring of the Operation

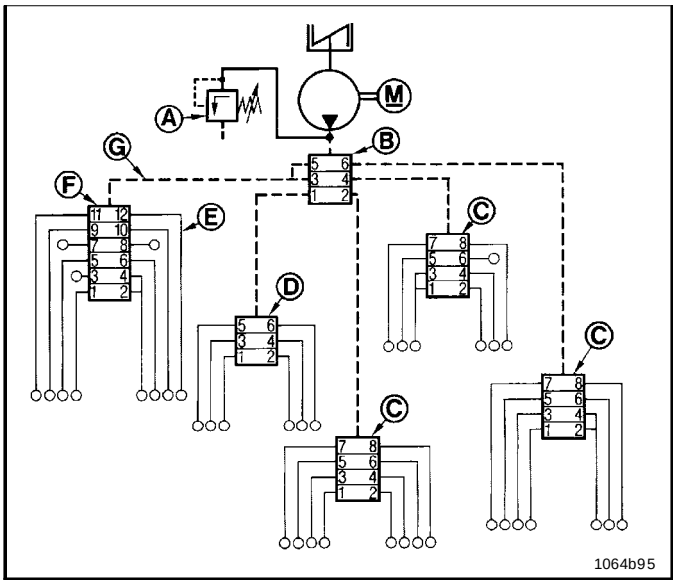

Fig. 5-1 Example of a lubrication system

System-dependent monitoring

- The main metering device B (fig. 5-1) and the secondary metering devices are connected by a high-pressure hose G. This feature automatically causes the linkage of the progressive system connected downstream of the pump.
- If only one piston does not move in any metering device or if the metering device can no longer dispense any lubricant via its outlets, this metering device will block itself.
- If one of the secondary metering devices is blocked, the main metering device is also blocked. The whole progressive system installed downstream of the pump stops operating.
- The fundamental internal structure of the progressive metering device guarantees the self-monitoring of the sequence within the metering device.
- The linkage makes it possible to monitor the operation of the whole system.

A - pressure relief valve
B - Main metering device SSV 6
C - Secondary metering device SSV 8
D - Secondary metering device SSV 6
E - Pressure plastic tube
F - Secondary metering device SSV 12
G - High pressure plastic hose

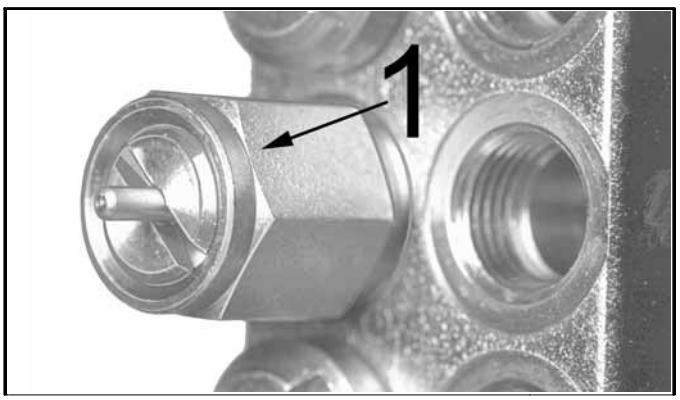

Fig. 5-2 Indicator pin installed on metering device 1011b96

Visual monitoring

- The metering devices can be equipped with an indicator pin which is connected to the piston and moves back and forth during lubricant distribution.
- If there is a blockage in the system, the indicator pin stops moving.


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NOTE

It is also possible to electrically check the movements of the indicator pin or any blockage in the system by means of a proximity switch (KN).

Components of the control pin tube fitting

Closure plug M11x1x5 MS, assy. (pos. 1) 519-32123-1

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Operation, continuation

Monitoring of the Operation, continuation

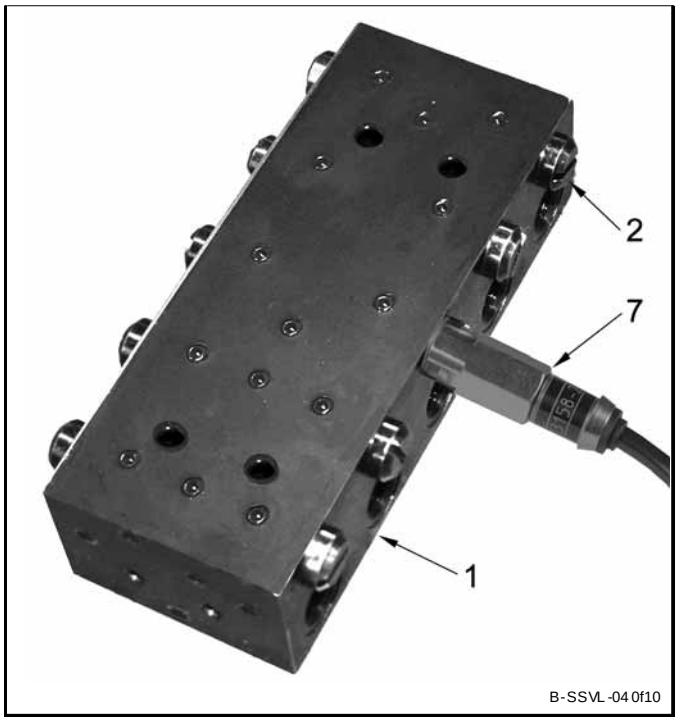

Fig. 5-3 Piston detector installed on the metering device

Electrical monitoring (microprocessor control)

- **A piston detector** 7 (initiator) lubricating time and brings it to a close after all the pistons of this metering device have dispensed their lubricant quantity.
- If there is a blockage in the system or if the pump reservoir is empty, the piston detector can no longer record the piston movements. The switching off signal is not transmitted to the control unit. A fault signal occurs.

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NOTE

*For the system monitoring it is recommended that **one SSV metering device with pre-assembled piston detector (SSVL-N)** be used per lubrication circuit. These special metering devices must be ordered separately for each lubrication system. Refer to the Parts Catalogue.*

- The pre-assembled metering devices have the designation **SSVL...-N, NE or NP** (they are available for SSVL 6, 8, 10, 12 and 14) . They must be installed in the system instead of a normal metering device (SSVL).

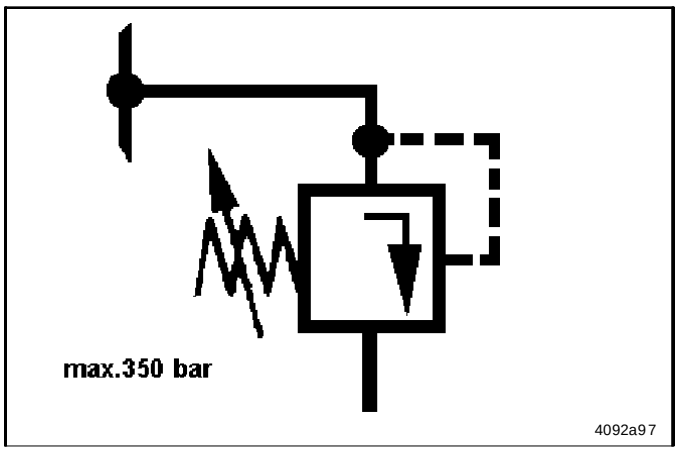

Fig. 5-4 Pressure relief valve

Pressure relief valve

- The whole system can be monitored visually via the pressure relief valve of the pump. If lubricant is leaking at the pressure relief valve during the distribution sequence, this indicates that there is a blockage in the system.

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IMPORTANT

Due to the functional order of its pistons, progressive metering devices SSVL 6 to 14 will seize if the outlets positioned directly at the metering device housing are closed.

To close single outlets a connecting bar 4 (Fig. 1-1) is required.

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Operation, continuation

Determining the Lubricant Output by Combining Outlets

Tube Fittings, screw-type

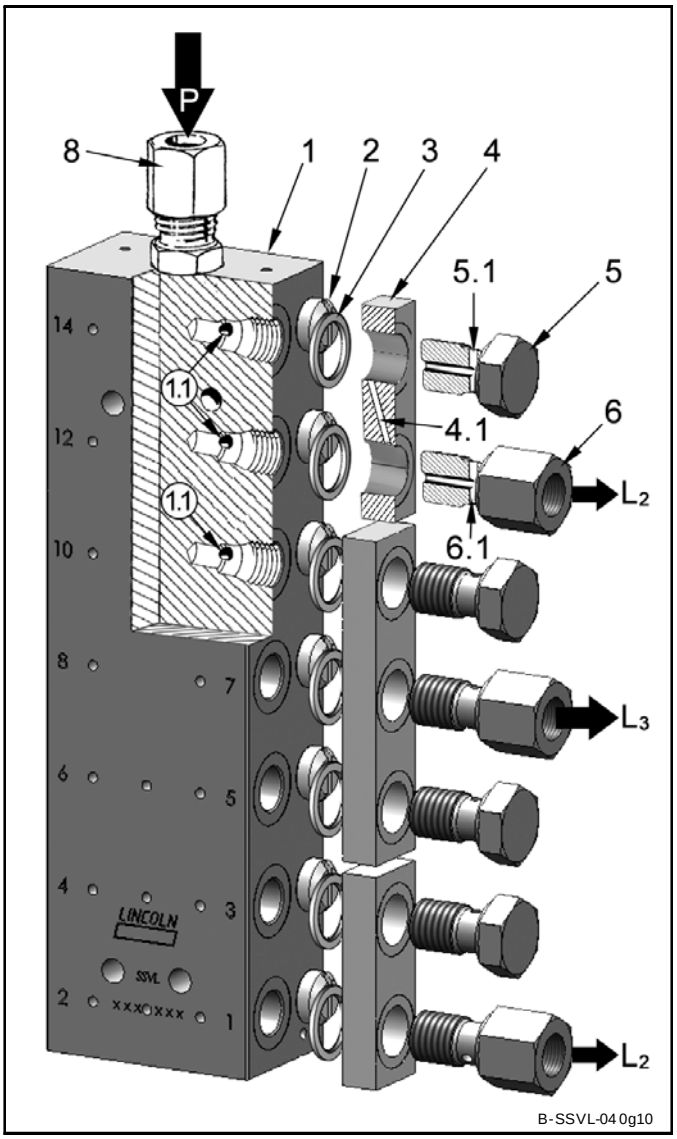

Fig. 6-1 Install the outlet fittings and closure plugs in accordance with the dosage

1-14 - Numbering of outlet bores

1 - Metering device housing
1.1 - Supply bores of the piston
2 - Control piston – closure plug
3 - Rubber-lined sealing washer
4 - Connecting bars (external combining of lubricant outlets)
4.1 - Connection duct [1)]
5 - Closure plug (1/4“ thread)
5.1 - Connection duct [1)]
6 - Outlet tube fitting without screw fitting (GERV)
6.1 - Connection duct [1)]
8 - Inlet tube fitting (R1/4“ thread)

1) For combining lubricant outlet volumes

L_2 - Double outlet volume (0.4 ccm/stroke)
L_3 - triple outlet volume (0.6 ccm/stroke)
P - Lubricant supply (R1/4“ thread)

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IMPORTANT

A control piston's closure screw 2 can be removed only in exchange for a piston detector.

- Mount at any required outlet a common screw fitting GE8LR1/4”, GE10LR1/4“ or GE12LR1/4“ (GERV) with 1/4“ thread (see pos. 9).

Single lubricant output

- For single lubricant amount connect the screw fitting (GERV) 9 directly to the metering device housing 1 (see Fig. 1-1, outlet 11 and 13).

6001a02

IMPORTANT

Due to the functional order of its pistons, progressive metering devices SSVL6 to 14 will seize if the outlets positioned directly at the metering device housing are closed.

Double or triple outputs

- For combining lubricant volumes externally (double or triple lubricant volume) use a connecting bar 4, outlet closure screw(s) and the outlet tube fitting 6 (incl. integrated check valve) and a straight outlet fitting (1/4“) with the necessary tube fitting.
- For each connecting bar 4 there can be combined 2 or 3 neighbouring outlet bores (1-3-5-7-9-11-13 or 2-4-6-8-10-12-14) in order to receive the double (L_2) or triple (L_3) outlet volume. On the connecting bar the positions of the closure screw(s) 5 or the outlet fittings 6 can be defined freely.

Example Fig. 6-1:

- Output per outlet bore 1-14 …….. 0.2 ccm/stroke
- Combining to the double lubricant outlet volume:
  - Outlet 1 (incl. outlet 3) ……. L_2 = 0.4 ccm/stroke
  - Outlet 11 (incl. outlet 13) ……. L_2 = 0.4 ccm/stroke
- Combining to the triple outlet volume:
  - Outlet 7 (incl. outlet 5 & 9) ……. L_3 = 0.6 ccm/stroke

Outlet fittings

- Customary screw fitting (GERV) with 1/4“ thread for 10 or 12 mm tube connection [1)]
- or hose stud [1)]
- or
  - for tube Ø 8 mm …….. 8L stud [1)]
  - for tube Ø 10 mm …….. 10L stud [1)]
  - for tube Ø 12 mm …….. 12L stud [1)]

1) Part no. see chapter “Spare Parts and Kits“)

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Troubleshooting

Fault: Blockage in the downstream progressive system

Cause:

- Bearing, lines or metering device clogged.
- In the case of metering devices SSVL 6 to SSVL 14 at least one outlet directly at the metering device housing is closed.

The fault can be identified by:

a) grease leaking at the pressure relief valve;
b) the fact that the indicator pins installed on the metering devices (if any) no longer move;
c) the fault signal of the signal lamp (if any) or LED display

Correction:

➲ Find out which is the cause of the blockage and rectify it in accordance with he following example:

➲ Allow pump to run (see paragraph "To trigger an additional lubrication" in User Manual of the corresponding pump or control unit).

➲ Loosen all high pressure hose connections G one after the other from the main metering device B (fig. 30) leading to the secondary metering devices. If f. ex. grease or oil emerges under pressure from outlet 1 of main metering device B, the blockage will be found in the lubrication circuit of the secondary metering device D.

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NOTE

If there is a blockage in the downstream system, the main lines are under pressure.

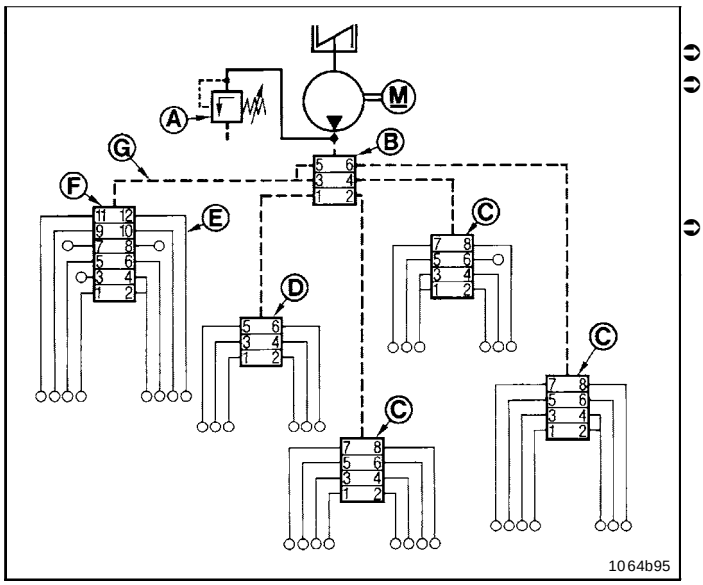

Fig. 7-1 Example of a lubrication system

A - pressure relief valve
B - Main metering device SSVL
C - Secondary metering device SSV 8
D - Secondary metering device SSV 6
E - Pressure plastic tubes
F - Secondary metering device SSV 12
G - High-pressure plastic hose

➲ Let the pump run.

➲ Disconnect all lubricant feed lines E from secondary metering device D one after the other. If f. ex. grease or oil emerges under pressure from outlet 3 of metering device D, the blockage will be found in the line of outlet 3 or in the connected bearing.

➲ Pump the blocked bearing or line through by means of a manual pump.

6001a02

NOTE

When checking the individual outlets, keep each outlet loosened for quite a while because per each motor revolution there is only one piston stroke. A complete cycle of all metering devices requires several strokes.

➲ Check pressure relief valve A. Replace it, if necessary.

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Troubleshooting, continuation

Fault: Blockage in the downstream progressive system, continuation

Cause:	Correction:
· Metering device blocked	➲ Replace the metering device or clean it in accordance with the following procedure: ➲ Remove all tube fittings. ➲ Unscrew the piston closure plugs (thread M11x1.0). ➲ If possible, try to eject the piston using a smooth drift (Ø smaller than 6 mm; 0.24 in.).  6001a02 **IMPORTANT** *he pistons are precision-fitted into the holes. Mark the pistons with regard to their installation position and direction after they have been removed. They must not be exchanged.* ➲ Thoroughly clean the metering device bodies in fat-dissolving washing agent, blow them through with compressed air. ➲ Press free the slant ducts (Ø 1.5 mm; 0.59 in.) at the thread ends of the piston holes using a pin. ➲ Clean the metering devices again and blow them through. ➲ Reassemble the metering devices. ➲ Replace rubber-lined sealing washer, if necessary. ➲ Before the tube fittings are reassembled, the metering devices should be pumped with oil several cycles by means of a manual pump. Check that the pressure in the metering device does not exceed 25 bar (362.8 psi). ➲ If the pressure is higher, replace the metering device.

Fault: Differing lubricant amounts at the lubrication points

Cause:	Correction:
· Lubricant metering not correct	➲ Check the lubricant metering acc. to the lubrication chart
· Setting of the pause time or lubricating time incorrect	➲ Check the time setting. Refer to the corresponding setting in the respective “Operating Instructions”.

Fault: Poor or excessive lubrication of the lubrication points

Cause:	Correction:
· Setting of the lubricating time or pause time incorrect	➲ Check the time setting at the printed circuit boards. Refer to the corresponding setting in the respective “Operating Instructions”.

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Technical Data

Rating

Lubricant output per outlet and per stroke ..... 0.2 ccm
Max. operating pressure ..... 350 bar
Min. operating pressure ..... 20 bar
Max. differential pressure between two outlets ..... 100 bar
Outlet connection for hose/tube Ø ..... 10 or 12 mm
Inlet connection R1/4
Outlet connection ..... 1/4“
Operating temperature ..... –40° C to +70°C

Lines

High-pressure hose (DN8 or DN10)

6001a02

NOTE

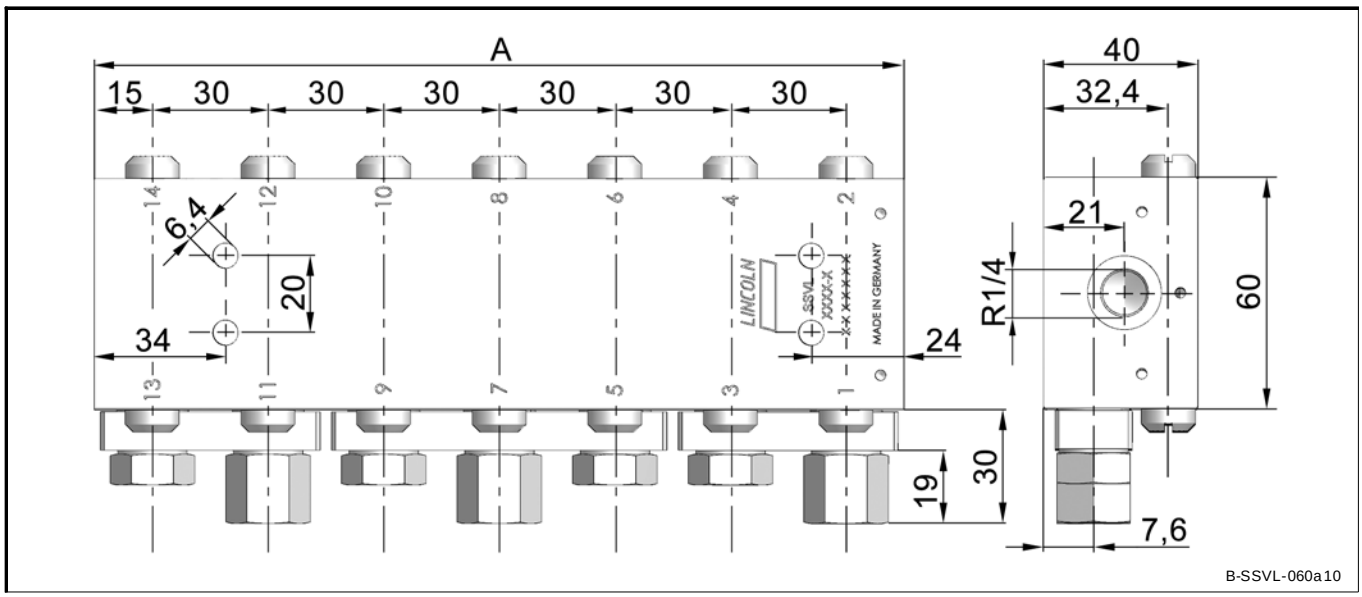
For technical data see indications by the manufacturer regarding the hoses used.

Tightening Torque

Closure plug (piston) in metering device ..... 18 Nm
Inlet fitting in metering device
- screw-type ..... 17 Nm
Outlet fittings, screw-type
- directly in metering device ..... 30 ±3 Nm
- via connecting bar ..... 35 ±3,5 Nm
Closure plugs
- via connecting bar ..... 35 ±3,5 Nm
Control pin tube fitting in metering device ..... 18 Nm
Piston detector in metering device ..... 15 Nm
Install metering device
- dry ..... 10 Nm
- oiled ..... 7,5 Nm

Dimensions

Metering device	Dimension A in mm
SSVL 6	90
SSVL 8	120
SSVL 10	150
SSVL 12	180
SSVL 14	210



Screw fittings (GERV)

- for tube Ø 8 mm 8L
- for tube Ø 10 mm 10L
- for tube Ø 12 mm 12L

(Part no. see chapter “Spare Parts and Kits“)

6001a02

NOTE

If you want to use external hose fittings and hoses, please contact Lincoln GmbH or a hydraulic specialist for prior technical clarification.

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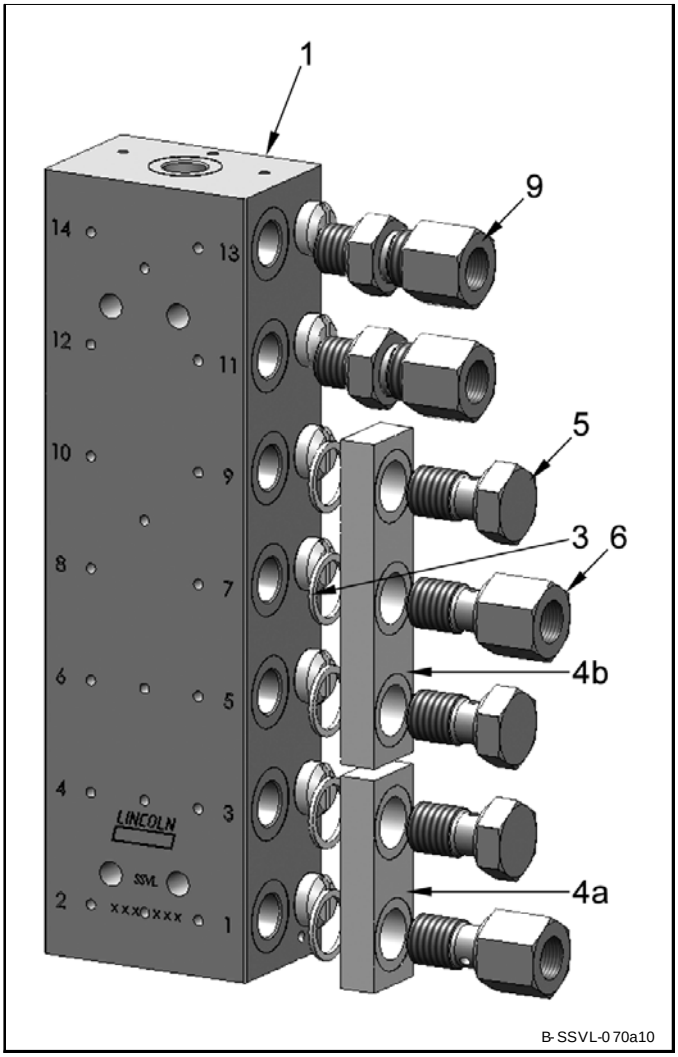
Spare Parts and Kits



Pos.	Designation	Part no.
	Fixing parts:	
	Hexagon head screws 8.8	
	- M6 x 45C	200-13092-3
	- M6 x 50C	200-13037-7
	- M6 x 55C	200-13092-6
	Hexagon socket screw 8.8	
	- M6 x 45C	201-12019-3
	- M6 x 50C	201-12587-1
	- M6 x 60C	201-12019-6
	Hexagonal nut M6C	207-12135-5
	Lock washer A6C	213-12168-8
	Washer A6, 4C	209-13649-1

Pos.	Designation	Part no.
	Kits:	
1	Metering devices	
	- SSVL 6, assy.	619-77162-1
	- SSVL 8, assy.	619-77163-1
	- SSVL10, assy.	619-77164-1
	- SSVL12, assy.	619-77165-1
	- SSVL14, assy.	619-77166-1
	Metering devices with indicator pin	
	- SSVL 6-K, assy.	619-77231-1
	- SSVL 8-K, assy.	619-77232-1
	- SSVL10-K, assy.	619-77233-1
	- SSVL12-K, assy.	619-77234-1
	- SSVL14-K, assy.	619-77235-1
	Outlet combinations SSVL	
	- double, assy. (pos. 2x3, 4a, 5 & 6)	519-34643-1
	- triple, assy. (pos. 3x3, 4b, 5 & 2x6)	519-34643-2
	Single parts:	
3	USIT ring 70 NBR 14x18,7x1,5	220-12238-9
5	Closure plug, hex head G1/4A	303-16470-1
	Outlet fittings:	
6	- hex head G1/4A-G1/4	303-16469-1
9	- Screw fittings (GERV)	
	- for tube Ø 8 mm, 8L / DN6	223-13052-2
	- for tube Ø 10 mm, 10L / DN8	223-13052-3
	- for tube Ø 12 mm, 12L / DN10	223-13052-5
	Inlet fittings:	
	- GE 10L G1/4 AC	223-12272-9
	- GE 10L G1/8 AC (for SSV)	223-13621-9
	- GE 12L G1/4 AC	223-12477-9
	Hoses and fittings:	
	High pressure hoses:	
	- 1SNDN6	111-35371-2
	- 1SNDN8	111-35371-1
	- 1SNDN10	111-35371-3
	Hose studs, screw type:	
	- D8 / DN6	226-10690-7
	- D10 / DN8	226-10690-8
	- D12 / DN10	226-10690-9
	Screwed sleeves:	
	- 1SNDN6	226-10979-1
	- 1SN DN8	226-10979-2
	- 1SN DN10	226-10979-3
	Hoses with pressed fittings:	
	- KF240 NW8 type 2040N-05V10	111-35301-2
	- KF240 NW10 type 2040N-05V10	111-35301-3
	Hose studs, straight:	
	- RSL10	226-13708-6
	- RSL12	226-13708-7
	Hoses stud with conical nipple:	
	- DKOL-10	226-10073-2
	- DKOL-12	226-10073-3
	Sleeves for hose fittings:	
	- DN6	226-10146-4
	- DN8	226-10146-2
	- DN10	226-10146-3

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Original Language 2.2EN-20004-C11

D	GB	F	E	I
EG- Einbauerklärung	**EC Declaration of incorporation**	**Déclaration CE d'incorporation**	**Declaración CE de incorporación**	**Dichiarazione CE di incorporazione**
Hiermit erklären wir, dass die Bauart von	*Herewith we declare that the model of*	*Par la présente, nous déclarons que le produit ci-dessous*	*Por la presente, declaramos que el modelo suministrado*	*Si dichiara che il prodotto da noi fornito*

Metering Device SSVL

in der von uns gelieferten Ausführung zum Einbau in eine Maschine bestimmt ist und dass ihre Inbetriebnahme solange untersagt ist, bis festgestellt wurde, dass die Maschine, in die das o. g. Produkt eingebaut werden soll, den Bestimmungen aller einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen entspricht, einschließlich deren zum Zeitpunkt der Erklärung geltenden Änderungen. Der Hersteller verpflichtet sich, technische Dokumente (gem. Anhang VII Teil B) bei begründeter Anfrage zum o. g. Produkt einzelstaatlichen Stellen in gedruckter Form zur Verfügung zu stellen.	*in the supplied version is intended to be incorporated into machinery and must not be put into service until the machinery into which it is to be incorporated has been declared in conformity with the provisions of the relevant fundamental requirements on health and safety, including all modifications of this directive valid at the time of the declaration. The manufacturer undertakes to make available any technical documents in printed version (following Annex VII Part B) to subnational authorities in the case of reasonable request regarding the above mentioned product.*	*dans la version dans laquelle nous le livrons, est destiné à être installé sur une machine et que sa mise en service est interdite tant qu'il n'aura pas été constaté que la machine sur laquelle le produit mentionné ci-dessus doit être installé est conforme aux réglementations régissant toutes les exigences fondamentales de sécurité et celles relatives à la santé, y compris les amendements en vigueur au moment de la présente déclaration. Le fabricant s'engage, en cas de demande justifiée, à fournir sous forme écrite aux organismes nationaux respectifs les documents techniques (suivant Annexe VII, Partie B) relatifs au produit ci-dessus.*	*en la versión suministrada es destinada a ser incorporada en una máquina y que su puesta en servicio está prohibida antes de que la máquina en la que vaya a ser incorporada haya sido declarada conforme a las disposiciones de los requisitos pertinentes y fundamentales de salud y seguridad en su redacción vigente en el momento de instalación. El fabricante se obliga a hacer disponible documentos técnicos (según anexo VII parte B) en versión imprimida a entes uniestatales a petición fundada referente al producto arriba mencionado.*	*nella versione da noi fornita è destinato all'installazione in una macchina e che la relativa messa in esercizio resta vietata fino all'avvenuto accertamento della conformità della macchina nella quale il suddetto prodotto deve essere installato con tutti i requisiti basilari prescritti in termini di sicurezza e di salute, incluse le relative modifiche vigenti al momento della dichiarazione. Il costruttore si impegna a mettere a disposizione la documentazione tecnica (ai sensi dell'Allegato VII parte B) in forma scritta relativa al summenzionato prodotto dietro richiesta motivata presso le singole sedi nazionali.*
Angewendete harmonisierte Normen, insbesondere:	*Applied harmonized standards in particular.*	*Normes harmonisées, notamment :*	*Normas armonizadas utilizadas, particularmente:*	*Norme armonizzate applicate in particolare:*
Maschinenrichtlinie 2006/42/EG	**Machinery Directive 2006/42/EC**	**Directive machines 2006/42/CE**	**Directiva de máquinas 2006/42/CE**	**Direttiva Macchine 2006/42/CE**
DIN EN ISO 12100 – Teil 1 & 2	**– Part 1 & 2**	**– Parties 1 & 2**	**– Parte 1 & 2**	**– Parte 1 e 2**
Sicherheit von Maschinen	**Safety of machinery**	**Sécurité de machines**	**Seguridad de máquinas**	**Sicurezza delle macchine**
Grundbegriffe, allgemeine Gestaltungsleitsätze	*Basic terms, general design guidelines*	*Notions fondamentales, directives générales d'élaboration*	*Términos básicos, axiomas generales de diseño*	*Concetti basilari, principi guida generali*
		DIN EN 908		
Pumpen und Pumpengeräte für Flüssigkeiten	**Pumps and pump units for liquids**	**Pompes et groupes de pompes pour liquides**	**Bombas y equipos de bombas para líquidos**	**Pompe e dispositivi di pompaggio per liquidi**
Allgemeine sicherungstechnische Anforderungen	*General safety requirements*	*Exigences en matière de sécurité technique*	*Prescripciones generales referente a la seguridad*	*Requisiti generali di sicurezza tecnica*
EMV-Richtlinien 2009/19/EG	**EMC directives 2009/19/EC**	**Réglementations CEM 2009/19/CE**	**Directivas CEM 2009/19/CE**	**Direttive EMC 2009/19/CE**
Kraftfahrzeug	*Automotive*	*véhicules automobile*	*vehículo*	*autoveicolo*
2004/108/EG	**2004/108/EC**	**2004/108/CE**	**2004/108/CE**	**2004/108/CE**
		DIN EN 61000-...		
Fachgrundnormen: - Störaussendung	*Generic emission standards: - Emitted interference*	*Normes fondamentales : - Emission de parasites*	*Normas especiales fundam.: - Emisión de interferencias*	*Norme specifiche fondam.: - Emissione di interferenze*
... Teil 6-4 [a]	**... Part 6-4** [a]	**... Partie 6-4** [a]	**... Parte 6-4** [a]	**... Parte 6-4** [a]
... Teil 6-3 [b]	**... Part 6-3** [b]	**... Partie 6-3** [b]	**... Parte 6-3** [b]	**... Parte 6-3** [b]
- Störfestigkeit	*- Noise immunity*	*- Résistance aux brouillages*	*- Resistencia a interferencias*	*- Resistenza alle interferenze*
... Teil 6-2 [a]	**... Part 6-2** [a]	**... Partie 6-2** [a]	**... Parte 6-2** [a]	**... Parte 6-2** [a]
... Teil 6-1 [b]	**... Part 6-1** [b]	**... Partie 6-1** [b]	**... Parte 6-1** [b]	**... Parte 6-1** [b]
[a] für Industriebereiche [b] für Wohnbereich, Geschäfts- und Gewerbebereiche sowie Kleinbetriebe	[a] for industrial environment [b] for residential, commercial and light industry	[a] pour domaine industriel [b] pour domaines de l'habitation, des magasins et de l'artisanat ainsi que des petites entreprises	[a] para áreas industriales [b] para áreas residenciales, comerciales e industriales tanto como pequeñas empresas	[a] per settore industriale [b] per il settore residenziale, commerciale, industriale e per le piccole imprese
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Wolfgang Studer • Heinrich-Hertz-Str. 2-8 • 69190 Walldorf

Walldorf July 23, 2010, ppa. Dr.-Ing. Z. Paluncic
Director Research & Development

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