

Hydraulic Operated Lubrication Pump HTL 101



6002b03

Subject to modifications

810-55289-1

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Table of Contents

	Page		Page
Introduction	4	Maintenance	10
Explanation of Symbols Used.....	4	Lubricant Cartridge	10
User's Responsibility.....	4	First insertion of cartridge	10
Environmental Protection	4	Cartridge Replacement.....	11
Service	4	Removal of Oil Strainer.....	11
Safety Instructions	5	Technical Data	12
Appropriate Use	5	Ratings.....	12
Misuse	5	Pressure Diagram: Ratio Comparison	12
General Safety Instructions	5	Dimensions.....	13
Accident Prevention Regulations.....	5	Flow Rate Diagram	14
Operation, Maintenance and Repair.....	5	Hydraulic Circuit.....	15
Repairs	5	Components and Parts List	16
Operation/Maintenance	6	Components with tension spring.....	16
Disposal.....	6	Parts List with tension spring	17
Exclusion of Liability	6	Components with pressure spring	18
Installation	6	Parts List with pressure spring	19
Installation and Maintenance of Hydraulic Hoses	6	Troubleshooting	20
Description	7	Accessories	21
The Pump Model HTL 101	7	Hydraulic Tubes.....	21
Working Method	8	Manufacturer's declaration	22
Adjustment and Operation	8		
Basic Adjustment of the Throttle Valve.....	8		
Monitoring of Function	8		
Pump Element.....	9		
Pressure Relief Valve	9		

Introduction

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Explanation of Symbols Used

The following description standards are used in this manual:

Safety Instructions

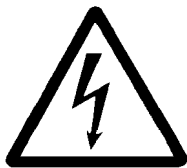
Structure of safety instructions:

- 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:



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- | | | |
|-------------|-------------|-------------|
| - ATTENTION | - ATTENTION | - NOTE |
| - CAUTION | - CAUTION | - IMPORTANT |
| - WARNING | - WARNING | |

The signal words give the seriousness of danger if the following text will be 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	refers to improvements in handling of systems.
IMPORTANT	refers to considerable disadvantages in handling of systems.

Example:



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WARNING:

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

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

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

- Listing
 - Subpoint
- ➞ 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 chapter "Safety Instructions", on page 5) 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 Owner 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 & Co. KG, is the user's responsibility. Lincoln GmbH & Co. KG 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 & Co. KG 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.

Safety Instructions

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Appropriate Use

The hydraulic operated lubrication pump model HTL 101 is designed for initial or for subsequent retrofit installation. It is designed for:

1. the automatic lubrication of hydraulic hammers;
2. the automatic lubrication of hydraulically driven units.

The pump is able to deliver lubricants and chisel pastes up to NLGI - class 2.

Misuse

Any use of the hydraulic operated lubrication pump HTL 101 that is not expressly mentioned in this user's manual will be regarded as misuse.

If the hydraulic operated lubrication pump HTL 101 is used or operated in a different manner other than specified, any claim for warranty or liability will be null and void.



NOTE

If personal injury or material damage occurs as a result of inappropriate operation, e.g. if the safety instructions are ignored or resulting from incorrect installation of the hydraulic operated lubrication pump HTL 101, no claims or legal actions may be taken against Lincoln GmbH & Co. KG.

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General Safety Instructions

- Hydraulic operated lubrication pumps model HTL 101:
 - are designed with state-of-the-art technology.
 - can be assembled for safe operation.
- Incorrect use may result in bearing damage caused by under- or over-lubrication.
- Modifications or alterations to an installed system by the customer are subject to prior consultation with the manufacturer of the lubrication system or with its appointed dealers.
- Hydraulic operated lubrication pumps model HTL 101:
 - are not to be installed in the lower area of the hammer,
 - must be installed in such a way that the operator can always see the position of the low-level indicator of the follower piston.
- After each cartridge replacement be sure that the pump delivers lubricant.

Accident Prevention Regulations

To prevent accidents, observe all city, state or provincial and federal safety regulations of the country in which the hydraulic operated lubrication pump HTL 101 will be used.

Operation, Maintenance and Repair



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ATTENTION!

Before beginning with maintenance or repair work to the lubrication pump HTL 101, ensure that the hydraulic system of the carrier unit (the supply to the lubrication pump) is depressurized.



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ATTENTION!

It is absolutely forbidden to carry out maintenance or repair work and to replace the cartridge while the hydraulic unit is in operation.

Repairs

Repairs are only to be performed by authorized and qualified persons who are familiar with all applicable regulations.

Safety Instructions, continuation

2.1A-39001-A03

Operation, Maintenance and Repair, continuation

Operation / Maintenance

Hydraulic operated lubrication pumps HTL 101

- shall be operated only with an installed pressure relief valve
- shall regularly be supplied with clean lubricant cartridges
- operate automatically. However, check at regular intervals (approx. every 2 days) whether the pump effectively delivers lubricant (visual check)

Disposal

Dispose of used or contaminated lubricants according to the legal regulations pertaining to environmental protection.

Exclusion of Liability

The manufacturer of the lubrication pump HTL 101 does not accept any liability for damages caused by:

- tardy replacement of the cartridges (lack of lubricant)
- contaminated lubricants
- use of lubricants that are inappropriate or only conditionally appropriate for the unit or which are not pumpable
- inappropriate disposal of used or contaminated lubricants
- arbitrary modification of system parts
- use of unauthorized spare parts and lubricant cartridges, including the usage of refilled cartridges with non-approved or contaminated lubricants

Installation



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ATTENTION!

Before installing or disassembling the lubrication pump HTL 101, ensure that the hydraulic system of the carrier unit (the supply to the lubrication pump) is depressurized.

It is forbidden to manipulate the protection devices installed on the hydraulic unit.

If necessary, these devices may be removed temporarily during the installation of the pump.

The devices must be properly put back in place after installation.

Use only original spare parts or spare parts and cartridges authorized by Lincoln (see spare parts list, page 18).



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IMPORTANT

Observe the installation guidelines and instructions of the machine/unit manufacturer when drilling and welding, as well as the specified minimum distance on vehicle/chassis frames for holes between upper/lower rim of the frame or between two bore holes.

Installation and Maintenance of Hydraulic Hoses



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ATTENTION!

The operational safety of the lubrication pump HTL 101 is only guaranteed with a professional installation and maintenance of hydraulic hoses/lines. The following points must be observed!

Hydraulic Hose/lines

- may never be subjected to torsion
- must be installed twist-free
- must not rub against metal components or edges
- are to undergo regular visual checks and exchanged in the case of wear (or at the latest, 2 years after installation)

Pay attention with non linear installations to allow for as large a bending radius as possible. Kinks are to be avoided. In constricted installation conditions use pipe elbow unions to avoid the danger of kinking behind the hose socket.

Description

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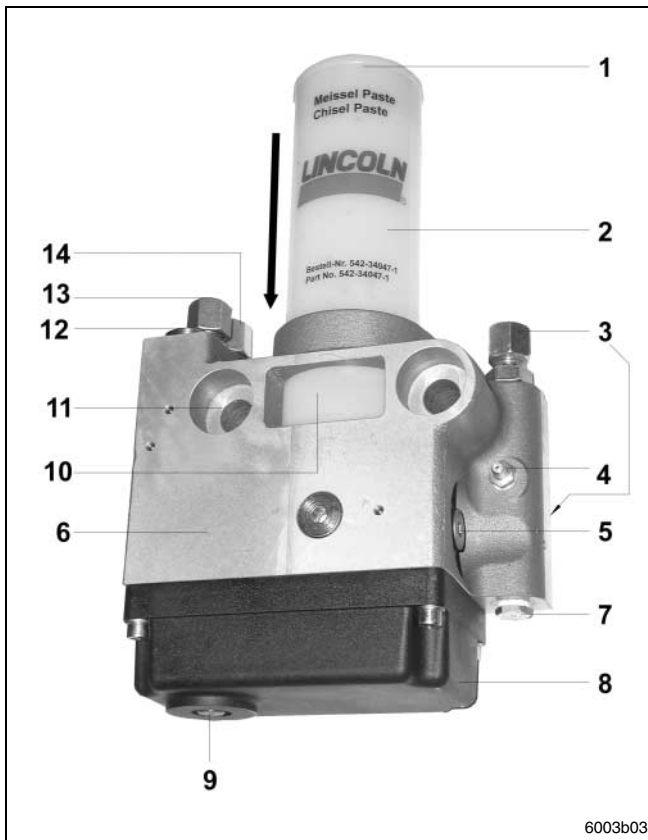


Fig. 1 Components of the Lubrication Pump HTL -101

- 1 - Follower piston, cartridge full
- 2 - Cartridge
- 3 - Lubricant outlet, G ¼
- 4 - Lubrication hydraulic fitting, for manual lubrication (M = 14Nm ±5%)
- 5 - Pump element
- 6 - Housing
- 7 - Pressure relief valve 120 bar (M = 12Nm ±5%)
- 8 - Housing cover
- 9 - Eccentric (cam)shaft
- 10- Low-level position (window) of the follower piston, cartridge empty
- 11- Fastening holes for M 14 bolts
- 12- Cover cap for the regulating throttle valve
- 13- Oil return connection R (M = 30Nm ±5%)
- 14- Oil pressure connection P (M = 30Nm ±5%)

The Pump Model HTL 101

- is a hydraulically driven grease pump for the lubrication of hydraulic hammers or other units with an available hydraulic circuit
- is compact and can therefore be fitted directly to the hammer or other units. Together with the carrier it forms a complete assembly
- is driven by the hydraulic system of the carrier
- continuously delivers lubricant to the lubrication point while the hydraulic unit is in operation and stops when the hydraulic flow stops. The lubricant quantity is adjustable via the regulating throttle valve (see Fig. 3 and 13)
- is equipped with a visual lubricant level indicator by means of the follower plate of the cartridge. If the follower plate is located in the low-level position of the cartridge (Fig. 1, item 10), the cartridge must be replaced
- is protected by means of a 120 bar pressure relief valve (Fig. 1, item 7) (cartridge)
- is equipped with an easy-to exchange pump element (Fig. 1, item 5)
- is equipped with a lubrication hydraulic fitting (Fig. 1, item 4) for manual lubrication override (e.g. if the hydraulic system fails to operate)
- does not require supplementary directional valve
- has three different outlets (Fig.1, items 3 & 7) for the individual grease supply connection of the hammer (unit)



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NOTE

If the lower lubricant outlet connection is used (Fig. 1, item 7), the outlet fitting and the pressure relief valve must be exchanged.

If the rear outlet is used, the outlet fitting and closure plug must be exchanged.

Working Method

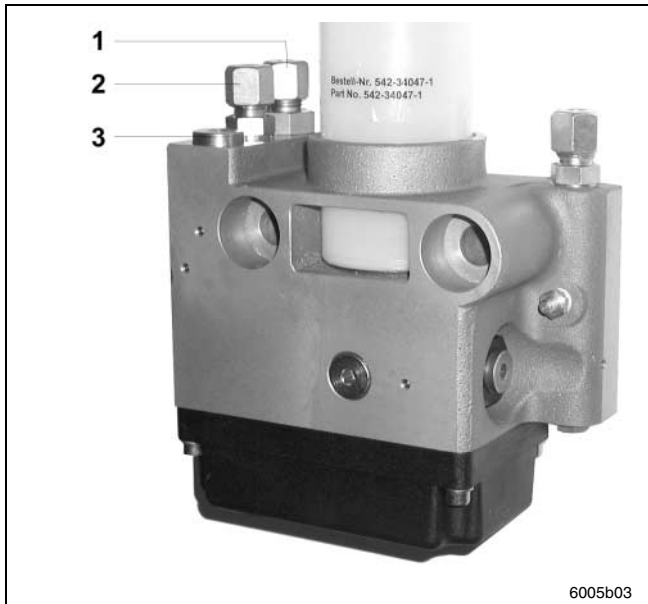


Fig. 2 Hydraulic oil connection of the pump HTL 101

- ➔ Connect the lubrication pump HTL 101 to the hydraulic system of the carrier by means of suitable hydraulic lines and connectors.
- The flow of hydraulic oil from the carrier is restricted (throttled) and flows:
 - via the pressure connection P (Fig. 2, item 1)
 - through the filter which is installed below the pressure connection
 - to the integrated hydraulic operated stepper motor
 - and back to the hydraulic system of the carrier via the return line connection R (Fig. 2, item 2)

A driving pin attached to the stepper motor activates the eccentric shaft (Fig. 4, item 1) via a one-way clutch. The pump element is thereby actuated and delivers lubricant.

The flow quantity of the hydraulic oil can be adjusted via the regulating throttle valve (Fig. 2, item 3), thereby, adjusting the output quantity of the pump accordingly. The throttle valve is notched, whereby eight notches correspond to one complete rotation.

- 1 - Pressure connection (P), M 16 x 1.5 with integrated oil strainer
- 2 - Return connection (R), M 16 x 1.5
- 3 - Cover cap for throttle valve (fine restrictor)

Adjustment and Operation

Basic Adjustment of the Throttle Valve

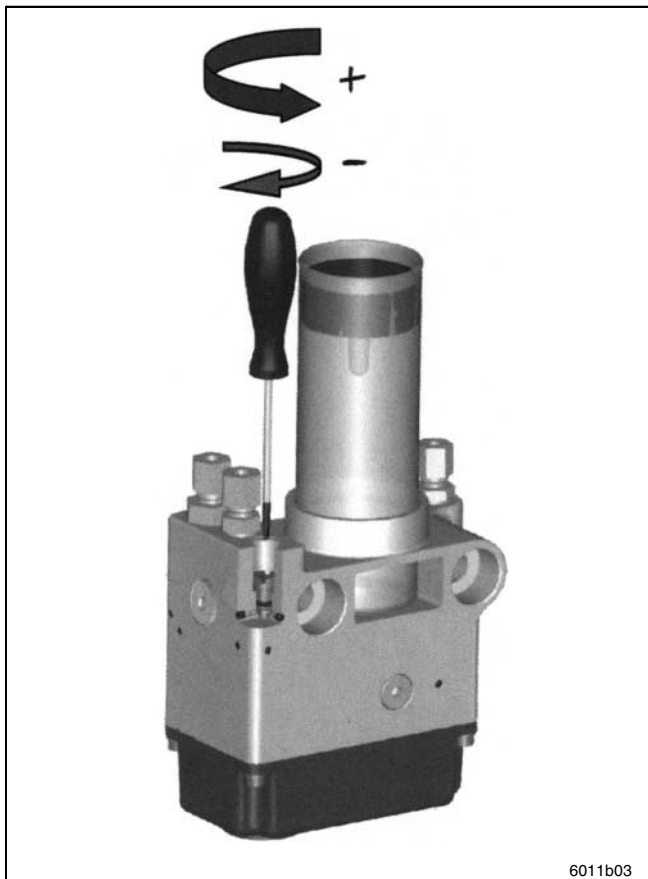


Fig. 3 Throttle Valve Adjustment

- ➔ Open the cover cap of the throttle valve (Fig. 2, item 3)
 - Turning clockwise = less lubricant
 - turning anticlockwise = more lubricant (see Fig. 3 and the flow rate diagram on page 14)



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IMPORTANT

Observe the specified lubricant quantities. The recommended speed of eccentric shaft is 4 rpm.



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ATTENTION!

To adjust the throttle valve, stop the hydraulic system operation. The throttle valve may still be pressurized for a long time after switching off the hydraulic unit. Always check first whether the pressure connection P (Fig. 2, item 1) is depressurized (the eccentric shaft no longer rotates).

Adjustment and Operation, continuation

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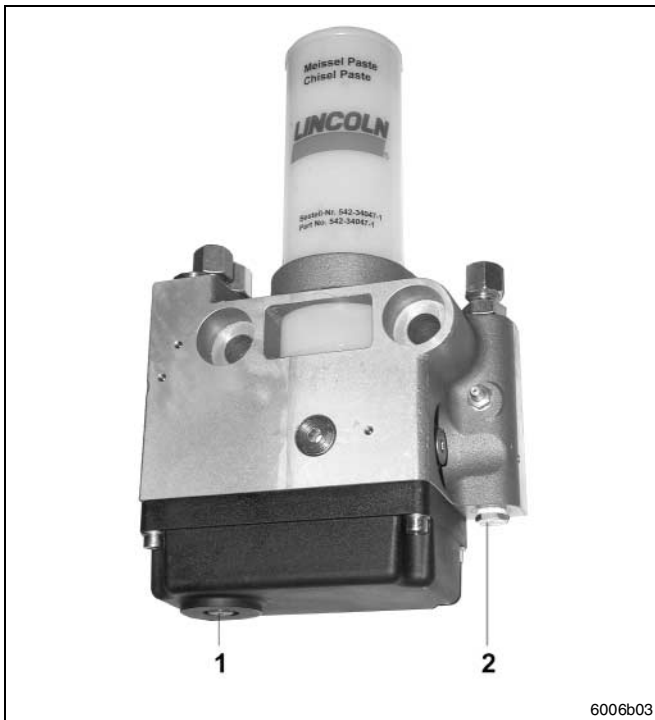


Fig. 4 Monitoring of Function

Monitoring of Function

The eccentric shaft (Fig. 4, item 1), located at the bottom of the pump housing cover, serves for checking the function. If it turns clockwise, the pump element is operating correctly.



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NOTE

Before switching on the hydraulic unit, check whether there is sufficient lubricant in the cartridge. If necessary, replace the cartridge (see chapter „Maintenance“, page 10.

IMPORTANT

The lubrication pump must be protected with a pressure relief valve (Fig. 4, item 2).

NOTE

If the lower outlet connection is used for lubricant delivery, the pressure relief valve must be fitted to the upper outlet connection.

- 1 - Eccentric shaft
- 2 - Pressure relief valve

Pump Element

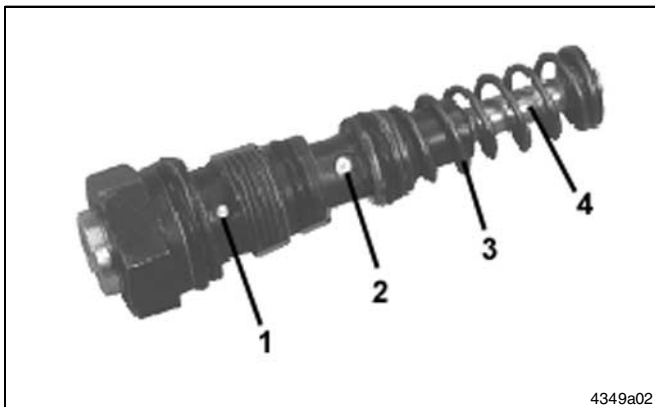


Fig. 5 Pump Element

During the operation the piston (Fig. 5, item 4) sucks in lubricant from the cartridge via the suction bore hole (Fig. 5, item 2) and delivers it to the connected lubrication point through the bore hole (Fig. 5, item 1). An integrated check valve prevents the lubricant from returning to the cartridge.

Piston diameter, C7:..... 7mm

Lubricant output:approx. 0.22 cm³/stroke

- 1 - Delivery bore hole
- 2 - Suction bore hole
- 3 - Return spring
- 4 - Piston

Pressure Relief Valve



Fig. 6 Pressure relief valve (cartridge)

The pressure relief valve

- limits the pressure build-up in the system,
- opens when a pressure of 120 bar is reached.



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NOTE

If lubricant is expelled at the pressure relief valve, this indicates that there is a blockage to, or at the lubrication point.

Maintenance

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ATTENTION!

Do not perform any maintenance or repair work or replace the cartridge while the hydraulic unit is in operation.



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ATTENTION!

Before beginning with maintenance or repair work on the lubrication pump HTL 101 and before dismantling it, ensure that the hydraulic system of the carrier is de-pressurized.

Lubricant Cartridge



Fig. 7 Cartridge with Lubricant

Capacity	400g
Lubricantup to NLGI class 2
Chisel paste	542-34047-1 ¹⁾
EP2 grease	542-34048-2 ¹⁾



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¹⁾NOTE

The cartridges are not available as single units. They are only supplied in packages of 12 cartridges.

Chisel paste	642-37608-1
EP2 grease	642-37609-2

- 1 - Closure cap
- 2 - Cartridge
- 3 - Follower plate

First insertion of cartridge

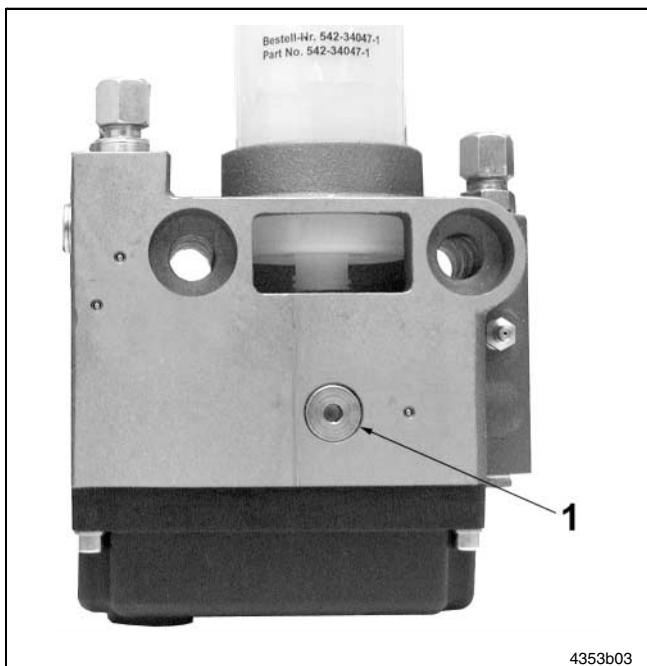


Fig. 8 Insert cartridge into the lubrication pump HTL 101

- 1 - Closure plug

- Lightly grease the inner o-ring
- Remove the closure cap (Fig. 7, item 1) from the cartridge
- Insert the cartridge in the bore hole by lightly pressing and screw it into the housing (described as in Fig. 8) hand-tightly
- Vent housing::
 - Remove closure plug (fig. 8, pos. 1)
 - Press red follower piston (fig. 7, pos. 3) into the cartridge until lubricant comes out of the open bore hole
 - Close housing with closure plug, again
- Operate the pump by switching on the hydraulic unit until lubricant flows out of the opened outlet (Fig. 1, item 3)



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NOTE

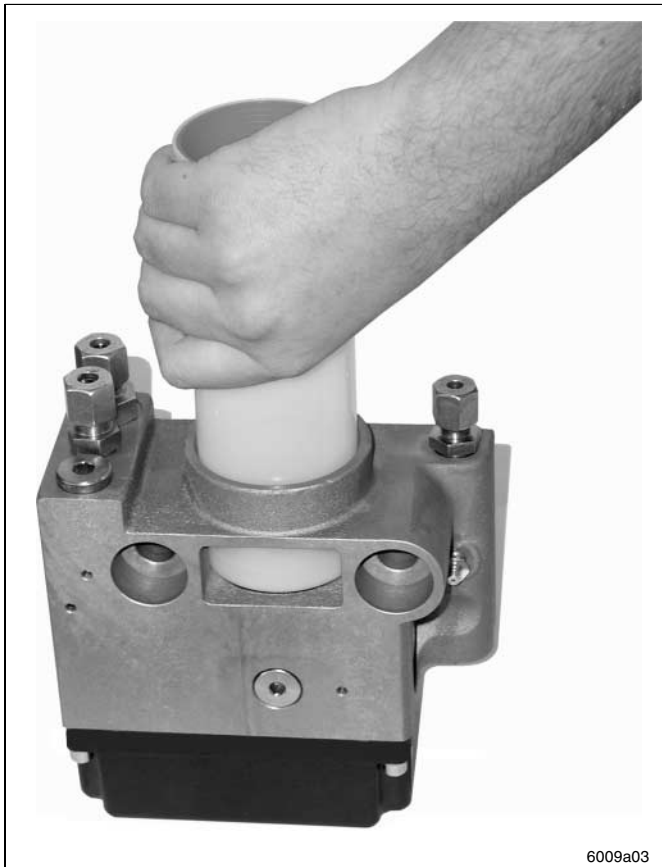
The pump delivers lubricant very slowly. It may take a while before the lubricant flows out of the outlet without air bubbles.

- Connect the supply hose to the lubrication point to one of the pump outlets (Fig. 1, items 3 & 7). Thread: G 1/4"
- Fill the lubricant supply hose to the lubrication point via the lubrication hydraulic fitting by means of a manually operated grease gun until the lubricant flows out at the lubrication point

Maintenance, continuation

2.1A-39001-A03

Cartridge Replacement



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Fig. 9 Cartridge Replacement

- Switch off the hydraulic unit
- Unscrew the old cartridge
- Remove the closure cap of the new cartridge
- Screw in the new cartridge hand-tightly in the housing
 - The pump is ready for operation again



NOTE

If afterwards the pump does not dispense lubricant immediately, vent the housing (see description, fig. 8 "vent housing").

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Removal of Oil Strainer



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Fig. 10 Cleaning the Oil Strainer

1 - Oil strainer

The oil strainer should be cleaned every 2000 operating hours. To do this, proceed as follows:

- Switch the hydraulic system of the carrier off and ensure that it is depressurized
- Remove the pressure line to the lubrication pump HTL 101
- Unscrew the oil strainer and clean it

Technical Data

2.1A-39001-A03

Ratings

Lubrication Pump HTL 101

Lubrication output:	0.22 cm ³ /stroke
Max. operating pressure (lubricant)	
- Hydraulic hammer	120 bar
- with metering device	270 bar
Admissible operating temperature ¹⁾	-25°C to 80°C
Ratio	1 : 1.65

Factory Output Settings

Speed (revolutions):	4 rpm
max. Hydraulic pressure:	250 bar
min. Hydraulic pressure:	40 bar

Standard Fitting Connections

Oil - Pressure (P)	M 16 x 1.5 mm
Oil - Return (R)	M 16 x 1.5 mm
Lubricant outlet	G 1/4"



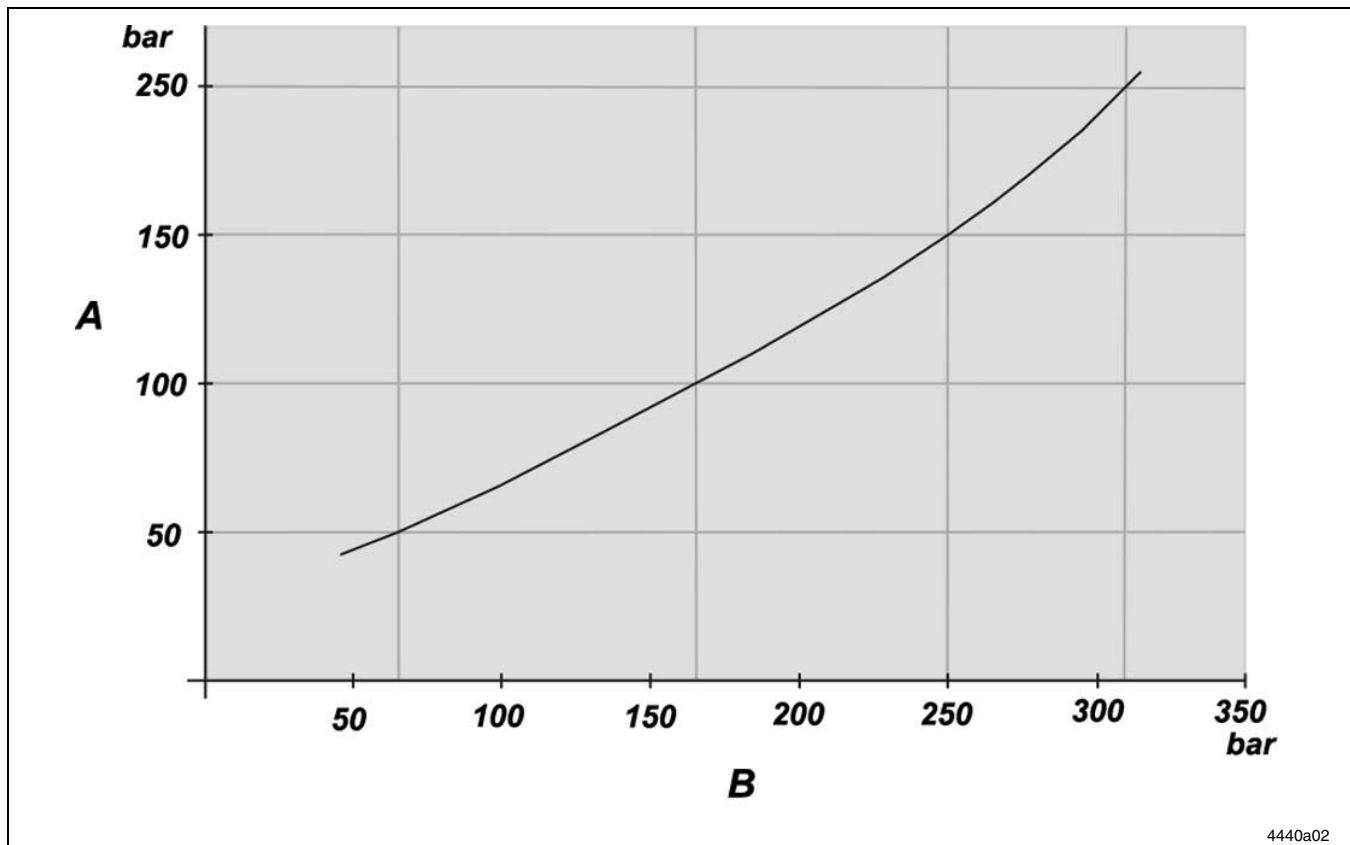
¹⁾NOTE

The minimum operating temperature depends on the pumpability of the lubricants. For Lincoln chisel pastes, it is -25°C. Observe the manufacturer's specifications for standard greases.

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Pressure Diagram: Ratio Comparison

The following pressure diagram depicts the relationship between the inlet pressure of the hydraulic system and the maximum outlet pressure of the lubrication pump with closed outlet or with a blockage. The maximum outlet pressure was determined with an EP 2 grease at room temperature.



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Fig. 11 Pressure diagram
A - Oil pressure: Hydraulic System (Inlet)
B - Delivery Pressure: Lubricant Outlet

Technical Data, continuation

2.1A-39001-A03

Dimensions

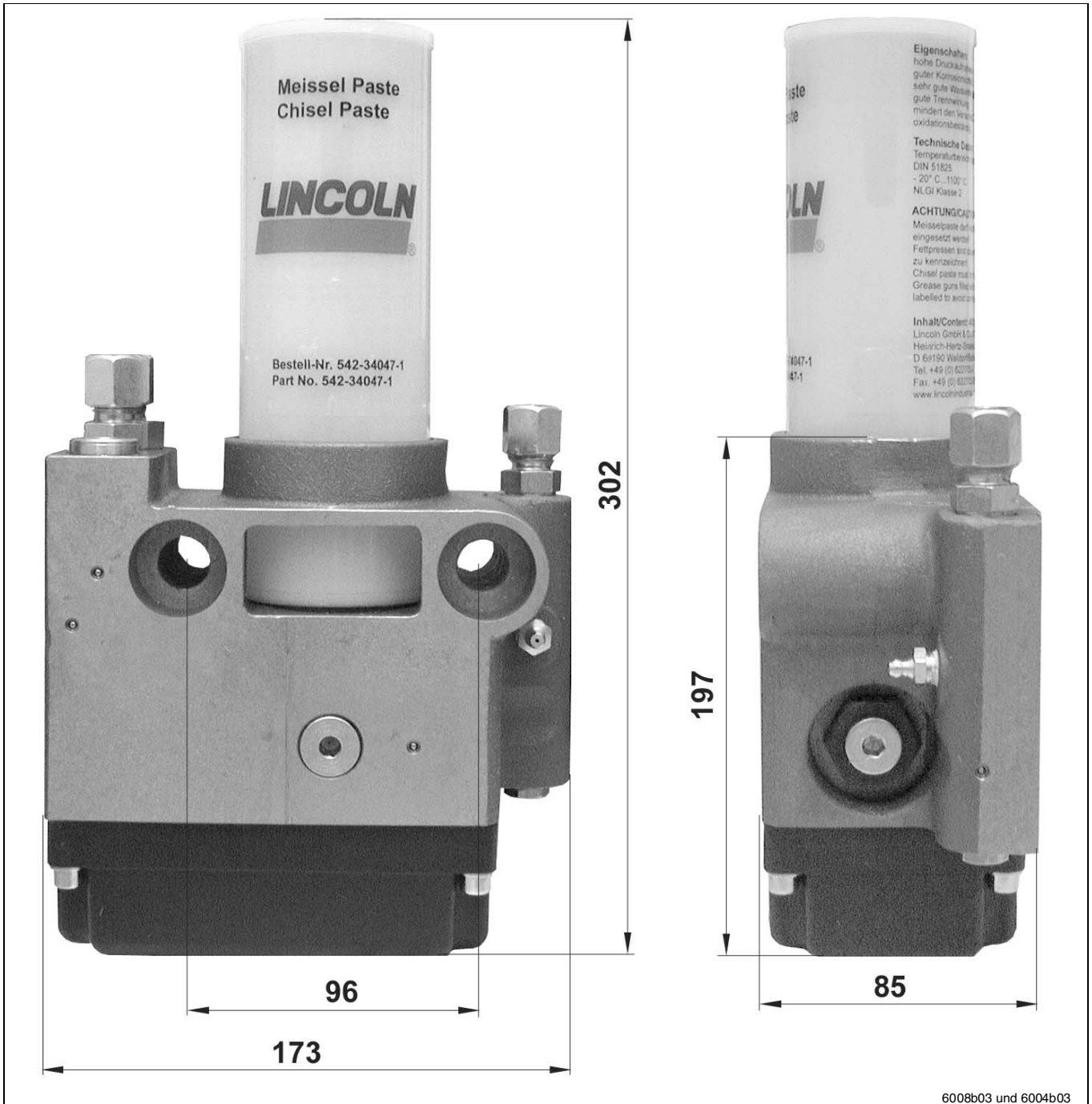


Fig. 12 Dimensions of the Hydraulic Lubrication Pump HTL 101 (all dimensions in mm)

Subject to modifications

Technical Data, continuation

2.1A-39001-A03

Flow Rate Diagram

The lubricant flow rate as a function of the throttle setting at different pressures can be read from the following flow rate diagram. The throttle valve is notched, whereby eight notches correspond to one complete rotation of the throttle.

Lubricant Output of the HTL 101 (at 10 bar back-pressure)

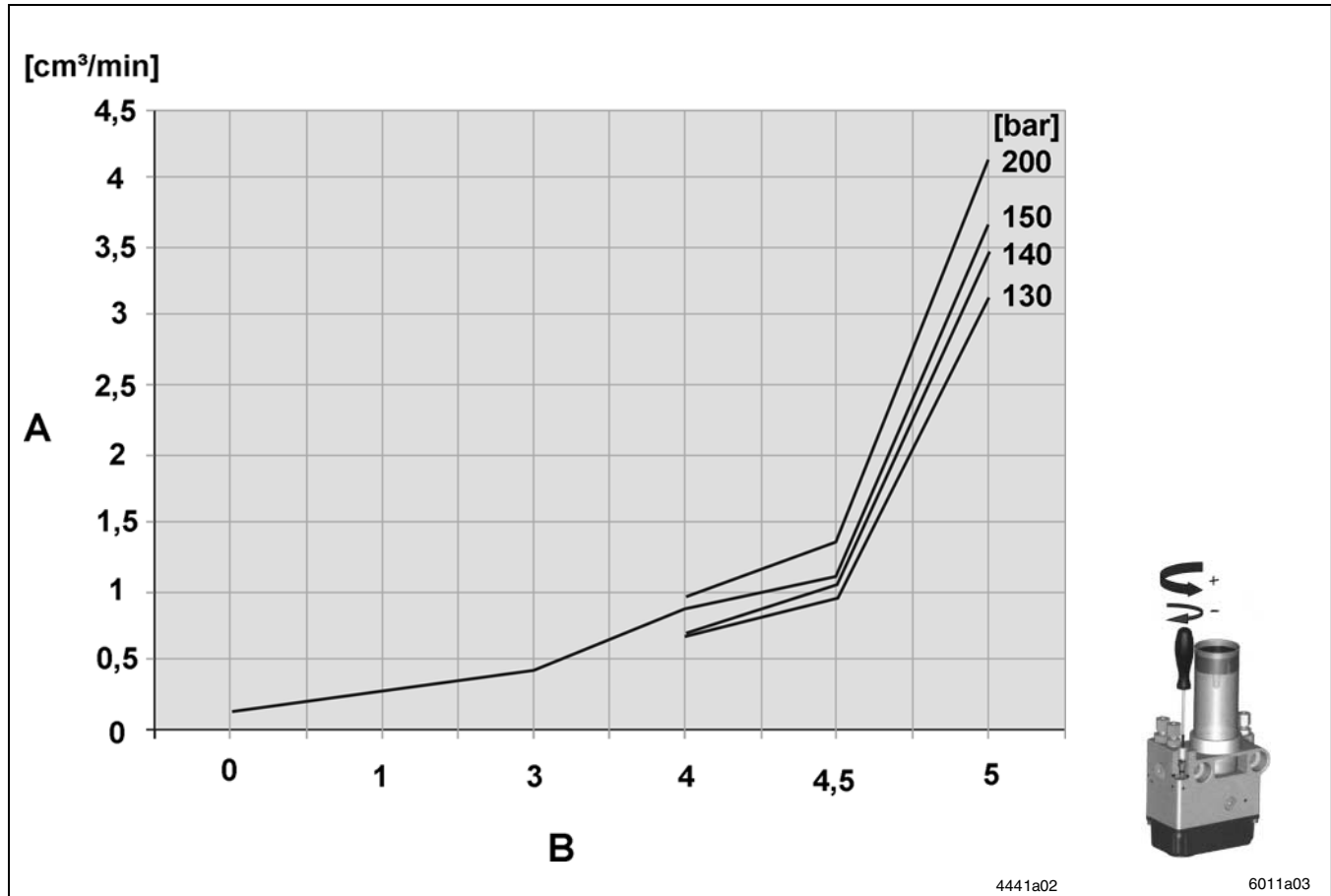
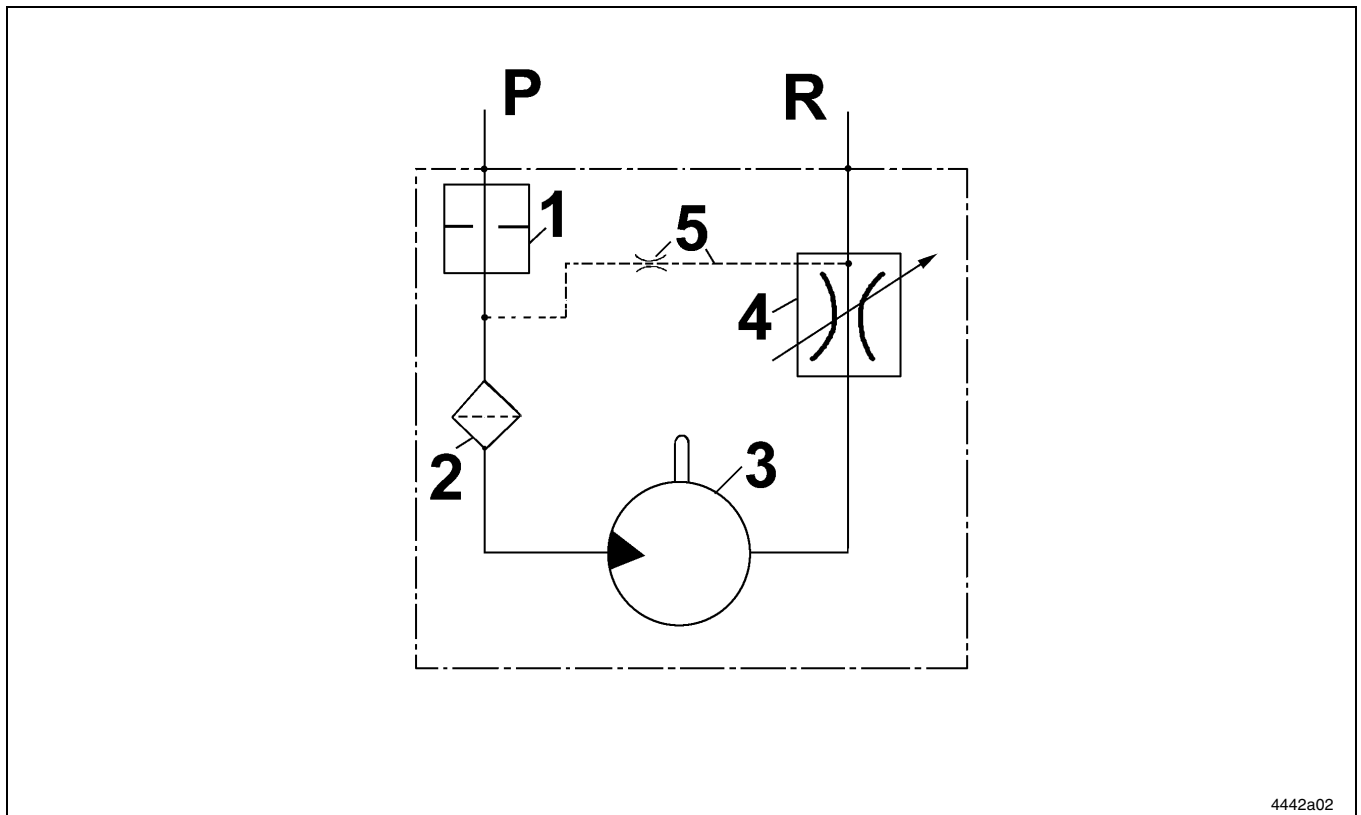


Fig. 13 Flow Rate Diagram
A - Lubricant Output (cm³/min)
B - Throttle Rotations (M8 x 0.75)

Hydraulic Circuit



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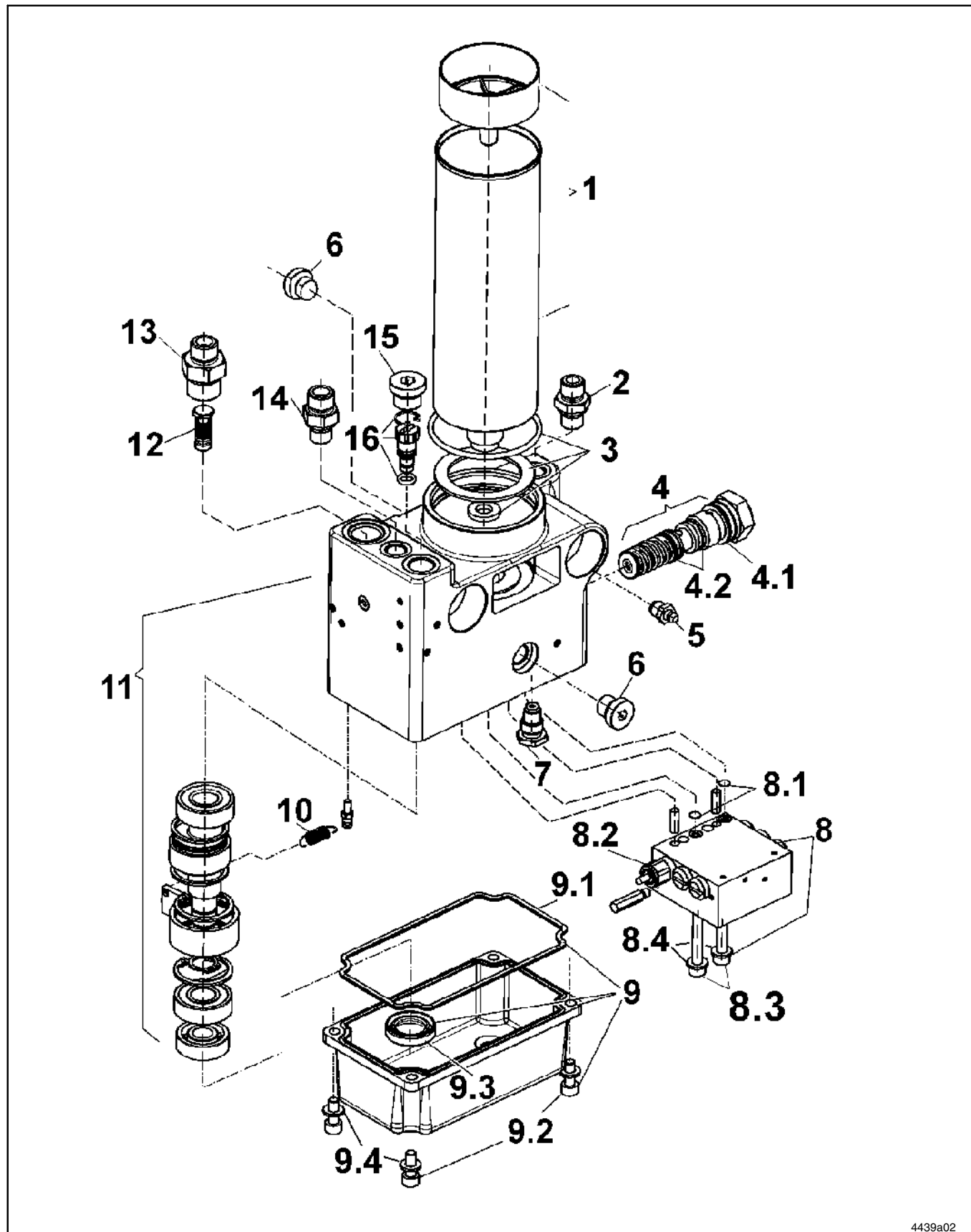
Fig. 14 Hydraulic Circuit HTL 101

- 1 - Screen
- 2 - Filter
- 3 - Stepper motor
- 4 - Throttle, adjustable
- 5 - By-pass for warming up

Components and Parts List

2.1A-39001-A03

Components with tension spring



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Fig. 15 Components with tension spring

subject to modifications

Components and Parts List, continuation

2.1A-39001-A03

Parts List with tension spring

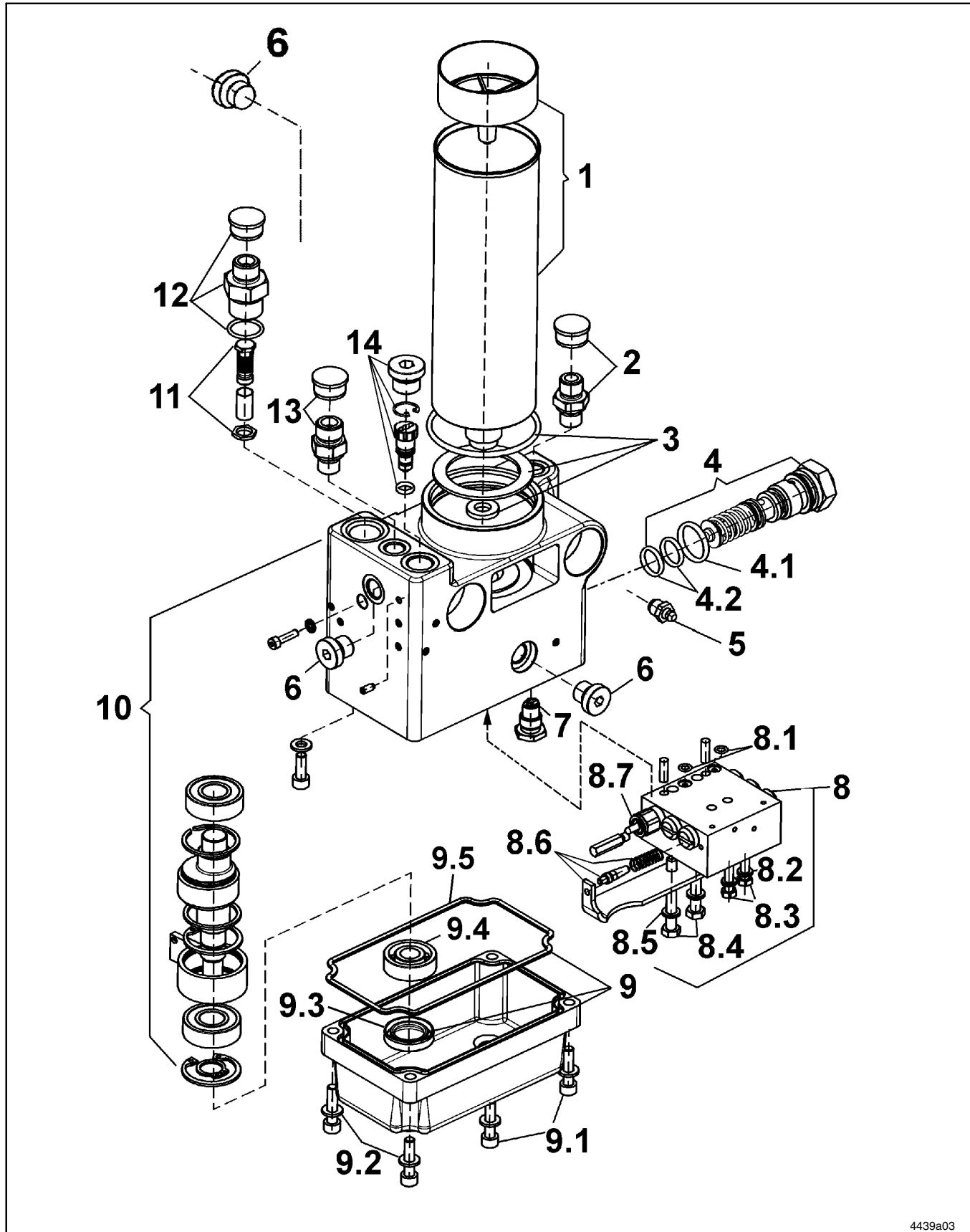
Item	Description	Qty.	Part-Number	Item	Description	Qty.	Part-Number
1	Cartridge with chisel paste, 400 g	1	542-34047-1	9	Housing cover, assy.	1	542-34079-4
	Cartridge with EP 2 grease, 400 g	1	542-34048-2	9.1	Sealing ring 122.7 x 2.5	1	442-70146-1
2	Connection fitting XGE 6 - SG ¼ AC	1	223-10055-5	9.2	Screw, hex-socket M6 x 16 C	4	201-13668-1
3	Kit of seals	1	542-34079-1	9.3	Package ring 12 x 30 x 7	1	220-12229-8
4	Pump element C 7	1	642-29086-1	9.4	Washer A 6.4 C	4	209-13011-5
4.1	O-ring 19.2 x 3	1	219-13053-6	10	Spring tensioner	1	218-10107-2
4.2	O-ring 14 x 2.5	2	219-13053-5	11	Pump housing, assy.	1	542-34079-6
5	Hydraulic fitting	1	251-14109-6	12	Filter, assy.	1	528-32215-1
6	Closure plug G ¼	2	223-13702-1	13	Oil inlet fitting M16 x 1.5 x M20 x 1.5 A, 8 S	1	304-19893-1
7	Valve body, 120 bar	1	235-14343-5	14	Oil outlet fitting XGE 85 G¼ A A3C	1	223-10055-4
8	Stepper motor, SSVV6-K, assy.	1	542-34079-5	15	Closure plug, G¼	1	223-13702-1
8.1	O-ring 2.9 x 1.78	2	219-12222-1	16	Throttle valve, assy.	1	542-34079-2
8.2	Coupling nut M11 x 1 x 5.0 F	1	519-32307-1				
8.3	Screw, hex-socket M6 x 45 C	2	201-13668-8				
8.4	Washer A 6.4 C	2	209-13011-5				

Tab. 1 Parts list with tension spring

Components and Parts List, continuation

2.1A-39001-A03

Components with pressure spring



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Fig. 16 Components with pressure spring

subject to modifications

Components and Parts List, continuation

2.1A-39001-A03

Parts List with pressure spring

Item	Description	Qty.	Part-Number	Item	Description	Qty.	Part-Number
1	Cartridge with chisel paste, 400 g	1	542-34047-1	9	Housing cover, assy.	1	542-34079-4
	Cartridge with EP 2 grease, 400 g	1	542-34048-2	9.1	Hex. head screw, M6 x 16 C	4	201-13668-1
2	Connection fitting XGE 6 - SG ¼ AC	1	223-10055-5	9.2	Shim St A 6.4 C	4	209-13011-5
3	Kit of seals	1	542-34079-1	9.3	Package ring 12 x 30 x 7	1	220-12229-8
4	Pump element C 7	1	642-29086-1	9.4	Bearing	1	250-14064-6
4.1	O-ring 19.2 x 3	1	219-13053-6	9.5	Sealing ring 122.7 x 2.5	1	442-70146-1
4.2	O-ring 14 x 2.5	2	219-13053-5	10	Pump housing, assy.	1	542-34079-6
5	Hydraulic fitting	1	251-14109-6	11	Filter, assy.	1	528-32215-1
6	Closure plug G ¼	3	223-13702-1	12	Oil inlet fitting M16 x 1.5 x M20 x 1.5 A, 8 S	1	304-19893-1
7	Valve body, 120 bar	1	235-14343-5		O-ring	1	219-12451-3
8	Stepper motor, SSVV6-K, assy.	1	542-34079-5	13	Oil outlet fitting XGE 85 G¼ A A3C	1	223-10055-4
8.1	O-ring 2.9 x 1.78	2	219-12222-1	14	Throttle valve, assy.	1	542-34079-2
8.2	Safety washer, dia. 6.5 C	2	211-10213-1				
8.3	Hex. head screw M6 x 50 C	2	200-10218-2				
8.4	Hex. head screw M5 x 40 C	2	200-10218-1				
8.5	Safety washer, dia. 5.4 C	2	211-10213-2				
8.6	Bracket, assy. with spring	1	542-34079-7				
8.7	Coupling nut M11 x 1 x 5.0 F	1	519-32307-1				

Tab. 2 Parts list with pressure spring

Troubleshooting

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Fault: Pump does not deliver the lubricant

Cause:	Remedy:
· Cartridge empty	➤ Replace the cartridge, see page 11
· Lubricant supply blocked	➤ Check the cartridge
· No oil pressure supply	➤ Check the hydraulic system and repair it ➤ Check the tube and hose lines and replace them
· Air entrapments in the suction area of the cartridge	➤ Vent housing, see page 10 „First Insertion of cartridge“

Fault: Lubricant quantity too low

Cause:	Remedy:
· Throttle not adjusted correctly	➤ Turn the throttle anticlockwise by 1 to 2 notches (more lubricant will flow out), see Fig. 3

Fault: Lubricant quantity too high

Cause:	Remedy:
· Throttle not adjusted correctly	➤ Turn the throttle clockwise by 1 to 2 notches (less lubricant will flow out), see Fig. 3

Fault: Lubricant leaking at the cartridge inlet

Cause:	Remedy:
· Leakage	➤ Check the sealing ring in the pump unit and replace it if necessary ➤ Check whether the cartridge is threaded correctly (hand-tight seat)

Fault: Lubricant leaking at the grease outlet

Cause:	Remedy:
· Leakage	➤ Check the fittings and retighten them if necessary

Fault: Oil pressure leaking at the hydraulic system

Cause:	Remedy:
· Leakage	➤ Check the fittings and retighten them if necessary

Tab. 3 Troubleshooting

Accessories

2.1A-39001-A03

Hydraulic tubes



NOTE

For applications of pump HTL 101 on hammers, use hoses with special fittings that resist the high vibrations during the hammer's operation. Standard hose fittings are not suitable for this type of application as they would spoil within a short period of time.

6001a02

Our accessories comprise special hoses (DN 6 Type 2040N-04V02 with blue outside coating) in various lengths for the connection of pump HTL 101 (oil pressure and oil return) to the hydraulic system of a hammer. The connecting fittings are made of high-tensile special steel and are provided with fittings DKO-S RA 8 M16 x 1.5 1 C9PX-8-04S.

The following hoses can be ordered:

Part no.	Kind of connection, both sides	Tube length in mm	Material of tube
225-10194-3	DKO-S RA 8 M16 x 1.5	420	HD DN 6 2040 N-04V02
225-10194-4	DKO-S RA 8 M16 x 1.5	430	HD DN 6 2040 N-04V02
225-10194-5	DKO-S RA 8 M16 x 1.5	470	HD DN 6 2040 N-04V02
225-10194-6	DKO-S RA 8 M16 x 1.5	480	HD DN 6 2040 N-04V02
225-10194-7	DKO-S RA 8 M16 x 1.5	490	HD DN 6 2040 N-04V02
225-10196-5	DKO-S RA 8 M16 x 1.5	540	HD DN 6 2040 N-04V02
225-10194-8	DKO-S RA 8 M16 x 1.5	560	HD DN 6 2040 N-04V02
225-10194-9	DKO-S RA 8 M16 x 1.5	610	HD DN 6 2040 N-04V02
225-10196-1	DKO-S RA 8 M16 x 1.5	620	HD DN 6 2040 N-04V02
225-10196-2	DKO-S RA 8 M16 x 1.5	750	HD DN 6 2040 N-04V02
225-10196-3	DKO-S RA 8 M16 x 1.5	850	HD DN 6 2040 N-04V02
225-10196-4	DKO-S RA 8 M16 x 1.5	950	HD DN 6 2040 N-04V02
225-10193-1	DKO-S RA 8 M16 x 1.5	450	HD DN 6 2040 N-04V02
225-10193-2	DKO-S RA 8 M16 x 1.5	500	HD DN 6 2040 N-04V02
225-10193-3	DKO-S RA 8 M16 x 1.5	550	HD DN 6 2040 N-04V02
225-10193-4	DKO-S RA 8 M16 x 1.5	600	HD DN 6 2040 N-04V02
225-10193-5	DKO-S RA 8 M16 x 1.5	650	HD DN 6 2040 N-04V02
225-10193-6	DKO-S RA 8 M16 x 1.5	700	HD DN 6 2040 N-04V02
225-10193-7	DKO-S RA 8 M16 x 1.5	800	HD DN 6 2040 N-04V02
225-10193-8	DKO-S RA 8 M16 x 1.5	900	HD DN 6 2040 N-04V02
225-10193-9	DKO-S RA 8 M16 x 1.5	1000	HD DN 6 2040 N-04V02
225-10194-1	DKO-S RA 8 M16 x 1.5	1250	HD DN 6 2040 N-04V02
225-10194-2	DKO-S RA 8 M16 x 1.5	1500	HD DN 6 2040 N-04V02

Tab. 4 Hydraulic tubes

Manufacturer's declaration

2.1A-39001-A03

D	GB	F	I
Herstellererklärung im Sinne der EG-Richtlinie Maschinen 98/37/EG, Anhang II B	Declaration by the manufacturer as defined by machinery directive 98/37/EEC Annex II B	Déclaration du fabricant conformément à la directive 98/37/CEE, annexe II B	Dichiarazione del costruttore ai sensi della direttiva 98/37/CEE in materia di macchinari, Appendice II B
<i>Hiermit erklären wir, dass die Bauart von</i>	<i>Herewith we declare that the supplied model of</i>	<i>Par la présente, nous déclarons que le produit ci-dessous</i>	<i>Si dichiara che il prodotto da noi fornito</i>

Produkt: HTL 101

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, die in das o.g. Produkt eingebaut werden soll, den Bestimmungen der oben genannten Richtlinie – einschließlich deren zum Zeitpunkt der Erklärung geltenden Änderungen –entspricht.

Angewendete harmonisierte Normen, insbesondere

is intended to be incorporated into machinery covered by this directive 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 above mentioned directive –including all modifications of this directive valid at the time of the declaration.

Applied harmonized standards in particular

dans l'exécution 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 il sera installé est conforme aux dispositions de la directive ci-dessus, y compris les modifications qui y auront été apportées et qui seront valides à la date de la déclaration.

Normes harmonisées, notamment

è destinato all'installazione su di un macchinario e che la sua messa in funzione non sarà autorizzata fino a quando non sarà stata accertata la conformità del macchinario, sul quale esso dovrà essere installato, in relazione alle disposizioni della direttiva 98/37/CEE –comprese tutte la rettifiche di questa direttiva al momento della dichiarazione.

Norme armonizzate applicate in particolare

Normen: EN 292-1; EN 292-2; EN 809

17.07.2002 Z. Paluncic

(Datum / Unterschrift)

(date / signature)

(date / signature)

(data/firma)

GR	E	P	NL	DK
Δηλώση του κατασκευαστή του σμφ. με τις προδιαγραφές: 98/37/ΕΟΚ, παρ. II Β	Declaración del fabricante conforme con la Directiva CE sobre máquinas 98/37/CEE, Anexo II B	Declaração do Fabricante segundo directiva CE 98/37/CEE, Anexo II B	Verklaring van de fabrikant inzake de richtlijn betreffende machines, (98/37/EEG, bijlage II B)	Fabrikantens erklaring i henold til EF-lovgivning om maskiner 98/37/EØF bilag II b
<i>Δια τα παροντος σας γνωστοποιουμε, οτι το προιον</i>	<i>Por la presente, declaramos que el modelo suministrado</i>	<i>Em anexo declaramos que o modelo fornecido</i>	<i>hiermede verklaren wij, dat de</i>	<i>Hermed erklæres, at</i>

Produkt: HTL 101

προοριζεται για τοποθετηση εντος μηχανηματος, και οτι δεν επιτρεπεται να τεθει σε λειτουργια μεχρις οτου διαπιστωθει, οτι το μηχανημα εντος του οποιου προκειται να τοποθετηθει ανταποκρινεται στις προαναφερομενες ισχυουσες προδιαγραφες (συμπεριλαμβανομενων των αλλαγων που ισχυουν και που εγιναν στο χρονικο αυτο διαστημα).

Προσθετα προς εφαρμογην χρησιμοποιηθησε εναρμιονισμενες προδιαγραφες

es destinado a ser incorporado en una máquina y que su puesta en servicio está prohibida antes de que la máquina en la que vaya a ser incorporado haya sido declarada conforme a las disposiciones de la Directiva en su redacción 98/37/CEE –incluso las modificaciones de la misma vigentes a la hora de la declaración.

Normas armonizadas utilizadas, particularmente

deverá ser incorporado na maquinaria coberta por esta directiva e não poderá ser colocado em serviço até a maquinaria na qual é para ser incorporado for declarada em conformidade com as provisões da directiva acima mencionada / incluindo todas as modificações desta directiva válida desde a emissão desta declaração.

Normas harmonizadas utilizadas, em particular

ertoe bestemd is, ingebouwd te worden in een machine en dat een inwerkstelling verboden is, voordat vastgesteld is, dat de machine, waarin deze machine wordt ingebouwd, in overeenstemming met de bepalingen van de richtlijn 98/37/EEG –ingesloten de tot dit tijdstip geldende veranderingen van deze richtlijn - verklaard is.

Gebruikte geharmoniseerde normen, namelijk

er bestemt til inkorporering i en maskine og at igangsætningen forbydes indtil der er konstateret, at maskinen, som skal inkorporeres i denne maskine, er bragt i overensstemmelse med alle relevante bestemmelser, samt ændringer gældende på deklarationstidspunktet.

Harmoniserede standarder, der blev anvendt, i særdeleshed

Normen: EN 292-1; EN 292-2; EN 809

17.07.2002 Z. Paluncic

(ημερομηνια / υπογραφή)

(fecha / firma)

(Data / assinatura)

(Datum/ handtekening)

(dato/underskrift)

Note:

2.1A-39001-A03

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