Operating Instructions
GTP Filler pump

GTP

810-53479-EN
Rev.: 009
25/01/2024

EC Declaration of conformity

(following machinery directive 2006/42/EC, Annex II Part 1 A)

The manufacturer
SKF Lubrication Systems Germany GmbH, Heinrich-Hertz-Str. 2-8, D - 69190 Walldorf

hereby declares that the machinery

Designation	Mobile filler pump to supply lubricants from separate grease containers following the specifications stated in these instructions for the filling of lubrication pumps preferably in wind turbine generators.
Type	GTP
Part number	24-1560-35xx
Year of construction	See type identification plate

complies with all basic safety and health requirements of the following directive(s) at the time when first being launched in the market.

*:

Directives:

2006/42/EC	Machinery directive
2014/30/EU	EMC directive
2014/35/EU	Low voltage directive

Applied (harmonized) standards:

DIN EN ISO 12100:2011-03

DIN EN 60204-1:2006

DIN EN 809:2012-10

DIN EN ISO 4413:2011-04

DIN EN 61000-6-2:2005

DIN EN 61000-6-4:2007

In the case of alterations of the above mentioned machine not authorized by the manufacturer this EC declaration of conformity will cease. Authorized representative of the technical documentation is the head of standardization. See manufacturer's address.

Jürgen Kreutzkämper
Manager R&D Germany
SKF Lubrication Business Unit

Walldorf
20/04/2016

Declaration of conformity

Table of contents

1. Guidelines

As you read these instructions, you will notice a number of depictions and symbols which are to facilitate the navigation and understanding of these instructions. For reasons of better legibility, in these instructions we mainly use the male form for general references. Of course, the female form is also always intended.

Text representations	Meaning
Bold print	Highlighting of particularly important words or passages
• List 1	Marks lists
○ List 2	Marks lists
(parenthesis)	Item numbers
➢ Instructions	Instructions to personnel always appear in chronological order

1.1. Warnings

Activities which generate actual hazards (to life and limb or possible damage to the material) are marked by warnings. Definitely observe the instructions given in the warnings. The following warnings are possible.

Warning level		Consequence	Probability
⚠	DANGER	Death/ serious injury	imminent
⚠	WARNING	Serious injury	possible
⚠	CAUTION	Minor injury	possible
	ATTENTION	Property damage	possible

1.2. Illustrations

The illustrations used refer to a specific product. In the case of other products they may have a schematic character only. The basic functions, however, do not change.

1.3. Abbreviations

The following abbreviations may be used within these instructions.

max.	maximum		Nm	Newtonmeter
min.	minimum		incl.	including
min	minutes		i.e.	this means
s	seconds		rh	relative humidity
etc.	and so on		approx.	approximately
e.g.	for example		Ø	diameter
ml	millilitre		®	registered trademark
mm	millimetre		©	Copyright
°C	degrees Celsius		TM	Trademark
°F	degrees Fahrenheit		%	per cent
K	Kelvin		dB (A)	sound pressure level
inch	inch		>	greater than
etc.	et cetera		<	less than
kg	kilogram		±	plus minus
l	litre		SW	width across flats

1.4. Manufacturer and Service addresses

Manufacturer	Customer Service
SKF Lubrication Systems Germany GmbH Heinrich-Hertz-Str. 2-8 DE - 69190 Walldorf	SKF Lubrication Systems Germany GmbH Central Customer Service Dept. P.O. Box 1263 DE - 69183 Walldorf

1.5. Warranty

The instructions do not contain any information on the warranty. This can be found in our general terms and conditions.

1.6. Copyright

1.7. Training courses

In order to provide a maximum of safety and economic viability, SKF carries out detailed product training courses. It is recommended that the training courses are attended. Please contact SKF Customer Service for information.

1.8. *Inspection of the delivery*

The delivery must be inspected for completeness based on the delivery papers. Transport damages must be reported to the forwarder immediately. Keep the packaging material until any discrepancies are resolved.

1.9. *Returns*

Clean all parts and pack them properly before returning them. Mark returns on the packaging as follows.

	Do not burden
	Protect against moisture!
	Caution, fragile. Do not throw

2. Safety information

Safety information is to be read and observed by any persons entrusted with works on the pump or by those persons who supervise or instruct the before-mentioned group of persons. It is prohibited to commission or operate the machine prior to reading the Instructions. These Instructions must be kept at an accessible location for further use.

2.1. *Disclaimer*

Observation of these instructions is the prerequisite for safe operation and the achievement of product characteristics and performance levels. The manufacturer shall bear no liability for damages - of any kind - resulting from the non-observance of these instructions.

2.2. *Emergency stopping of the pump station*

In case of an emergency stop the pump station by:

- Releasing the cable remote control
- Switching off the ON/OFF switch
- Disconnecting the power supply (pull the power plug of the pump).

2.3. *Intended use*

Mobile filler pump to supply lubricants from separate grease containers following the specifications stated in these instructions for the filling of lubrication pumps preferably in wind turbine generators.

2.4. *Pump operation*

Operation is permitted only, if in compliance with:

- All information given in these instructions or stated in the referenced documents.
- All laws and regulations to be complied with by the user.

2.5. *Conversions or modifications*

Unauthorized conversions or modifications may result in unforeseeable impacts on safety. Therefore, any unauthorized reconstructions or changes are expressly prohibited.

2.6. *Foreseeable misuse*

Any usage differing from the aforementioned conditions and stated purpose is strictly prohibited. It is expressly forbidden:

- to lift additional load on the transport brackets of the pump (e.g. grease reservoir).
- to directly feed centralized lubrication systems
- to supply, transport, stockpile pressure-dependent explosive lubricants
- with hydraulic hoses different from those stated in these instructions.
- For the supply, transport, and stockpiling of hazard group I fluids following directive 67/548/EC.
- For the supply, transport, stockpiling of gases, liquefied gases, dissolved gases, vapours, and fluids whose vapour pressure exceeds normal atmospheric pressure (1013 mbar) by more than 0.5 bar at the maximum admissible operating temperature.

2.7. *Inspections*

The following inspections were carried out prior to delivery:

- Electrical inspections following EN 60204
- Electrical inspections following BGV A 3
- Functional tests

2.8. *Warning labels on the machine*

<table>
<tr><td>  </td><td>Warning of electric shock</td><td rowspan="2">  </td><td rowspan="2">Observe associated instructions</td></tr>
<tr><td>  </td><td>Risk of crushing between:
- Pump and frame
- Frame and grease reservoir
- Follower plate and grease reservoir
- Follower plate and transportation drum</td><td>  </td><td>Directional arrow of motor</td></tr>
<tr><td>  </td><td colspan="3">Warning of suspended load
When lifting the transportation drum make sure to secure it with ropes on the GTP pump against falling.</td></tr>
</table>

2.9. Other applicable documents

In addition to these instructions, the following documents must be observed by the respective target group:

- Safety data sheet of the lubricant used.
- Operational instructions and release provisions by the operator.

The operator must supplement these documents with the relevant applicable national regulations of the country of use. If the product is sold or transferred, any associated documents must be passed on to the subsequent operator as well.

2.10. Sources of hazard

The pump has been designed and built using state-of-the-art technology. It will have left our company only after having passed stringent safety and reliability tests. Like for all complex machines, also for this pump there may still be involved potential sources of hazard. For example:

2.11. Moving, rotating parts

- Drive motor / follower plate / annular gear pump

2.12. Energies

- Electricity
- Temperature (hot or cold surfaces)
- Position energy (raised components)
- Overpressure (parts subject to operating pressure)
- Underpressure (between follower plate and grease level)

2.13. Lubricants

- Lubrication grease:

2.14. Persons authorized to operate the pump

2.15. Operator

A person who is qualified by training and experience to carry out the functions and activities related to normal operation. This includes avoiding possible hazards that may arise during machine operation.

2.16. Specialist for maintenance and repairs

A person who is qualified by training, knowledge and experience to identify and assess possible risks and hazards during work, assembly or repair on the machine in potentially explosive areas and to initiate suitable measures to prevent such risks.

2.17. Protection of special groups of persons

The respective legal employment restrictions do apply.

2.18. Safety recommendations to be complied with

2.19. General behaviour when handling the machine

- The pump may be used only in awareness of the potential dangers, in proper technical condition, and according to the information in these instructions.
- Familiarize yourself with the functions and operation of the product. The specified assembly and operating steps and their sequences must be observed.
- Any unclear points regarding proper condition or correct assembly/ operation must be clarified. Operation is prohibited until issues have been clarified.
- Keep unauthorized persons away.
- Precautionary operational measures and instructions for the respective work must be observed.
- Responsibilities for different activities must be clearly defined and observed. Uncertainty seriously endangers safety.
- Protective and safety equipment must not be removed, modified or affected otherwise in its function and is to be checked at regular intervals for completeness and function.
- Remedy occurring faults in the frame of responsibilities. Immediately inform your superior in the case of faults beyond your competence.
- Wear personal protective equipment always.
- When handling lubricants or operating materials, adhere to the respective safety data sheets.
- Never use parts of the pump as standing or climbing aids.

2.20. Transport

- In case of ground transport, transport the pump in the transportation drum. Lifting the pump out of the transportation drum is allowed only with the help of a second person.
- For transportation of the pump to the gondola make sure to use only tested lifting tools and load-carrying devices of sufficient load-carrying capacity. **In case of transportation of the pump via transportation bracket:** Lift the pump on the transport bracket only. Do not attach further load. Further load (e.g. grease container) must be lifted separately. Do not stay below any lifted load. Check the transport bracket and transportation drum for damages at regular intervals.
- Lifting the pump outside of the mast is allowed up to Beaufort wind force scale 6 (wind speeds from 10 to 13 m/s) only. Observe the increasing wind speed at greater heights.

2.21. Installation / start-up / operation

- Other units of the wind turbine generator must not be damaged or impaired in their function by the installation / operation of the pump.
- Carry out installation works only after depressurizing and disconnecting the pump from the power grid. Work on electrical components must be carried out by electrical specialists only. Do not touch cables or electrical components with wet or damp hands.
- Before the electrical connection check the power cable for damages. Connection only to undamaged protective contact socket and within the allowed specifications.
- Ensure through suitable measures that movable or detached parts are immobilized during assembly and that no limbs can be caught in between by inadvertent movements.
- Assemble the pump only outside of the operating range of moving parts, at an adequate distance from sources of heat or cold.
- When assembling the grease reservoir do not reach between the rim of the reservoir and the follower plate. Risk of crushing hands and fingers! Make sure to carry out the assembly of the grease reservoir with 2 persons.
- Immediately bind and remove any lubricant leaked or spilled during assembly of the grease reservoir with a suitable binding agent. Observe the legal or company regulations on dealing with oils and greases and contaminated parts.
- If necessary, secure the pump with adequate means (e.g. chain, hooks, ropes) against tilting, e.g. due to pulling the hydraulic hose extremely.
- Avoid damages to the hydraulic hose. When operating the hydraulic hose, do not move it over sharp edges or chafing points. Check the hydraulic hose for damages at regular intervals.
- Regularly check that:
    - All protection and safety devices are completely available and functional.
    - All connections are correctly connected.
    - All parts are correctly installed.
    - All warning labels on the machine are completely available, highly visible and undamaged.
    - Illegible or missing warning labels are replaced without delay.

2.22. Maintenance and repair

- Use adequate lifting devices when working with heavy components.
- Avoid mixing up or wrong assembly of dismantled parts. Mark these parts accordingly.
- Carry out all works on electrical components using voltage insulated tools only.

2.23. Cleaning

- Risk of fire and explosion when using inflammable cleaning agents. Only use non-flammable cleaning agents suitable for the purpose.
- Do not use steam jet or high pressure cleaners. Electrical components may be damaged. Observe the IP protection class.
- Cleaning work on energized components may be carried out by electrical specialists only.
- Do not touch cables or electrical components with wet or damp hands.
- Mark and secure wet areas accordingly.

2.24. Disposal

At the end of its service life, the pump must be dismantled correctly and disposed of according to the respective valid provisions.
It is forbidden to use parts of a pump that is to be disposed of or to assemble these parts to make a new pump.

3. Technical data

Motor	
Supply voltage	230 V AC
Frequency	50 Hz ± 10 %
Line fuse	C 10 A or B 16 A
Max. current consumption	approx. 9 A
Capacity	0.75 kW
Motor speed	1430 rpm^{-1}
Operating mode	S3-60%ED[1)]
Insulation class	F
Design	B 14
Starting delay	5 seconds between 2 motor starts
Automatic disconnection (Switch off)	15 minutes after the last motor start Reconnection by actuating the cable remote control

[1)] Relative duty cycle ED in relation to 10 min. playing time.

Electrical connection	
Connect the GTP pump only to a power grid with protective earth (PE).	
Rubber hose line	3 m / 3 x 1.5 mm^2 (H07RNF)

Types of protection	
IP type of protection	IP 54

Pump	
Pump	Annular gear pump
Gear	Planetary gear i = 4:1
Operating pressure	100 bar max.
Pressure control valve	150 bar (firmly adjusted)
Back pressure	100 bar max.
Operating temperature	-10 °C min. / + 50 °C max.
Operating position	upright, deviation ± 5°
Sound pressure level	< 70 dB(A)
Nominal output	2.5 l/min (+ 20 °C and 50 bar backpressure, tested with Fuchs Gleitmo 585 k)
Weight	approx. 27 kg (without grease reservoir, hydraulic hose and transportation drum)

Hydraulic hose	
Specification	HP hose KP 120 (1SC) G3/4“ NW 19
Transport / storage	Bending radius 180 mm minimum. Do not kink!
Weight	15 m/ 8.5 kg 10 m/ 6.0 kg 5 m / 4.5 kg

Lubricants	
Consistency class	NLGI 1 or NLGI 2
Flow pressure	700 mbar max.
Solids content	5 % max.
Material compatibility with:	Steel, brass, copper, aluminium, NBR, FKM, PU
Approved lubricants	
SKF	LGWM 2
Klüber	Klüberplex BEM 41-132
Fuchs	gleitmo 585 K RENOCAL FN 745/94
Mobil	SHC 460 WT (transportable up to – 5 °C)
Autol	Top 2000
Grease reservoir sizes	
Inhalt	25 kg / 30 l
Max. inner diameter	≤ 339 mm
Min. inner diameter	≥ 302 mm
Height	≤ 400 mm
Form	cylindrical / conical

Other grease reservoir sizes on request

ATTENTION

Ageing of lubricants

After a prolonged downtime, the lubricant must be inspected prior to recommissioning as to whether it is still suitable for use due to chemical or physical ageing. We recommend that you undertake this inspection already after a machine downtime of 1 week.

ATTENTION

Risk of damage to the machine or system

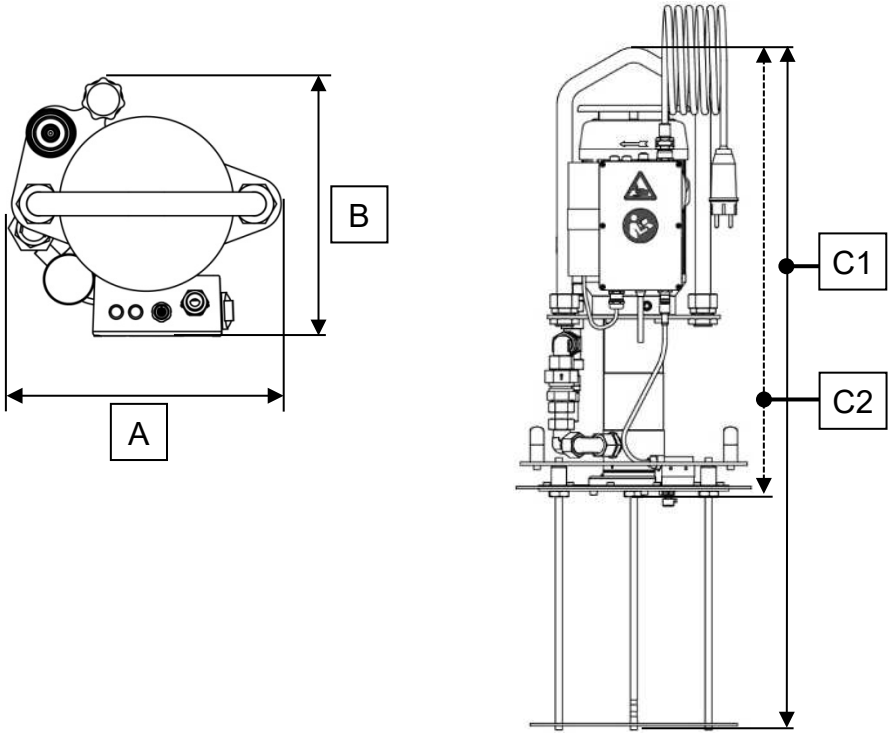
Do not mix different lubricants. This may have unforeseeable effects on the characteristics and thus on the usability of the lubricant. Therefore, always use lubricants tested by SKF. Please contact the SKF Service Department for an overview of lubricants tested by SKF.

3.1. Storage until the first use

- in the original packaging
- in dry rooms with little dust
- without direct sun or UV radiation
- without aggressive, corrosive substances at the place of storage
- without vibrations
- protected against pests (insects, rodents, etc.)

Temperature range	minimum	- 10 °C
	maximum	+ 40 °C
Relative humidity	maximum	90 %

3.2. Dimensions / space requirement



A = 250 mm C1 = 993 mm
B = 240 mm C2 = 663 mm (follower plate fully lowered)

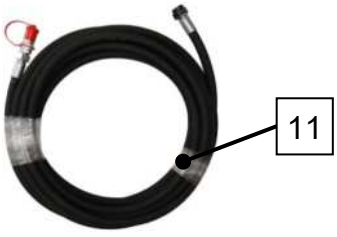
The actual space requirement depends on the dimensions of additional add-on parts, e. g. grease reservoir, hydraulic hose, etc. It is recommended that at least 100 mm are allowed in each direction for maintenance and inspection work.

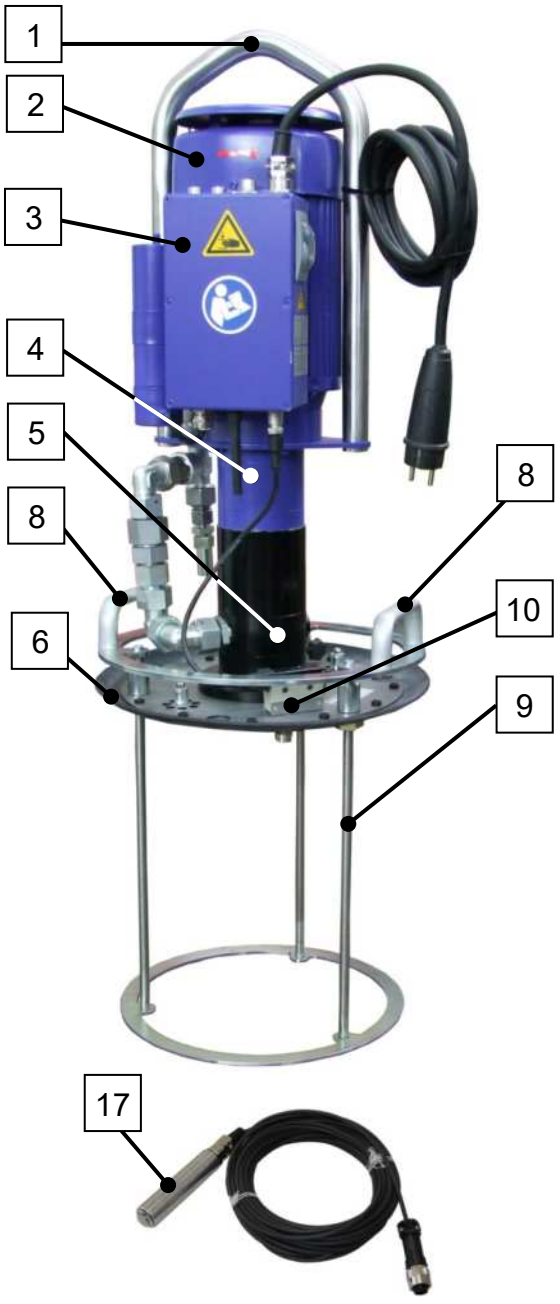
4. Brief description of the pump

The GTP pump is a compact, mobile and powerful electric pump to fill lubricant reservoirs of lubrication pumps, preferably in the wind energy sector.

The GTP pump consists of the following main components:

1 Transport bracket (option)
2 Motor
3 Electrical terminal box
4 Gear
5 Annular gear pump
6 Follower plate
7 Venting (see page 18)
8 Handles
9 Pump frame
10 Limit switch for low-level signal (option)
11 Hydraulic hose
17 Cable remote control
44 Transportation drum for transport and storage





Operating and control elements

12 Power supply
Serves to electrically connect the pump to the power grid.

13 ON/OFF switch
Serves to switch the pump on or off. When the thermal switch of the motor has been triggered, the pump must be switched on by actuating the switch again. Observe the cooling time.

14 Green lamp
Is lit when the pump is switched on and the correct supply voltage is applied.

15 Yellow lamp
Is lit when the pump is switched on and the signal by the limit switch (10) is applied. Flashes in case of a low level signal or a missing signal of the limit switch.

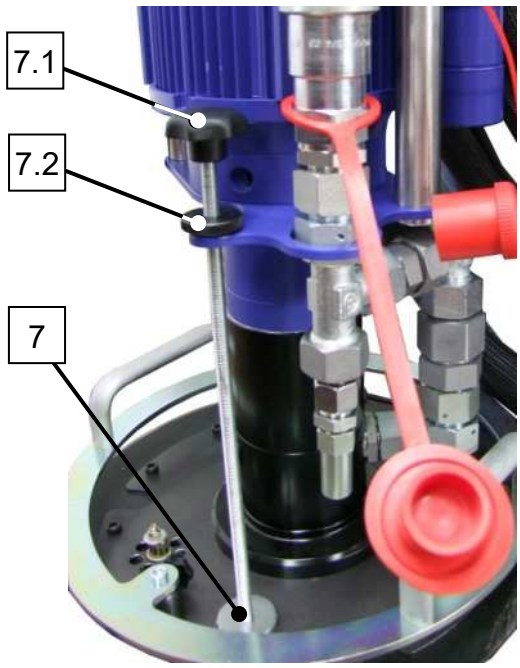
16 Electrical connection of the cable remote control
Serves to connect the cable remote control (17).

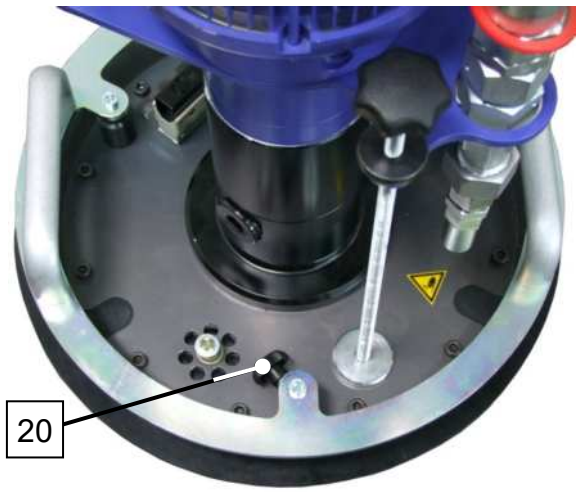
17 Cable remote control
Serves to start or stop the filling procedure. To start the filling procedure, press the button (17.1). To stop the filling procedure, release the button (17.1). The start delay between 2 motor starts is 5 s.

Operating and control elements

(7) Venting
Serves to vent the grease reservoir. Venting is required when changing the reservoir or putting the system into operation. To vent the system open the vent valve on the handle (7.1) by 3 - 4 revolutions anticlockwise.
To close the vent valve, proceed in the reverse order and additionally turn the locking (7.2) downward until it stops.

(20) Fixation
The fixation is used to fasten the follower plate (6) to the pump frame (9). Venting is required when changing the reservoir, putting the system into operation, or transporting the pump. To fix the follower plate in the upper position, turn in the fixation (20) by hand clockwise until it firmly sticks to the pump frame.





5. Start-up / standard operation

5.1. *Transport of the pump to the place of use*

WARNING

Danger to life
Do not stay below the lifted pump. Keep unauthorized persons away. Only use tested lifting tools and load-carrying devices of sufficient load-carrying capacity. When lifting the pump on the transport bracket, make sure not to lift any further loads (e.g. grease container) with it. Check the transport bracket and transportation drum for damages at regular intervals.

Lifting by means of the transport bracket

- Make sure that the pump has been fully lowered into the transportation drum and that the follower plate has been secured with the fixation.
- Attach suitable lifting tools to the transport bracket (1).
- When lifting the transportation drum (44) make sure to secure it with ropes on the GTP pump against falling.
- Slowly lift the pump.
- Do not attach further load.
- Observe the maximum wind speed when lifting it outside of the mast.

5.2. *Inspections prior to commissioning*

In order to warrant safety and function, a person assigned by the operator must inspect certain areas of the central lubrication system prior to initial commissioning. Report any detected deficiencies immediately to your superior and remedy them. Deficiencies may be remedied by an authorized and qualified maintenance and repair specialist only. Check the following points prior to initial commissioning:

- Loose/ missing items, smoke or smouldering spots
- Contaminations and corrosion
- Unusual noises
- Damages, deformations, or cracks of the hydraulic hose
- Leakages of lubricant at connections and from lines.

5.3. *Inserting the pump in a grease reservoir*

WARNING

Slipping hazard
due to leaking lubricant. Bind and remove lubricant immediately with a suitable agent. If necessary, warn other persons. Inhibit the access to the areas concerned.

WARNING

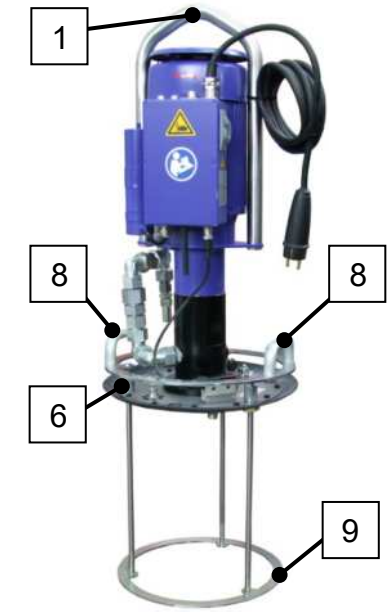
Risk of crushing hands and fingers
When inserting the pump into a grease reservoir, never reach between the rim of the reservoir and the follower plate.

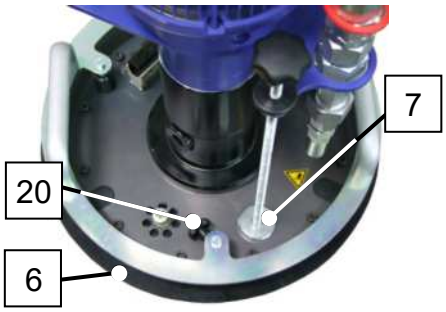
Before inserting the pump into the grease reservoir, check whether the reservoir is suitable for the pump frame. Observe the indications made in chapter 3 Technical data / grease reservoir sizes.

- Lock the follower plate (6) by means of the fixation (20) on top of the pump frame.
- Open the vent valve (7).
- Remove the lid of the grease reservoir.
- Lift the pump on the handles (8) or on the transport bracket (1) and insert it straight into the grease reservoir.
- Lower the pump frame (9) entirely into the grease reservoir by pressing down the handles (8). The pump frame must be placed on the bottom of the grease reservoir.
- Open the fixation (20).

The grease follower plate (6) sinks down onto the grease level of the grease reservoir.

- Close and lock the vent valve (7), as soon as the grease follower plate has been lowered down entirely (minor leakage from the vent valve).





5.4. Installation of the hydraulic hose

Installation of the hydraulic hose by means of a quick coupling

ATTENTION

Before the installation check the hydraulic hose with regard to damage or contamination. Do not install a damaged hydraulic hose. Remove contaminations before installation.

- Transport the hydraulic hose to the pump.
- Remove the protective cap (21) of the hydraulic sleeve on the pump.
- Remove the protective cap (22) of the hydraulic plug on the hydraulic hose.
- Pull the hydraulic sleeve downward and connect it to the hydraulic plug (quick coupling).

Installation of the hydraulic hose with connection thread

- Transport the hydraulic hose to the pump.
- Tighten the hydraulic hose on the M30 x 2 thread (41) by hand until it is firmly seated. Then tighten it with a flat wrench by another quarter of a turn.

Disassembly of the hydraulic hose is done in the reverse order.

5.5. *Installation of the cable remote control*

- Check the cable remote control for damages.
- Transport the hydraulic hose to the pump.
- Connect the cable remote control by means of the plug (18) to the pump electrically.

Disassembly of the cable remote control is done in the reverse order.

5.6. *Installation of a bridge in case of pumps without low-level signal*

In case of pumps without low-level signal there must be installed a bridge (40). To install the bridge proceed as follows:

- Remove the plug from the bottom side of the electrical terminal box and screw the bridge (1) to the low-level port.

Disassembly of the bridge is done in the reverse order, e. g. in case of a modification of the pump to a version with low-level signal.

5.7. *Standard operation*

DANGER

Electric shock
Do not touch cables or plugs with wet or damp hands. Connect the GTP pump only to a power grid with protective earth (PE).

WARNING

Risk of falling or tripping
When working pay attention to the hydraulic hose. Upon completion of the work, position the filling hose outside of the pathway.

- If necessary, connect the hydraulic hose and the cable remote control to the pump.
- Connect the pump with the cable to the power grid.
- Switch on the power supply of the pump on the switch (13)
- Route the hydraulic hose to the pump to be filled and couple it to the pump.
- Press the pushbutton on the cable remote control and fill the lubrication pump reservoir.

ATTENTION

Do not overfill the reservoir. Otherwise the reservoir could be damaged. Always observe the filling procedure!

- When reaching the maximum filling level release the pushbutton of the cable remote control.
- If necessary, repeat the filling procedure on the next lubrication pump.
- Upon completion of the work switch the pump off by means of the switch (13).

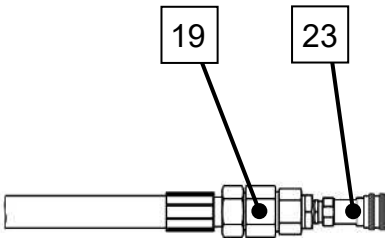
5.8. *Installation of an adapter for connection to different lubrication pumps*

5.9. *SKF lubrication pump types KFG and P203 with adapter G1/4*

For part numbers, see chapter Spare parts and accessories.

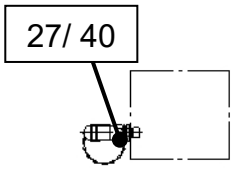
Mount the adapter to the hydraulic hose of the GTP pump

- If necessary, remove the existing adapter.
- Mount the adapter (23) to the hydraulic hose (19).



Mount the adapter to the lubrication pump

- Remove closure screw G1/4 from the KFG pump housing
- Remove closure screw M22x1.5 from the P203 pump housing
- Mount the adapter (27) into the KFG pump housing.
- Mount the adapter (40) into the P203 pump housing.

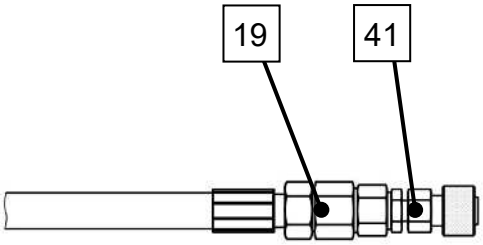


Connect the hydraulic hose

- Route the hydraulic hose to the lubrication pump.
- Connect the hydraulic hose to the lubrication pump (quick coupling).

5.10. SKF lubrication pump type KFG with adapter M 20 x 1.5

The following description applies to the KFG pump with adapter M20 x 1.5 For part numbers, see chapter Spare parts and accessories.

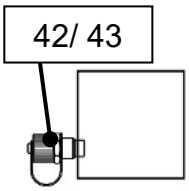


Mount the adapter to the hydraulic hose of the GTP pump

- If necessary, remove the existing adapter.
- Mount the adapter (23) to the hydraulic hose (19).

Mount the adapter to the lubrication pump

- Remove closure screw G1/4 from the pump housing.
- Mount the adapter (42 / 43) into the pump housing.



Connect the hydraulic hose

- Route the hydraulic hose to the lubrication pump.
- Connect the hydraulic hose lubrication pump and hand-tighten by means of a coupling nut.

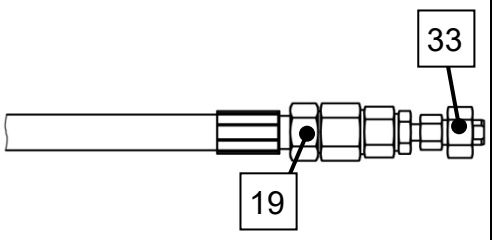
5.11. SKF pumps

The following description applies to SKF pump models P203, P223, P233, P243, P603 and P653.

For part numbers, see chapter Spare parts and accessories.

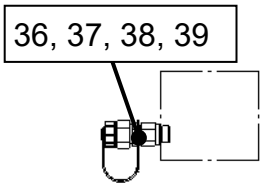
Mount the adapter to the hydraulic hose of the GTP pump

- If necessary, remove the existing adapter.
- Mount the adapter (33) to the hydraulic hose (19).



Mount the adapter to the lubrication pump

- Remove the closure screw M22 x 1.5 from the pump housing.
- Mount the desired adapter (36, 37, 38 or 39) into the pump housing,



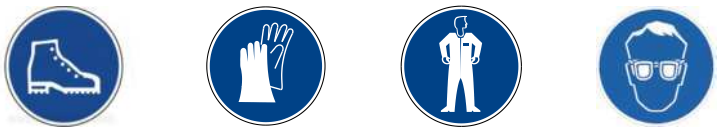
Connect the hydraulic hose

- Route the hydraulic hose to the lubrication pump.
- Position the adapter (33) of the hydraulic hose on the adapter of the lubrication pump and hand-tighten by means of a coupling nut.

5.12. Cleaning

WARNING

Risk of fire and explosion when using inflammable cleaning agents.
Only use non-flammable cleaning agents suitable for the purpose. Use steam-jet cleaners or high-pressure cleaners only in accordance with the IP protection class of the pump. Electrical components may be damaged. Do not touch cables or electrical components with wet or damp hands.
Cleaning work on energized components may be carried out by electrical specialists only. Mark and secure wet areas. Wear personal protective equipment always.



Execution, required protective clothes, cleaning agents and devices following the valid operational regulations of the operator.
Exterior cleaning Thorough cleaning of all surfaces. **Interior cleaning** Normally, interior cleaning is not required.

6. Maintenance

The pump is mainly maintenance-free.

Hydraulic hose

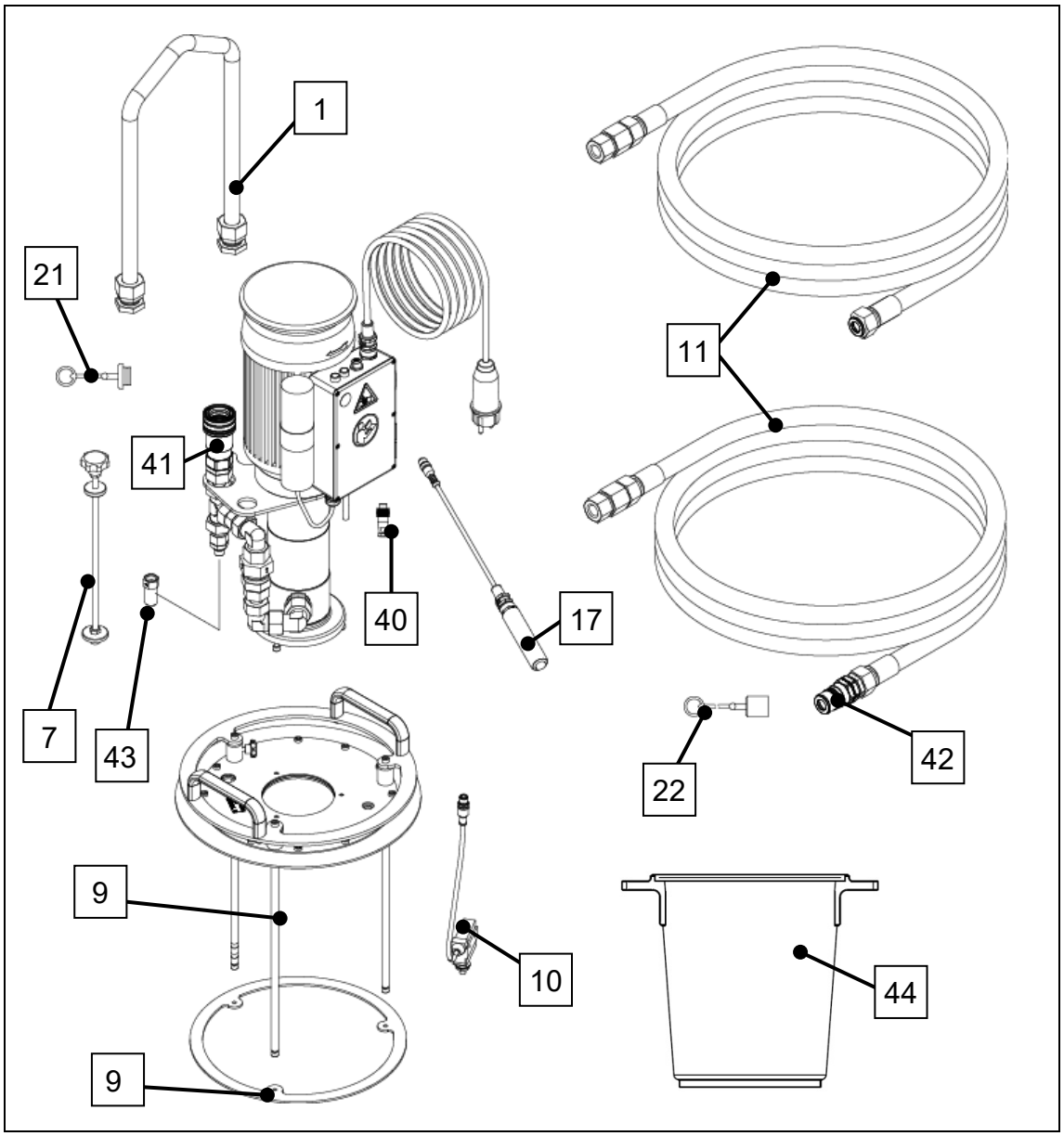
The hydraulic hose must be tested for accuracy by a qualified person according to the following indications. Replace faulty hydraulic hoses immediately. Latest after 6 years (including 2 years storing time) the hydraulic hose must be replaced.

Type of inspection	Deadline
Regularly recurring inspection	Every 12 months at the latest
Special inspection after certain incidents - Accidents, collisions, exceptional natural events - Changes to the machine/ installation of a new hydraulic hose - Longer downtimes	Immediately, at the latest before recommissioning

7. Troubleshooting

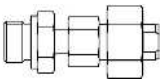
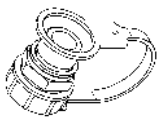
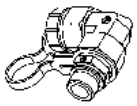
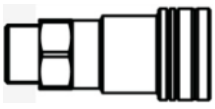
Fault	Possible cause	Remedy
No supply		
	Grease reservoir empty (yellow light flashing) Only in case of pumps with low level signal	• Replace grease reservoir.
	Pump does not run	• Switch the pump on. • Plug in the mains plug. • Check the fuse of the mains supply. • Check and switch on the thermal circuit breaker.
	Pump takes in air └ Follower plate is stuck.	• Vent the grease reservoir. • Close and lock vent valve.
	Pump with low level signal Plug of low level signal not installed correctly or sensor defective (yellow light flashing)	• Check and, if applicable, mount the sensor correctly or replace it
	Pump without low level signal Bridge not installed correctly. (Yellow light flashing).	• Check and, if applicable, mount the sensor correctly or replace it
	Electric connection of cable remote control not mounted correctly.	• Check and, if applicable, mount the sensor correctly or replace it
	Cable of cable remote control is defective.	• Replace cable remote control
	Pushbutton of cable remote control is defective.	• Replace cable remote control
Output volume too low		
	Follower plate is stuck	• Check whether fixation of the follower plate is fully open. • Check and, if applicable, went the grease reservoir
	Air bubbles in the lubricant	• Vent the grease reservoir.
If the fault cannot be determined and remedied, please contact our Customer Service.		

8. Spare parts and accessories

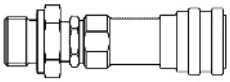
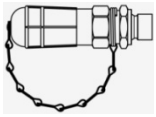
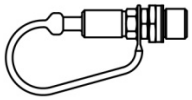


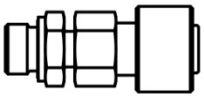
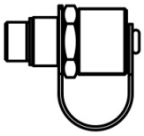
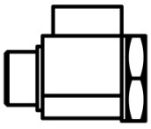
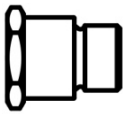
Item	Name						Part number
	A = Quick coupling	B = Transport bracket	C = Pump frame				D = Low-level signal
			A	B	C	D	---------
	Pump GTP mobile assy.		YES	YES	YES	YES	799-000-3083
	Pump GTP mobile assy.		YES	YES	YES	NO	799-000-3089
	Pump GTP stationary assy.		NO	NO	YES	NO	799-000-3087
	Pump GTP stationary assy.		NO	NO	YES	YES	799-000-3090
	Pump GTP mobile		YES	YES	---	---	24-1560-3576
	Pump GTP stationary		NO	NO	--	---	24-1560-3595
9	Pump frame with follower plate		---	---	---	YES	24-1722-2557
9	Pump frame with follower plate		---	---	---	NO	24-1722-2559
9 a	Lower steel ring of pump frame						44-0226-5116
1	Transport bracket assy.						24-9906-0263
43	Pressure control valve						995-001-884
40	Bridge for low level indication						24-6882-0079
10	Limit switch for low level indication assy.						24-9909-0261
11	Hydraulic hose assy. 5 m with plug-in coupling and outlet G1/2						24-1868-4337
11	Hydraulic hose assy. 10 m with plug-in coupling and outlet G1/2						24-1868-4338
11	Hydraulic hose assy. 15 m with plug-in coupling and outlet G1/2						24-1868-4339
11	Hydraulic hose assy. 5 m with connection M30 x 2 and outlet G1/2						24-1868-4340
11	Hydraulic hose assy. 10 m with connection M30 x 2 and outlet G1/2						24-1868-4341
11	Hydraulic hose assy. 15 m with connection M30 x 2 and outlet G1/2						24-1868-4342
17	Cable remote control assy. 5 m						24-6077-0099
17	Cable remote control assy. 10 m						24-6077-0100
17	Cable remote control assy. 15 m						24-6077-0101
41	Coupling sleeve G3/4 DN 19 (to pump)						24-1020-2604
42	Coupling sleeve G3/4 DN 19 (to pump)						24-1020-2605
21	Protective cap for sleeve						44-1860-2086
22	Protective cap for plug						44-1860-2087
7	Venting assy.						24-9909-0262
44	Transportation drum						44-2160-0002

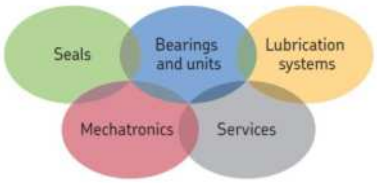
9. Spare parts and accessories for connection to SKF pumps

Connection to SKF lubrication pump models P203 / P223 / P233 / P243 / P603 / P653			
Installation to the hydraulic hose			
Pos.	Fig.	Name	Part number
33		Coupling stud assy.	24-0159-2110
Installation on pump			
36		Straight filling connection M22 x 1.5	538-36763-1
37		Straight filling connection M22 x 1.5, long	538-36763-5
38		90 ° Filling connection	538-36763-2
39		90 ° Filling connection, long (for 2 l flat, 4 l, and 8 l reservoirs)	538-36763-4
40		Coupling plug G1/2 for installation on pump P603 (filling from the top) in combination with pos. 41 on the hydraulic hose of the GTP pump	504-33395-1
41		Coupling sleeve G1/2 for installation on the hydraulic hose of the GTP pump	24-0159-2113
Without figure Without item no.		Protective plug for items 36 to 39	233-13124-8

10. Spare parts and accessories for connection to KFG pump

SKF lubrication pump KFG and SKF lubrication pump P203, connection G 1/4			
Installation on the hydraulic hose			
Pos.	Fig.	Name	Part number
23		Filler coupling sleeve assy.	24-0159-2111
Installation on pump			
27		KFG coupling plug G1/4	995-000-705
40		P203 coupling plug G1/4/ M22 x 1.5	540-31800-1

KFG Lubrication pump (S / L / C) filling connection			
Pos.	Fig.	Name	Part number
41		Coupling G1/2 for filling connection items 42 and 43	24-0159-2112
42		Straight filling connection M22 x 1.5	169-000-174
43		Straight filling connection (short) M20 x 1.5	169-000-170
44		Swivelling screw fitting 2 x M20 x1.5 Items 42 and 43	405-541-411
45		Connecting piece (extension) 2 x M20 x1.5 items 42 and 43	853-950-010



The Power of Knowledge Engineering

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

Important information on product usage

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

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