

MOBILEX GFB 8000

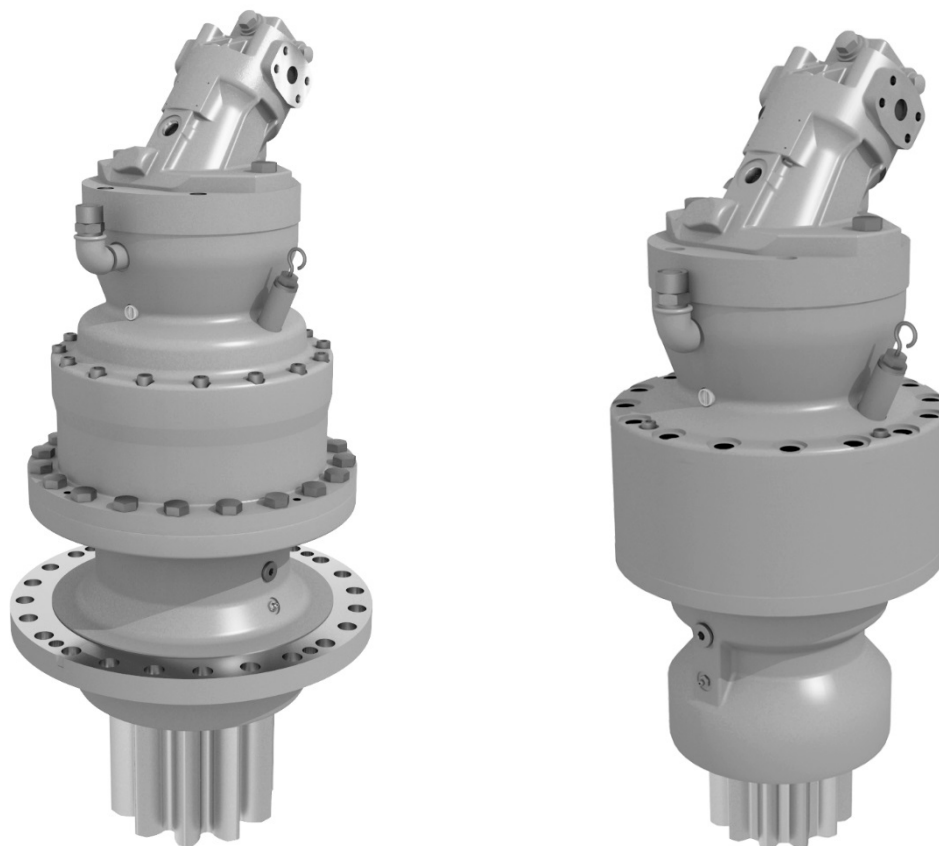
Hydrostatic swing drives for mobile applications

Series 40

Sizes 8110 - 8195

Operating Instructions
RE 79039-01-B/01.2021

Replaces: 11.2018
English



The data specified above serve to describe the product. If there is also information on the intended use, it is meant only as examples of use and suggestions. Catalog information does not constitute guaranteed properties. The information given does not release the user from obligation of own judgment and verification. Our products are subject to a natural process of wear and aging.

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A CE marking of the gearboxes as well as the EC declaration of conformity are not necessary, because the gearboxes are not a machine for the purposes of the EC-machine directive.

An example configuration is shown on the title page. The delivered product may, therefore, differ from the product which is pictured.

The original operating instructions were created in the German language.

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1 About this documentation

1.1 Validity of the documentation

This documentation is valid for the following product:

- MOBILEX GFB 8000 series 40

These general operating instructions of the hydrostatic swing drive MOBILEX GFB 8000 describes the following configurations:

- Planetary gearbox with connection options for:
 - Axial-piston motor
 - Electric motor
 - Circulating oil lubrication or oil cooling
 - Planetary gearbox (depending on the scope of supply) with :
 - Mounted axial-piston motor
 - Static multiple-disk parking brake
 - Oil dipstick
 - Eccentric
 - Additional functions, additional connections
 - Circulating oil lubrication/oil cooling
- ▶ For the valid configuration of your hydrostatic swing drive MOBILEX GFB 8000, see the chapters “Product description”, “Scope of supply” and appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- ▶ Also observe the respective chapters of these general operating instructions.

For simplification purposes, the product is referred to as “MOBILEX GFB 8000 planetary gearbox” or as “planetary gearbox” in the following chapters. This documentation addresses installers/service technicians/machine or vehicle operators.

This documentation contains important information on the safe and appropriate transport, storage, assembly, commissioning, use, maintenance, disassembly and simple troubleshooting of the planetary gearbox.

- ▶ Please read this documentation completely and in particular the chapter 2 “Safety Instructions” and chapter 3 “General information concerning damage to property and product damages”, prior to working with the planetary gearbox.

1.2 Required and supplementary documentations



- ▶ Please only commission the planetary gearbox once the documentation marked with the book icon  has been made available to you and make sure you have read, understood and followed it.

Table 1 Required and supplementary documentations

	Description	Document type
	Material number-specific operating instructions	Operating instructions (included within Rexroth's scope of supply)

1.3 Presentation of information

So that you can work with this documentation fast and with certainty when using your planetary gearbox, uniform safety instructions, icons, terminology and abbreviations are being used. For better understanding, these are explained in the following sections.

1.3.1 Safety instructions




In this documentation, safety notes are located in chapter 2.6 “Product and technology-dependent safety instructions” and in chapter 3 “General information concerning damage to property and product damages”, as well as before any sequence of actions, or sequence of instructions, where there is a danger of damage to persons or property. The measures described for avoiding hazards must be observed.

The safety instructions are structured as follows:

 SIGNAL WORD
<p>Type and source of danger</p> <p>Consequences in the case of non-compliance</p> <ul style="list-style-type: none"> ▶ Measures for danger aversion ▶ <List>

- Warning symbol: draws attention to the danger
- Signal word: identifies the degree of the danger
- Type and source of danger: identifies the type and source of danger
- Consequences: describes what occurs if the safety instructions are not complied with
- Precautions: states how the danger can be avoided.


Table 2 Danger categories according to ANSI Z535.6

Warning symbol, signal word	Meaning
 DANGER	identifies a dangerous situation where death or serious personal injury will result if it is not avoided
 WARNING	identifies a dangerous situation where death or serious personal injury may result if it is not avoided
 CAUTION	identifies a dangerous situation where mild to medium personal injury will result if it is not avoided
NOTE	identifies damage to property: The product or the environment can get damaged.

1.3.2 Symbols

The following symbols identify information which is not relevant for safety, however, does increase the coherency of the documentation.

Table 3 Meaning of symbols

Symbol	Meaning
	If this information is not observed, the product cannot be optimally used and/or operated.
▶	individual, independent action step
1 2 3	numbered action instructions: The figures show that the action steps follow on each other.

1.3.3 Terminology

The following terminology is used in this documentation:

Table 4 Terminology

Name	Meaning
MOBILEX	Registered trademark
GFB 8000	G F = Vehicle gearbox B = Slewing 8000 = Size (e.g. 8130)
Ri Chan Jia HE L-HL15	Hydraulic oil
PERIGOL VCI 230	Preservative
CUSTOS 10-38	Preservative
HAKUTEX 74	Detergent to remove preservative
HAKUPUR 236	Detergent to remove preservative
L-XBCHA3 (GB 7324-94) FAG Arcanol MULTI3 Klüberplex BE 31-222	Lithium multi-purpose grease
Screw plug	Metallic screw, pressure-resistant
Plug	Made of plastic, not pressure-resistant, only for transport

1.3.4 Abbreviations

The following abbreviations are used in this documentation:

Table 5 Abbreviations

Abbreviation	Meaning
RE	Rexroth-Document in E nglish Language
RDE	Rexroth-Document in G erman (D) and E nglish Language
DIN	D eutsche I ndustrie N orm (German Industrial Standard)
ISO	I nternational O rganization for S tandardization (Internationale Normierungsorganisation)
SAE	S ociety of A merican E ngineers
ANSI	A merican N ational S tandard I nstitute
PSA	P ersonal S afety equipment (A)

2 Safety instructions

2.1 About this chapter

This MOBILEX GFB 8000 planetary gearbox was produced according to the generally approved good engineering practice. There is, however, still a danger of personal injury or damage to equipment if the following chapter and the safety instructions of this documentation are not complied with.

- ▶ Read this documentation thoroughly and completely before working with the MOBILEX GFB 8000 planetary gearbox.
- ▶ Keep the documentation in a place where it is accessible at all times to all users.
- ▶ When passing on the MOBILEX GFB 8000 planetary gearbox to third parties, always do so together with the required documentation.

2.2 Intended use

The planetary gearbox is a subassembly.

- ▶ Refer to the material number-specific operating instructions for the intended use of your MOBILEX GFB 8000 planetary gearbox.
- ▶ Observe the operating conditions and power limits as mentioned in the technical data sheet. For this refer to the material number-specific operating instructions.

The planetary gearbox is intended only for professional use and not for private use.

Intended use includes that this documentation, especially chapter 2 “Safety instructions” has been read and understood.

2.3 Improper use

Any use other than described in intended use is not in accordance with the requirements and, therefore, is not permitted.

Bosch Rexroth AG assumes no liability for damage resulting from improper use.

The risks associated with improper use lie solely with the user.

Also the following expected foreseeable misuses are not improper use (this list is not exhaustive):

- Use outside the operating data released in the specifications or the order confirmation
- The use of inadmissible liquids, e.g. water or unreleased lubricating oils
- The use of the planetary gearbox in other applications than described in chapter 2.2 “Intended use”
- The use of the planetary gearbox and its mounting parts in explosion-prone environments
- The use of the planetary gearbox as a safety-related part of a control unit
- The use of the planetary gearbox in an environment with aggressive substances and gases
- Change of the factory settings by unauthorized persons

- The use of the planetary gearbox when the external pressure exceeds the internal pressure (housing pressure)
- The use of mounting parts (e.g. attached filter, controller, valves) other than the intended Rexroth components

2.4 Qualification of Personnel

The operations described in this documentation require basic knowledge of mechanics, electrics, hydraulics as well as knowledge of the related technical terms. Transport and handling of the planetary gearbox require additional knowledge of handling a crane or forklift (e.g. crane/forklift training, crane/forklift driver's license) and the associated means of attachment.

In order to ensure the safe use, all operations should therefore only be carried out by a respective qualified personnel or an instructed and trained person under the direction of qualified personnel.

Qualified personnel are those who can recognize possible hazards and institute the appropriate safety measures due to their professional training, knowledge and experience, as well as their understanding of the relevant regulations pertaining the work to be done. Specialists must comply with the applicable specialist regulations.

2.5 General safety instructions

- Observe all binding regulations for accident prevention and environmental protection.
- Observe all safety instructions and provisions of the country where the planetary gearbox is going to be deployed/operated.
- Only use Rexroth products which are in perfect technical condition.
- Observe all instructions on the planetary gearbox.
- Persons, who assemble, commission, operate, disassemble, or maintain Rexroth products must not consume alcohol, drugs or pharmaceuticals that may affect their ability to respond.
- Only use Rexroth original accessories and spare parts in order to prevent any hazards to persons due to improper spare parts.
- You may only start using the MOBILEX GFB 8000 planetary gearbox once it has been established that the end product (see intended use of the material number-specific operating instructions) in which the Rexroth-products are installed complies with the country-specific provisions, safety regulations and standards of the application.
- The assembly, commissioning, maintenance and disassembly of the MOBILEX GFB 8000 planetary gearbox takes place under the responsibility of the end-product manufacturer. Therefore, the product safety of the MOBILEX GFB 8000 planetary gearbox cannot be guaranteed by Rexroth during these life phases.
- You must adhere to the technical data, operating conditions and performance limits shown in the product documentation.
- The warranty shall apply to the delivered configuration only.
- The warranty is void in case of faulty installation, commissioning and operation, as well as in case of improper use and/or improper handling
- You may not modify the MOBILEX GFB 8000 planetary gearbox in principle.

2.6 Product and technology-dependent safety instructions

The following safety instructions apply to chapters 6 to 14.

WARNING

Danger during all works on the MOBILEX GFB 8000 planetary gearbox during the operation of the machine or the vehicle!

Mortal danger, risk of severe injury or damage to property during working!

- ▶ Secure the entire unit against restarting.
- ▶ Relieve any system pressure in the relevant part of the machine or vehicle before you start working on the planetary gearbox.
- ▶ Switch the relevant machine or vehicle part completely free of voltage before you start working on the planetary gearbox.
- ▶ Do not loosen any cable connections, connections or components on the planetary gearbox, as long as the planetary gearbox or the machine, the vehicle part is under oil pressure and under voltage.

Fire hazard caused by fire, smoking and naked light!

Risk of injury or damage to property from combustible materials, as for example: Lubricating oil, preserving agent, solvent, detergents and hydraulic fluid!

- ▶ In dealing with combustible materials, please observe the product data sheets and safety data sheets of the respective manufacturer.
- ▶ Do not use fire or naked light when working on the planetary gearbox, its mounting parts and when handling with combustible materials.
- ▶ Do not smoke in the vicinity of combustible materials.
- ▶ Always wear the protective equipment which is specified in the safety data sheets of the respective substance.
- ▶ When the planetary gearbox is positioned near ignition sources or heat radiators, a shield must be installed so that leaking hydraulic fluid cannot ignite and hoses are protected against premature aging.

Risk of toxicity and injury!

Risk of toxicity and injury by contact with harmful substances, as for example: Lubricating oil, preserving agent, solvent, detergents and hydraulic fluid!

- ▶ In dealing with harmful substances, please observe the product data sheets and safety data sheets of the respective manufacturer.
- ▶ Always wear the protective equipment which is specified in the safety data sheets of the respective substance.
- ▶ Carefully wash off harmful substances that have come into contact with the skin. Wash out your eyes thoroughly with water if harmful substances have gotten into the eyes and go see a doctor.

See a doctor immediately if you have inhaled, for example, solvent-based detergents or have swallowed harmful substances.

CAUTION

Locally hot surfaces on the gearbox!

Danger of burns!

- ▶ Do not touch any hot surfaces on the planetary gearbox. The planetary gearbox heats up to a max. of 90 °C during operation in the oil sump.
- ▶ Allow the planetary gearbox and its mounting parts to cool down to approx. 50 °C before touching.
- ▶ To protect yourself from burns, wear heat-resistant protective clothing and heat-resistant safety gloves.

Hot lubricating oil during operation!

Danger of scalding during oil change, oil sampling and draining oil!

- ▶ To protect yourself from scaldings, wear heat- and oil-resistant safety gloves and heat-resistant protective clothing. Wear protective goggles.
- ▶ Avoid oil temperatures of much more than 50°C when taking oil samples or draining oil.
- ▶ When taking the oil sample or draining the lubricating oil, carefully open the oil sampling point or oil drain.

Sharp edges and tensioned tension belts and cable fasteners as well as rebounding parts!

Risk of injury!

- ▶ Carefully remove any attached tension belts and chains.
- ▶ When cutting tension belts and detaching chains, always wear protective goggles and cut-resistant safety gloves.

Danger in the case of mix-up with metrical and inch threads!

Risk of injury and damaging to the gearbox!

- ▶ Only assemble the planetary gearbox, if you have the dimensioned drawing available, indicating the thread types and sizes.

Danger in the case of faulty installation of cables and lines!

Risk of injury or property damage!

- ▶ Lay cables and lines so that they cannot be damaged and no one can trip over them.

Metal particles or metal abrasion in the lubricating oil or on screw plugs!

Risk of injury!

- ▶ When refilling the lubricating oil, during the oil change and when draining oil, always wear oil-resistant safety gloves and protective goggles.

CAUTION

Setting down the planetary gearbox on unsuitable, non-load-bearing base!

Risk of injury or property damage by tipping over the planetary gearbox!

- ▶ Always load the planetary gearbox on a load-bearing surface.
- ▶ Secure the planetary gearbox against tipping over by the use of chocks, wooden bars or the load boards provided by Rexroth.

Leaking hydraulic fluid due to leakages of the machine or vehicle!

Risk of burns and injuries due to leaking oil jet!

- ▶ Relieve any system pressure in the machine or vehicle and repair the leak.
- ▶ Never try to stop or seal the leak or oil jet using a cloth.

2.7 Personal Safety Equipment (PSA)

The personal safety equipment for users of the planetary gearbox comprises:

- Safety gloves

The required characteristics of the safety gloves are determined by the conditions encountered in practice.

- ▶ Wear resistant safety gloves of the corresponding classification (according to action step, for example, heat-resistant, oil-resistant, cut-resistant).

- Protective goggles (sealed)
- Safety shoes
- Heat-resistant safety wear, if necessary, flameproof protective clothing
- If necessary, safety helmet

- ▶ When in contact with lubricating oil, preserving agents, solvents, detergents and hydraulic fluid, please wear the mandatory safety equipment as outlined in the respective product data sheets and safety data sheets.

All components of the personal safety equipment must be intact.

3 General information concerning damage to property and product damages

The following instructions apply to chapters 6 to 14.

NOTE

Danger caused by improper handling!

The planetary gearbox can be damaged!

- ▶ Do not submit the planetary gearbox to mechanical load in an unacceptable way.
- ▶ Do not place any objects on the product.
- ▶ Do not hit against sensitive mounting parts (e.g. sensors or valves).
- ▶ Do not hit against sealing surfaces (e.g. on the axial-piston motor working connections (if included in the scope of supply)).
- ▶ Leave the protective cover on the axial-piston motor (if included in the scope of supply) until just before connecting the cables.

Damage of the planetary gearbox caused by a lack of knowledge when handling the crane and the slinging equipment!

Lack of knowledge when handling a crane, or wrong slinging equipment, may lead to uncontrolled movements of the planetary gearbox and therefore damage the machine or vehicle!

- ▶ Use a crane with sufficient lifting capacity for lifting the planetary gearbox.
- ▶ Only use approved transport equipment.
- ▶ Use e.g. straps, chains, swivel hooks, shackles or suitable equipment as slinging equipment.

Damage caused by improper assembly!

Improper assembly may lead to damage of the planetary gearbox respectively the machine or vehicle!

- ▶ Make sure that the planetary gearbox has been properly mounted by qualified personnel before operating it.

Damage to the planetary gearbox caused by improper installation!

Material damage to the planetary gearbox or its mounting parts!

- ▶ Assign or close all necessary connections properly, particularly the one of the static multiple-disk brake.
- ▶ Only commission a completely installed product.
- ▶ Take the required connections from the dimensioned drawing in appendix D "Technical data / Drawings" of the material number-specific operating instructions.

NOTE

Damage to the planetary gearbox caused by commissioning without or with insufficient lubricating oil!

When commissioning the planetary gearbox and the integrated static multiple-disk parking brake without, or with insufficient lubricating oil can damage or even being completely destroyed!

- ▶ When commissioning or recommissioning the machine or a vehicle, fill the planetary gearbox with the correct quantity of oil.
- ▶ Control the oil level thoroughly.
- ▶ Pay attention when commissioning the machine or vehicle, that the housing chamber and the axial-piston motor (if included in the scope of supply) service lines are filled with hydraulic fluid and remain filled during operation.
- ▶ Always replace the disks, the springs and the sealing elements after a functional impairment or thermal overload and by any repair work on the multiple-disk parking brake.

Damage to the planetary gearbox caused by commissioning with too much lubricating oil!

When commissioning the planetary gearbox and the static multiple-disk parking brake, integrated in the planetary gearbox, with too much lubricating oil, thermal overloads may occur, causing damage to the gears, seals and bearings as well as failure of the static multiple-disk brake!

- ▶ When commissioning or recommissioning the machine or a vehicle, fill the planetary gearbox with the correct quantity of oil.
- ▶ Control the oil level carefully.
- ▶ Always replace the disks, the springs and the sealing elements after a functional impairment or thermal overload and by any repair work on the multiple-disk parking brake.

Damage caused by penetrating liquids, foreign objects and dirty lubricating oil!

Wear and malfunctions caused by impurities!

- ▶ Check whether all seals, connections and plug-in connectors have been correctly installed and are intact.
- ▶ When performing any work on the planetary gearbox, please ensure extreme cleanness to prevent foreign objects, as for example weld spatter or metal particles, from getting into the planetary gearbox and, therefore, causing wear and malfunction.
- ▶ Only use clean connections.
- ▶ Exclusively install clean hydraulic lines.
- ▶ No dirt shall penetrate when closing the ports.

NOTE

Damage to the planetary gearbox caused by cleaning agents or solvents!

Damage caused by aggressive detergents or solvents and/or fiber from cleaning cloths getting into the planetary gearbox!

- ▶ When removing the preserving agent make sure that no aggressive detergents or solvent enters the seal areas, the hydraulic system, or the planetary gearbox.
- ▶ Only use a dry cloth made of lint-free fabric to remove lubricating oils and other soils.

Damage to the planetary gearbox caused by mechanical stress!

Oil lines and hoses which you install under tension cause additional mechanical stress during operation, which reduces the service life of the gearbox!

- ▶ Assemble hydraulic lines and hoses without mechanical stress.
- ▶ Ensure vibration-free fastening of tubings.
- ▶ Only use hoses and fasteners which have been approved for the respective operating pressure range.

Risk of environmental pollution!

Ground water and/or soil contamination by escaping or spilled lubricating oil or pressure medium!

- ▶ Place a catch basin with sufficient capacity under the planetary gearbox when replacing, draining lubricating oil, or working with a pressure medium.
- ▶ Bond any passing flow of lubricating oil or spilled lubricating oil or pressure medium with appropriate absorption material such as oil absorbent granule.
- ▶ Dispose the lubricating oil or pressure medium in accordance with local country regulations and provisions.
- ▶ Observe the product data sheets and safety data sheets of the lubricating oil manufacturer and pressure medium manufacturer. These data sheets are not included within Rexroth's scope of supply.

Damage to the planetary gearbox caused by improper handling!

Damage to the planetary gearbox during installation into the machine or chassis frame, maintenance and repair work and during disassembly!

- ▶ Avoid strong impacts on the planetary gearbox during assembly or disassembly.
- ▶ Never use the mounting parts as a handle or step.
- ▶ Make sure that the planetary gearbox is not canted.

Damage to the planetary gearbox and mounting parts!

Material damage caused by securing and lifting equipment!

- ▶ When lifting the planetary gearbox, take care that mounting parts do not get damaged by securing or lifting equipment.

Insufficient lubrication!

Damage to the planetary gearbox and mounting parts!

- ▶ Supply the gearbox with a sufficient lubricating oil amount in all modes of operation.

NOTE

Any irregularities manifesting during maintenance and inspection!

Damage to the planetary gearbox and its mounting parts!

- ▶ Take the planetary gearbox out of service and contact the nearest Rexroth Service point, if you find any irregularities during maintenance work or inspections.

Unpunctual inspection and maintenance work!

Risk of damage!

- ▶ Adhere to the planetary gearbox's maintenance intervals schedule when carrying out mandatory maintenance work.

4 Scope of supply

Refer to your material number-specific operating instructions for the complete scope of supply.

5 About this product

5.1 Performance description

- ▶ For the performance-related data of the MOBILEX GFB 8000 planetary gearbox, please refer to appendix D “Technical data / Drawings” of the material number-specific operating instructions.

5.2 Product description

The hydrostatic MOBILEX GFB 8000 swing drive is a planetary gearbox.

The following product description includes different models. For details of your planetary gearbox, refer to the chapter “Product description” as well as the chapter “Scope of supply” and the dimensioned drawing provided in appendix D “Technical data / Drawings” of the material number-specific operating instructions.

This is where you find details on:

- Number of planetary stages
- Transmission ratio
- Motor type and design
- Integrated static multiple-disk parking brake
- Mounting parts
- Connections
- Optional equipment
- Lubrication, etc.

The entire planetary gearbox, which is mounted in rolling bearings, is equipped with a splash oil lubrication. Optionally, the planetary gearbox can also be provided with connections for a circulating oil lubrication. The externally toothed planet gears are case-hardened.

The bottom bearing of the output shaft in the output shaft housing is grease-lubricated.

A special output seal ensures optimum protection against dust and dirt of the output bearing.

Drive and output have the same direction of rotation.

The planetary gearbox is intended exclusively for use in the technical environment approved by Rexroth for the application referred to in the material number-specific instructions.

5.2.1 Application conditions

The planetary gearboxes are designed for use in environmental temperatures between -25°C and + 40°C. Environmental factors such as salt water, salt air, sand, dust, pressure, severe shocks, extreme shock loads and environmental temperatures, aggressive media, etc. affect the function. Such influences must be pre-announced in order for a secure gearbox design.

5.3 Description of the brake

The planetary gearbox is equipped with an integrated wet-running static multiple-disk brake (multiple-disk parking brake).



WARNING

Risk caused by the failure of the static multiple-disk parking brake!

The use of the static multiple-disk parking brake for braking the gearbox may cause its destruction.

- ▶ Operate the static multiple-disk parking brake only after a complete stop of the, e.g. superstructure.
- ▶ Always replace the disks, the springs and the sealing elements after a functional impairment or thermal overload and by any repair work on the multiple-disk parking brake.

Danger of delayed stopping of the static multiple-disk parking brake!

Delayed application of the static multiple-disk parking brake can lead to accidental turning of the e.g. superstructure.

- ▶ Please ensure that the brake line of the static piston is pressureless within 0.5 s.

The multiple-disk brake is a hydraulically released parking brake. The parking brake (static multiple-disk parking brake) is applied via the brake release connection.

The static multiple-disk parking brake acts negatively, i.e. it is released by means of pressure fluid and applied by spring action when pressureless.

5.4 Product overview

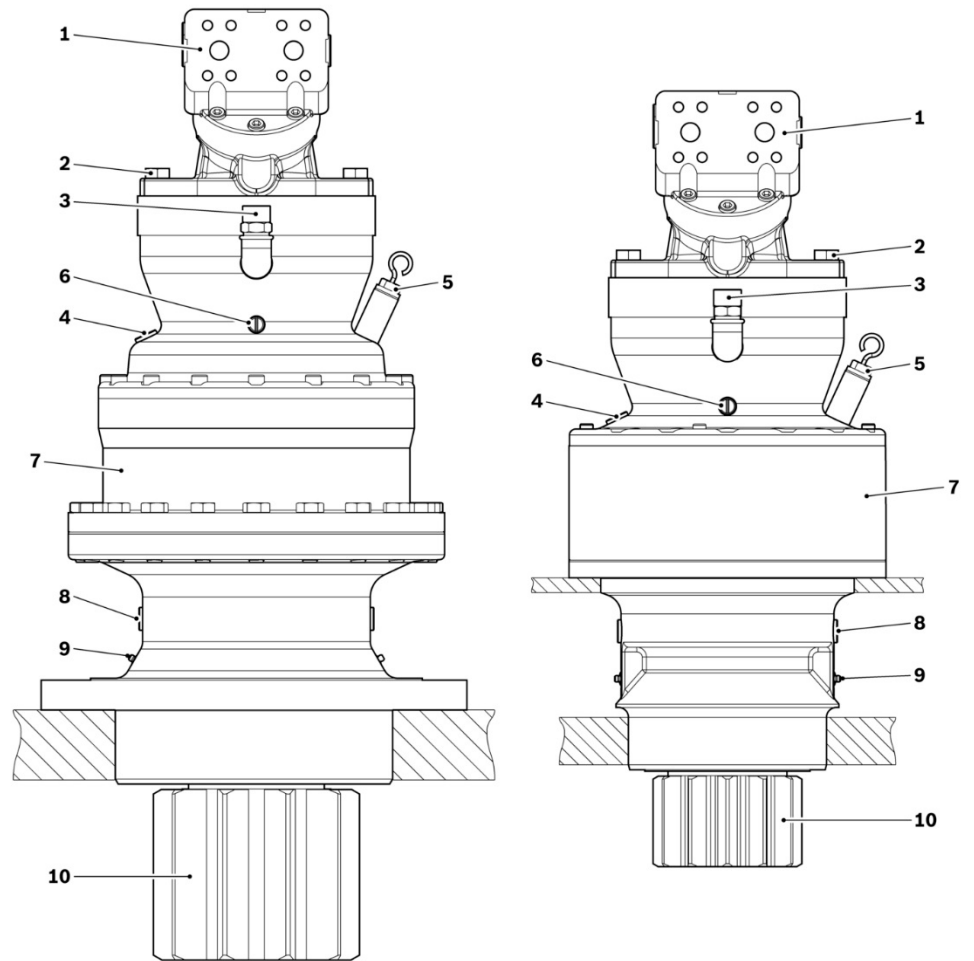


Fig 1: Variant Short with one centering seat

Variant Long with two centering seats

- 1** Axial-piston motor
- 2** Motor attachment screws
- 3** Vent
- 4** Oil filler
- 5** Oil dipstick
- 6** Brake release connection

- 7** MOBILEX GFB 8000 planetary gearbox
- 8** Oil drain
- 9** Grease nipple
- 10** Output shaft / output pinion



The shown versions of the MOBILEX GFB 8000 planetary gearbox are only examples and may differ from the supplied version.



For the exact arrangement of the bores, refer to the planetary gearbox dimensioned drawing in the appendix D “Technical data / Drawings” of the material number-specific operating instructions.

The indicated gear type is an example. Your MOBILEX GFB 8000 planetary gearbox may differ from this example in the following points:

- Position of connections
- Position of oil filler opening
- Position of the oil level control system
- Type of oil level control system (oil dipstick)
- Position and type of mounting parts
- **Optional** Circulating oil lubrication/oil cooling

5.5 Identification of the product

A name plate is located on the planetary gearbox, enabling you to identify the product.

5.5.1 Standard name plate

The following information is indicated on the name plate:



Fig 2: Example of a planetary gearbox name plate

- | | |
|--|----------------------------------|
| 1 Manufacturer | 5 Internal factory code |
| 2 Type code | 6 Ratio of the gearbox |
| 3 Factory specific order number | 7 Date of manufacture |
| 4 Serial number | 8 Product material number |



The name plate shown above is only an example of the standard Rexroth name plate. In addition, the serial number is engraved on the output shaft housing.

6 Transport and storage



Please read chapter 7.1 “Unpacking” before you transport the planetary gearbox.

6.1 Transporting the MOBILEX GFB 8000

WARNING

Hazardous, uncontrolled movements during the transport of the planetary gearbox!

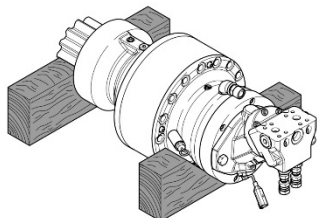
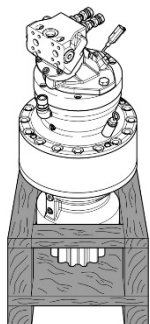
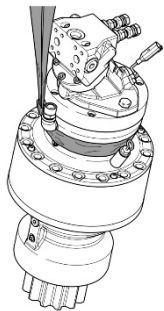
Mortal danger, risk of injury, severe physical injury or damage to property!

- ▶ Observe the national laws and regulations regarding occupational safety and health protection and transport.
- ▶ Weight information about the planetary gearbox can be found in the shipping documents, the technical data sheet or on the name plate.
- ▶ Make sure that the planetary gearbox is attached to the crane or the forklift exclusively by qualified personnel with credentials, using attachment means, and is transported only by said qualified personnel, with a crane or forklift. In addition, observe chapter 2.4 “Qualification of Personnel”.
- ▶ Adjust the lifting means (crane or forklift) and attachment means (chains and shackles or straps or ropes) to the weight and the dimensions of the planetary gearbox.
- ▶ Design the load-carrying capacity of the lifting means to match the weight of the planetary gearbox.
- ▶ Tighten the means of attachment before lifting the planetary gearbox.
- ▶ You may only lift the planetary gearbox with a forklift if it is protected by a transport frame / a pallet designed for the planetary gearbox.
- ▶ Make sure that the crane loads (such as the planetary gearbox on the crane hook) do not start swaying.

Danger from suspended loads!

Danger to life or risk of injury!

- ▶ Use a crane or forklift whose load-carrying capacity is sufficient to lift the planetary gearbox.
- ▶ Never step or put your hands under suspended loads.



- ▶ Carefully attach the planetary gearbox with approved lifting equipment, such as chains and shackles adapted to weight and suitable ropes (see illustration on the left) to the crane hook or transport the planetary gearbox in a suitable transport frame using a suitable forklift.
- ▶ Choose the chain or cable length such that the attachment angle remains smaller than 90°.
- ▶ Please ensure that the mounting parts attached depending on the gearbox design cannot be damaged by transport elements when the planetary gearbox is lifted.
- ▶ Set the planetary gearbox down vertically on the output pinion or place it horizontally on a flat, stable ground.
 - When setting down the planetary gearbox vertically, use suitable measures to protect the gearbox from tipping over. Use e.g. a suitable wooden frame.
 - When setting down the planetary gearbox horizontally, use suitable measures to protect the gearbox from rolling away. Use e.g. wedges or scantlings (see adjacent sketches).

6.2 Storing the MOBILEX GFB 8000

NOTE

Risk of damaging the planetary gearbox!

A planetary gearbox stored for more than 12 months has to be thoroughly inspected and submitted to a test run before use!

- ▶ If necessary, contact our Rexroth Service before installing a planetary gearbox that has been stored for more than 12 months.
- ▶ This product should only be tested by qualified personnel (refer to chapter 2.4 “Qualification of personnel”).

Preservation and storing of the planetary gearbox is described in this chapter.



For queries concerning preservation and storage, please contact a Rexroth's subsidiary located near you or the main plant directly. Refer to www.boschrexroth.com and the address directory in appendix A “Address directory” of the material number-specific operating instructions for the addresses of our national agencies.

6.2.1 Preservation

Rexroth delivers the planetary gearbox without oil filling. The planetary gearbox is, however, preserved from the inside with e.g. Ri Chan Jia HE L-HL15.

The external flange surfaces and flanging surfaces are applied with preservative by the factory (e.g. PERIGOL VCI 230 or CUSTOS 10-38).

After removing the packing, you must check whether the outside preservation is still correct.

- ▶ If the preservation is damaged and gearbox parts on the outside have bright spots, then preserve these spots again with e.g. PERIGOL VCI 230 or CUSTOS 10-38.
- ▶ Observe the manufacturer's product data sheets and safety data sheets when using preservative. These data sheets are not included within Rexroth's scope of supply.
- ▶ Use a brush to apply the preservative evenly onto the bright spots.

6.2.2 Maximum storage periods

The following storage conditions must be met to ensure a maximum storage period of 12 months:

- Temperature -30 ... 60°C, relative air humidity of max. 70%
- Dry and dust-free
- Protected against rain, snow and sunlight

7 Assembly

Prior to assembly, the following documents must be readily accessible:

- Operating instructions for the machine or vehicle (supplied by the manufacturer)
- Dimensioned drawing of the planetary gearbox
- Technical data of the planetary gearbox
- Material number-specific operating instructions of the planetary gearbox
- Hydraulic diagram for the entire machine or vehicle (supplied by the manufacturer)
- Assembly drawing for the machine or vehicle (supplied by the manufacturer)

7.1 Unpacking

Depending on manufacturer's plant and transport paths, the planetary gearbox may be packed differently.

7.1.1 Delivery on pallet

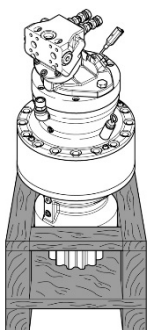
If the planetary gearbox is delivered on a pallet, the gearbox is secured with clamping bands. To protect from moisture, the delivery may be covered in shrink wrap.

Procedure To unpack the planetary gearbox:

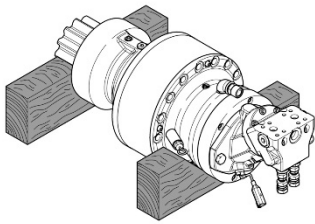
- 1 Remove the shrink wrap and the oiled paper.
- 2 Remove the clamping bands.
- 3 Check the scope of supply for transport damage and completeness, see chapter 4 "Scope of supply".
- 4 Compare material number and designation (type code) with those specified in the order confirmation.



If the material number of the planetary gearbox does not match the one in the order confirmation, contact the Rexroth Service for clarification. For the address, see appendix A "Address directory" of the material number-specific operating instructions.



- 5 Lift the planetary gearbox from the pallet with suitable lifting gear and suitable attachment means (see chapter 6.1 "Transporting the MOBILEX GFB 8000").
- 6 For placing the planetary gearbox, make sure that the surface is stable.
- 7 Set the planetary gearbox down vertically on the output pinion or place it horizontally on a flat, stable ground.
 - When setting down the planetary gearbox vertically, use suitable measures to protect the gearbox from tipping over. Use e.g. a suitable wooden frame.



- When setting down the planetary gearbox horizontally, use suitable measures to protect the gearbox from rolling away. Use e.g. wedges or scantlings (see adjacent figure).

8 Dispose of the packaging in accordance with regulations in your local country.

7.1.2 Delivery in wood transport box

Overseas transports are performed mainly in closed wood transport boxes in seaworthy packaging. The gearbox is covered with oiled paper and the bottom of the transport box is lined with foam packaging or the planetary gearbox is packed in PE foil.

Procedure To unpack the planetary gearbox:

- 1 Place the packing on a flat, stable surface.
- 2 Only open the packing from the top.
- 3 Check the scope of supply for transport damage and completeness, see chapter 4 "Scope of supply".
- 4 Compare material number and designation (type code) with those specified in the order confirmation.



If the material number of the planetary gearbox does not match the one in the order confirmation, contact the Rexroth Service for clarification. For the address, see appendix A "Address directory" of the material number-specific operating instructions.

- 5 Lift the planetary gearbox out of the packing with suitable lifting means and suitable attachment means (see chapter 6.1 "Transporting the MOBILEX GFB 8000").
- 6 For placing the planetary gearbox, make sure that the surface is stable.
- 7 Set the planetary gearbox down vertically on the output pinion or place it horizontally on a flat, stable ground.
 - When setting down the planetary gearbox vertically, use suitable measures to protect the gearbox from tipping over. Use e.g. a suitable wooden frame.
- 8 When setting down the planetary gearbox horizontally, use suitable measures to protect the gearbox from rolling away. Use e.g. wedges or scantlings (see adjacent figure).
- 9 Dispose of the packaging in accordance with regulations in your local country.

7.2 Installation conditions

The assembly conditions depend on the machine, the chassis frame or the equipment frame where the planetary gearbox is integrated.

- ▶ Make sure that the chassis or equipment frame, where the MOBILEX GFB 8000 planetary gearbox is attached to, is torsion resistant. The frame must be able to withstand the weight and torque specified for the design.
- ▶ During assembly, observe by all means the operating conditions that are specified in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- ▶ Make sure that the work environment on site is free of dust and foreign substances. The planetary gearbox must be installed free of contamination. Contamination of the hydraulic fluid may considerably affect the function and service life of the axial-piston motor, if supplied.
- ▶ Use cloths made of lint-free fabric for cleaning.
- ▶ Use mild detergents for removing lubricants and other heavy contaminations. No detergents may penetrate into the hydraulic system.

7.3 Installation position

The standard installation position of the planetary gearbox is vertical (axial piston motor on top).



The planetary gearbox installation position approved and recommended by Rexroth is indicated on the drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.

NOTE

Installation of the planetary gearbox in a non-approved Rexroth mounting position!

Damage or failure of the planetary gearbox and expiry of the warranty!

- ▶ Only install the planetary gearbox in an approved Rexroth mounting position as indicated in the dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.

Damage to the planetary gearbox through misalignment with the machine frame!

Property damage!

- ▶ Do not tilt the planetary gearbox during installation and insert it into the machine frame torsion-free and tension-free.
- ▶ Avoid misalignment of the planetary gearbox during installation.
- ▶ Align the gearbox exactly with the connection of the customer (live ring).

7.3.1 Operation with axial-piston motor (if included in the scope of supply)

- ▶ Strictly observe the instructions of the axial-piston motor operating instructions. You will find these in appendix C “Mounting parts” in the material number-specific operating instructions of the planetary gearbox.

7.4 Required tools

The planetary gearbox can be assembled with standard tools. No special tool is required.

7.5 Assembling the MOBILEX GFB 8000

The required, proper assembly sequence depends on the chassis or equipment frame design and may therefore differ from the assembly sequence described in these operating instructions.

7.5.1 Preparing assembly

- Procedure**
- 1 Check if the scope of supply is complete and shows transport damages. Refer to your material number-specific operating instructions for the complete scope of supply.
 - 2 Compare the material number and the type designation on the nameplate with the details in the order confirmation or on the delivery note. If the material number of the planetary gearbox does not match the order confirmation or the delivery note, please contact the Rexroth Service.
 - 3 Compare the connecting dimensions of planetary gearbox and chassis or equipment frame.



The mounting order depends on the machine, the vehicle or the chassis or equipment frame design. Refer to the instructions in chapter 7.2 “Installation conditions”. In addition, observe the assembly instructions of the machine or vehicle manufacturer.



The dimensioned drawing contains the dimensions of all connections of the MOBILEX GFB 8000 planetary gearbox. Also observe the instructions of the manufacturers of the mounting parts in appendix C “Mounting parts” in the material number-specific operating instructions.

- 4 Remove the preservative from the outside flange surfaces with a suitable organic solvent (e.g. HAKUTEX 74) or an alkaline detergent (e.g. HAKUPUR 236). Wear suitable protective gloves and protective goggles when cleaning the planetary gearbox and observe the manufacturer's safety notes when handling preservative or solvents. These data sheets are not included within Rexroth's scope of supply.

NOTE

Damages to the seals!

Aggressive detergents or solvents can damage the seals of the planetary gearbox and can cause the seals to age faster!

- ▶ When removing the preserving agent make sure that no aggressive detergents or solvents enter the seal areas. This applies in particular to the area of the output seals.

7.5.2 Installing the planetary gearbox without eccentric

NOTE

Risk of damaging the planetary gearbox!

A wrong or incorrectly installed planetary gearbox can lead to planetary gear failure or damage to the live ring!

- ▶ Use mounting screws with strength class 8.8 or 10.9 according to EN ISO 898-1 to attach the planetary gearbox to the equipment frame. Also observe the information in the primary operating instructions of the machine or vehicle and the manufacturer's frame drawing.
- ▶ For the required strength class of the mounting screws as well as the necessary tightening torques is the machine or vehicle manufacturer liable. The required mounting screws are not included within the scope of supply.
- ▶ If necessary, use HV washers to install the planetary gearbox. Observe the information on the planetary gearbox dimensioned drawing in appendix D "Technical data / Drawings" of the material number-specific operating instructions.
- ▶ Observe the information provided by the live ring manufacturer for setting the backlash. The machine or vehicle manufacturer is responsible for the correct setting.

7.5.3 Installing the planetary gearbox with eccentric (optional eccentric)

NOTE

Risk of damaging the planetary gearbox!

A wrong or incorrectly installed planetary gearbox can lead to planetary gear failure or damage to the live ring!

- ▶ Use mounting screws with strength class 8.8 or 10.9 according to EN ISO 898-1 to attach the planetary gearbox to the equipment frame. Also observe the information in the primary operating instructions of the machine or vehicle and the manufacturer's frame drawing.
- ▶ For the required strength class of the mounting screws as well as the necessary tightening torques is the machine or vehicle manufacturer liable. The required mounting screws are not included within the scope of supply.
- ▶ If necessary, use HV washers to install the planetary gearbox. Observe the information on the planetary gearbox dimensioned drawing in appendix D "Technical data / Drawings" of the material number-specific operating instructions.
- ▶ To adjust the backlash, observe the eccentric information on the dimensioned drawing and the information provided by the live ring manufacturer to adjust the backlash. The machine or vehicle manufacturer is responsible for the correct assembly and setting.

7.5.4 Planetary gearbox without output pinion

Depending on the scope of supply, the output pinion, required to operate the planetary gearbox, is not part of the delivery.

- ▶ Grease the plug-in gearing of the output shaft with a molybdenum sulfide paste before assembly.

7.5.5 Installing the planetary gearbox with assembled axial-piston motor into the machine or chassis frame

! CAUTION

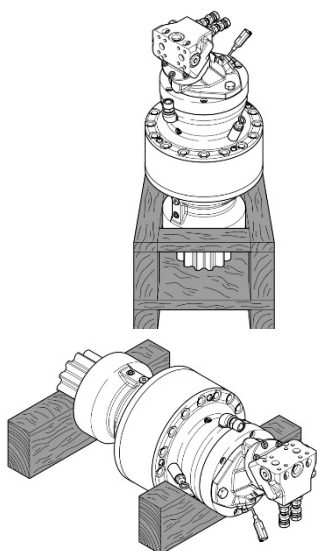
Failure or damage to the planetary gearbox!

If you install the planetary gearbox in any other installation position than the one permitted by Rexroth, the planetary gearbox may be damaged or fail. The warranty claim lapses!

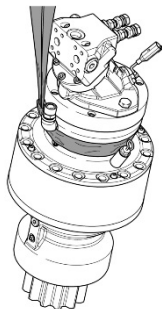
- ▶ Only install the planetary gearbox in an approved Rexroth mounting position as indicated in the dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- ▶ Observe the operating instructions of the axial-piston motor manufacturer. This is where you will find all the required information on assembly of the motor.

Procedure

Installing the planetary gearbox at/in the machine or chassis frame:



- 1 For installation, strictly observe the corresponding data in the dimensioned drawing of the planetary gearbox in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- 2 Also observe the primary operating instructions of the machine or vehicle and the manufacturer’s frame drawing.
- 3 For the planetary gearbox weight, refer to appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- 4 Transport the planetary gearbox to the application machine with the axial-piston motor installed.
- 5 Make sure that the surface is stable.
- 6 Set the planetary gearbox down vertically on the output pinion or place it horizontally on a flat, stable ground.
 - When setting down the planetary gearbox vertically, use suitable measures to protect the gearbox from tipping over. Use e.g. a suitable wooden frame.
 - When setting down the planetary gearbox horizontally, use suitable measures to protect the gearbox from rolling away. Use e.g. wedges or scantlings (see adjacent sketches).
- 7 Attach the planetary gearbox carefully using appropriate means of attachment e.g. swivel hooks, shackles or suitable equipment on an appropriate lifting equipment such as a crane hook. Observe chapter 6.1 “Transporting the MOBILEX GFB 8000”.



- 8 Tighten the means of attachment without lifting the planetary gearbox.
- 9 Make sure that the part of the machine or chassis frame to which the planetary gearbox is to be mounted is free of dirt and foreign objects.
- 10 Lift the planetary gearbox into the machine or chassis frame.
- 11 Attach the planetary gearbox to the machine or chassis frame. For the required strength class of the mounting screws as well as the necessary tightening torques is the machine or vehicle manufacturer liable. The required mounting screws are not included within the scope of supply.
- 12 Remove all means of attachment, transport and lifting equipment.
- 13 Connect all power units and mounting parts required for operation of the planetary gearbox. For this, observe the instructions in chapter 7 "Assembly".

7.5.6 Connecting the planetary gearbox's axial-piston motor to the hydraulic system

The machine or vehicle manufacturer is responsible for laying the lines. The axial-piston motor or the static multiple-disk parking brake (parking brake) has to be connected to the hydraulic system according to the machine or vehicle manufacturer's hydraulic diagram.

CAUTION

Failure or damage to the planetary gearbox!

Operation of the axial-piston motor without reading the general operating instructions of the axial-piston motor first or observing the hydraulic circuit diagram of the machine or vehicle manufacturer may cause damage to the axial-piston motor/planetary gearbox/machine or vehicle!

- ▶ For installation of the axial-piston motor, please refer to the general operating instructions in chapter C "Mounting parts" of the material number-specific operating instructions.
- ▶ Observe the hydraulic circuit diagram of the machine or vehicle manufacturer.

7.5.7 Installing the planetary gearbox with axial-piston motor connection (axial-piston motor is not included in the scope of supply)

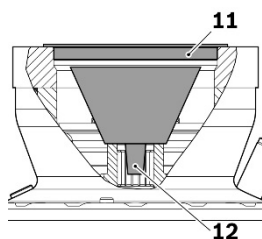
! CAUTION

Failure or damage to the planetary gearbox!

If you install the planetary gearbox in any other installation position than the one permitted by Rexroth, the planetary gearbox may be damaged or fail. The warranty claim lapses!

- ▶ Only install the planetary gearbox in an approved Rexroth mounting position as indicated in the dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- ▶ Observe the operating instructions of the axial-piston motor manufacturer (not included in the scope of supply). This is where you will find all the required information on assembly and commissioning of the axial-piston motor.

If the planetary gearbox is delivered without the axial-piston motor, install as follows:



- Assemble the axial-piston motor to the planetary gearbox.
- Then assemble the planetary gearbox with mounted axial piston motor to the machine or chassis frame.

1 Remove the dust cap **11** and the thrust cup **12**.

Procedure Installing the axial-piston motor to the planetary gearbox:

! CAUTION

Failure or damage to the planetary gearbox

An O-ring forgotten during assembly or installed improperly may cause leakage or failure of the planetary gearbox!

- ▶ Observe correct O-ring size depending on the O-ring groove of the axial-piston motor.
- ▶ Ensure that the O-ring is installed correctly in the corresponding O-ring groove of the axial-piston motor.



If Rexroth delivers the hydrostatic swing drive without axial-piston motor, the operating instructions of the motor are not included in the scope of supply. Observe the operating instructions of the axial-piston motor (provided by the manufacturer of the axial-piston motor). This is where you will find all the required information on assembly and commissioning of the axial-piston motor.

Procedure Installing the planetary gearbox at/in the machine or vehicle frame:



For further assembly of the planetary gearbox, proceed as described in chapter 7.5.5 "Installing the planetary gearbox with assembled axial-piston motor in the machine or chassis frame".

Procedure To connect the axial piston motor to the hydraulic system:



For further assembly of the axial-piston motor to the hydraulic system, proceed as described in chapter 7.5.6 "Connecting the axial-piston motor of the planetary gearbox to the hydraulic system".

7.5.8 Installing the planetary gearbox with connection for an electric motor (electric motor is not included in the scope of supply)

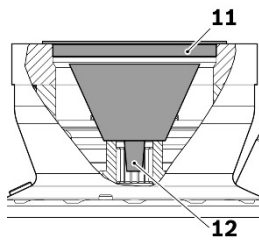


CAUTION

Failure or damage to the planetary gearbox!

If you install the planetary gearbox in any other installation position than the one permitted by Rexroth, the planetary gearbox may be damaged or fail. The warranty claim lapses!

- ▶ Only install the planetary gearbox in an approved Rexroth mounting position as indicated in the dimensioned drawing in appendix D "Technical data / Drawings" of the material number-specific operating instructions.
- ▶ Observe the operating instructions of the electric motor manufacturer (not included in the scope of supply). This is where you will find all the required information on assembly and commissioning of the electric motor.



- If the planetary gearbox is delivered without the electric motor, install as follows:
- Assemble the electric motor to the planetary gearbox.
 - Assemble the planetary gearbox with assembled electric motor to the machine or chassis frame.

- 1** Remove the dust cap **11** and the thrust cup **12**.
- 2** Use a fitting lubricant, e.g. Klüberplex Lubrication Altemp Q NB50 to grease the drive shaft of the electric motor.

Procedure Installing the electric motor to the planetary gearbox:



Work on electrical systems or equipment may only be carried out by a qualified electrician or by instructed persons under the direction and supervision of a qualified electrician in accordance with the electronic regulations.



If Rexroth delivers the hydrostatic swing drive without electric motor, the operating instructions of the motor are not included in the scope of supply. Observe the operating instructions of the electric motor (provided by the manufacturer of the electric motor). This is where you will find all the required information on assembly and commissioning of the electric motor.

7.6 Connecting the static multiple-disk parking brake

Your planetary gearbox is/may be equipped with a static multiple-disk parking brake to serve as parking brake.



WARNING

Risk caused by the failure of the static multiple-disk parking brake!

The static multiple-disk parking brake is a safety device of the planetary gearbox. The improper connection of the static multiple-disk parking brake or its use as dynamic brake (using the multiple-disk parking brake for braking the vehicle) may lead to failure or its destruction!

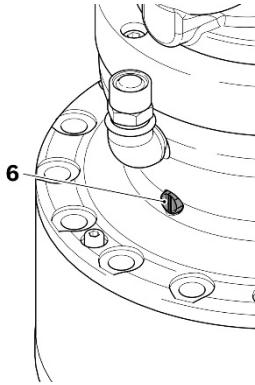
- ▶ Operate the static multiple-disk parking brake only after a complete stop of the, e.g. superstructure.
- ▶ Always observe that the integrated multiple-disk brake that is only intended as parking brake must be inspected and maintained by our service after dynamic braking.
- ▶ Always replace the disks, the springs and the sealing elements after a functional impairment or thermal overload and by any repair work on the multiple-disk parking brake.
- ▶ Ensure maximum cleanliness when connecting the multiple-disk parking brake.
- ▶ Make sure that neither dirt nor foreign substances penetrate in the brake release connection.
- ▶ Ensure that the brake release connection is carefully sealed.
- ▶ Assemble hydraulic lines and hoses without mechanical stress.
- ▶ Use e.g. copper sealing rings according to DIN 7603 as sealing means.
- ▶ Make sure that no dynamic pressure occurs in the brake line.
- ▶ Only use pressure fluid based on mineral oil for operating the static multiple-disk parking brake.
- ▶ Avoid contamination caused by unclean pressure fluids, rubbed-off parts or residual dirt from system components.
- ▶ Observe by all means the specifications for release pressure and maximum brake release pressure. Also make sure that the minimum release pressure is observed so that the multiple-disk parking brake can be completely released.
- ▶ Observe by all means the specifications on the gear unit dimensioned drawing when connecting the static multiple-disk parking brake. These can be found in appendix D "Technical data / Drawings" of the material number-specific operating instructions.

Danger of delayed stopping of the static multiple-disk parking brake!

Delayed application of the static multiple-disk parking brake can lead to accidental turning of the e.g. superstructure.

- ▶ Please ensure that the brake line of the static piston is pressureless within 0.5 s.

Procedure



To connect the static multiple-disk parking brake to the hydraulic system:

- 1 Make sure that the installation point is free of dirt and foreign substances. Make sure that neither dirt nor foreign substances penetrate in the brake release connection. The brake release connection is shown and labelled in the planetary gearbox dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- 2 Remove the plug on brake release connection **6** of the planetary gearbox.
- 3 Connect the brake release line to the brake release connection **6**.
- 4 Connect the static multiple-disk parking brake according to the hydraulic diagram of the machine or vehicle manufacturer with the remaining hydraulics system.

7.7 Performing a flushing cycle

Rexroth recommends to flush the planetary gearbox when changing the lubricating oil type or the lubricating oil manufacturer as well as after carrying out a major repair.

Before commissioning the axial-piston motor, Rexroth recommends a rinsing run of the entire system. Observe the information in the operating instructions of the axial-piston motor manufacturer.



The flushing cycle is to be performed using an additional flushing unit. Observe the specifications of the flushing unit manufacturer for the exact procedure when performing the flushing cycle.

7.8 Assembling mounting parts

If your planetary gearbox has additional mounting parts, you will find information on them in the following documents, which are included in the material number-specific operating instructions:

- Chapter “Scope of supply”
- Appendix C “Mounting parts”
- Appendix D “Technical data / Drawings”
- Appendix F “Optional equipment variant”

- ▶ Connect all units, supply lines, and connections necessary for operating the planetary gearbox and its mounting parts.

7.9 Connecting circulating oil lubrication or external oil cooling (if included in the scope of supply)

If the planetary gearbox is equipped with connections for a circulating oil lubrication, refer to the dimensioned drawing of the planetary gearbox in appendix D "Technical data/Drawings" of the material number-specific operating instructions for information on the permissible operating conditions. The machine or vehicle manufacturer must ensure that these are complied with.

7.10 Completing the assembly

- ▶ Remove all means of attachment such as straps, swivel hooks, shackles or devices which are still attached.
- ▶ Once again check all connecting parts for proper fit and tightness.

All connections used for connecting lines are sealed with plugs or screw plugs during transport. Plastic plugs are not pressure-resistant.

- ▶ Seal the unused connections with metallic, pressure-resistant screw plugs.

8 Commissioning

WARNING

Dangers caused by work in the danger zone of a machine/vehicle!

Mortal danger, risk of injury or severe physical injury!

- ▶ Be aware of potential hazards and eliminate such hazards before taking the planetary gearbox into operation.
- ▶ Nobody should be in the danger zone of the machine or the vehicle.
- ▶ The “Emergency Stop” button for the machine/vehicle must be within reach of the operator.
- ▶ Necessarily observe the information provided by the machine or vehicle manufacturer during commissioning.

CAUTION

Commissioning improperly installed products!

Risk of injury and property damage! Improperly installed products may cause injuries or damages to the product!

- ▶ Make sure that all electrical or hydraulic connections are connected or sealed.
- ▶ Only commission a completely installed product.

8.1 Initial commissioning

Before commissioning the planetary gearbox, following documents must be at hand:

- Dimensioned drawing of the planetary gearbox
 - Technical data of the planetary gearbox
- ▶ Only commission the planetary gearbox if it has been mounted and installed according to the instructions and information in these operating instructions, the material number-specific operating instructions and the operating instructions of the overall machine or the vehicle.



For all work related commissioning of the planetary gearbox, observe the general safety instructions and intended use as specified in chapter 2 “Safety instructions”.

8.1.1 Initial commissioning the axial-piston motor/axial-piston motor connection

If the planetary gearbox is delivered with an axial-piston motor or with a connection to attach an axial-piston motor:

- ▶ With delivered axial-piston motor, strictly observe the instructions of the axial-piston motor operating instructions. You will find these in appendix C “Mounting parts” in the material number-specific operating instructions of the planetary gearbox.



If Rexroth delivers the hydrostatic swing drive without axial-piston motor, the operating instructions of the motor are not included in the scope of supply. Observe the operating instructions of the axial-piston motor (provided by the manufacturer of the axial-piston motor). This is where you will find all the required information on assembly and commissioning of the axial-piston motor.

8.1.2 Initial commissioning the electric motor connection

If the planetary gearbox is supplied with a connection for mounting an electric motor:



If Rexroth delivers the hydrostatic swing drive without electric motor, the operating instructions of the motor are not included in the scope of supply. Observe the operating instructions of the electric motor (provided by the manufacturer of the electric motor). This is where you will find all the required information on assembly and commissioning of the electric motor.

8.1.3 Before filling the planetary gearbox with lubricating oil

This chapter describes how to fill the planetary gearbox with lubricating oil. In order to fill the planetary gearbox with lubricating oil, you need the following fundamental information:

- ▶ Refer to the dimensioned drawing for:
 - Position of the oil filler opening
 - Position of oil level control system (oil dipstick)
 - Position of the oil drain opening
- ▶ Refer to the selection list – industrial gear oils for:
 - Approved lubricating oils
- ▶ Refer to the technical data for
 - Lubricating oil viscosity and oil quantity
- ▶ Always record the used oil designation.

8.1.4 Filling the planetary gearbox with lubricating oil

Fill the planetary gearbox MOBILEX GFB 8000 only with lubricating oil which has been approved for this planetary gearbox according to the selection list – industrial gear oils in appendix B “Required and supplementary documentations” in the material number-specific operating instructions for these planetary gearbox.

8.1.5 Fill lubricating oil through the oil filler opening (planetary gearbox without circulating oil lubrication)

! CAUTION

Danger of burns!

The planetary gearbox heats up to a max. of 90 °C during operation in the oil sump, so that you can burn yourself!

- ▶ Allow the planetary gearbox to cool down to approx. 50 °C before touching.
- ▶ To protect yourself from burns, wear appropriate protective clothing such as heat-resistant safety gloves.
- ▶ Always wear protective goggles.

Risk of injury!

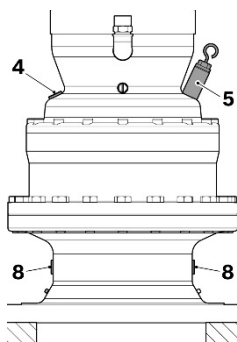
Solid particles, such as metal particles or metal abrasion, which are in the lubricating oil or on the screw plug can cause injury!

- ▶ Wear appropriate protective clothing.



Due to the preserving oil already in the planetary gearbox, the oil quantity can differ from the oil quantity indicated in the technical data sheet of the material number-specific operating instructions when filling the planetary gearbox for the first time. The exact oil volume has therefore to be determined on the planetary gearbox.

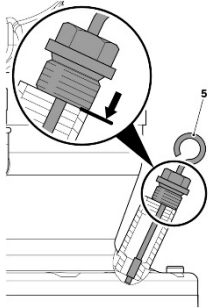
Procedure



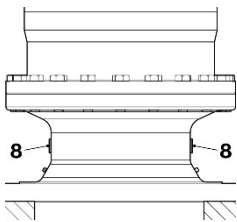
Filling the planetary gearbox with lubricating oil:

- ▶ Refer to the figure on the left
- Oil filler opening **4**: for filling the lubricating oil
- Oil dipstick **5**: for checking the lubricating oil level
- Oil drain opening **8**: for draining the lubricating oil

- 1 Place a catch basin with sufficient capacity under the planetary gearbox.
- 2 Loosen the screw plug of the oil filler opening **4** slowly, so that any existing pressure can be released.
- 3 Remove afterwards the screw plug from the oil filler opening **4**.
- 4 Turn the oil dipstick **5** out of the extension. Use a dry and lint free cloth to remove any lubricating oil sticking to the dipstick.
- 5 Refer to the technical data sheet in appendix D “Technical data / Drawings” of the material number-specific operating instructions for information on oil viscosity and oil capacity.
- 6 Fill the planetary gearbox with clean lubricating oil via the oil filler opening **4**.



- 7 To check the oil level, move the oil dipstick **5** to the position as shown in the figure on the left.
- 8 Pull out the oil dipstick **5**.
- 9 The oil level is correct if it is between the marks Min. and Max. of the oil dipstick **5**. See dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- 10 If the oil level is too low, fill lubricating oil via the oil filler opening **4** until it is between the marks Min. and Max. of the oil dipstick **5**.
- 11 Repeat steps 6 to 9.
- 12 Turn oil dipstick **5** back into the extension.
- 13 Check whether the seals on the screw plug threads of the oil filler opening **4** are still in perfect condition and can be reused. Replace a damaged seal.
- 14 Seal the oil filler opening **4** with the corresponding screw plug.
- 15 Let the MOBILEX GFB 8000 planetary gearbox run for approx. 5-10 minutes.
- 16 Allow the planetary gearbox cool down to approx. 50 °C after switching off.
- 17 Check again the oil filling level.
- 18 Turn the oil dipstick **5** out of the extension. Use a dry and lint free cloth to remove any lubricating oil sticking to the dipstick.
- 19 Move the oil dipstick **5** to the position as shown in the figure above. The oil level is correct if it is between the marks Min. and Max. of the oil dipstick **5**, with the planetary gearbox at standstill.
- 20 If the oil level is too low, fill in lubricating oil until the oil level is between the marks Min. and Max. of the oil dipstick **5**. Therefore loosen the screw plug of the oil filler opening **4** slowly, so that any existing pressure can be released. Remove afterwards the screw plug from the oil filler opening **4**.
- 21 Repeat steps 6 to 9.
- 22 If the oil level is too high, loosen one of the screw plugs from the oil drain opening **8** slowly, so that any existing pressure can be released. Remove afterwards the screw plug from the oil drain opening **8**.
- 23 Drain so much lubricating oil into the catch basin until the oil level is between the marks Min. and Max. of the oil dipstick **5**.
- 24 Dispose of the drained lubricating oil according to the national regulations of your country.
- 25 Check whether the seals on the screw plug threads of the oil filler opening **4** and the oil drain opening **8** are still in perfect condition and can be reused. Replace the damaged seals.
- 26 Seal oil filler opening **4** and oil drain opening **8** with the corresponding screw plugs.
- 27 Turn oil dipstick **5** back into the extension.



8.1.6 Completing commissioning and run-in period

NOTE

Property damage caused by low viscosity!

Due to high temperature of the hydraulic fluid/lubricating oil, the viscosity may fall to low values and cause damage to the product!

- ▶ Monitor the operating temperature during run-in period, e.g. by measuring the leakage fluid temperature (axial-piston motor).
- ▶ Reduce the load (pressure, speed) of the planetary gearbox axial-piston motor if inadmissible operating temperatures and/or viscosity occur.
- ▶ Too high operating temperatures indicate faults that have to be analyzed and eliminated.

- ▶ Check after approx. 10 hours of full load operation that all mounting screws are tightly secured. Proceed as described in chapter 10.2.4 “Checking and retightening screw connections”.
- ▶ For this, put the planetary gearbox out of service. Proceed as described in the instructions of the machine or the overall vehicle.
- ▶ After reaching the operating temperature, check that the planetary gearbox does not show any leakage. The maximum operating temperature is 90 °C. This test can be performed during operation. Proceed as described in chapter 10.2.1 “Visual inspections”.

8.2 Recommissioning after standstill

Depending on the assembly and ambient conditions, certain changes in the hydraulic system can make recommissioning necessary.

The following criteria may make recommissioning necessary:

- Air and/or water in the hydraulic system
 - Aged hydraulic fluid
 - Other contaminations
- ▶ Proceed for recommissioning as described in chapter 8.1 “Initial commissioning”.

9 Operation

The planetary gearbox is a subassembly that does not require any settings or changes in operation. The chapter of these operating instructions does therefore not include any information on setting possibilities. Only use the planetary gearbox within the performance range described in the technical data. The machine/vehicle manufacturer is responsible for the correct design of the hydraulic system and its control.

CAUTION

Danger of property damage and personal injury!

The static multiple-disk parking brake of the planetary gearbox is a safety device. If the pressure liquid for the static multiple-disk parking brake is contaminated, the static multiple-disk parking brake and thus the planetary gearbox can block in undefined position. This way, the stopping function of the static multiple-disk parking brake is no longer warranted!

- ▶ Switch off hydraulic pressure when the planetary gearbox is blocked.
- ▶ Avoid contamination caused by unclean pressure fluids, rubbed-off parts or residual dirt from system components.
- ▶ Ensure proper installation of an emergency stop function, so that the consumer driven machine can be brought into a safe situation.
- ▶ Always replace the disks, the springs and the sealing elements after a functional impairment or thermal overload and by any repair work on the multiple-disk parking brake.

If your planetary gearbox is equipped with connections for a circulating oil lubrication or oil cooling, refer to the dimensioned drawing of the planetary gearbox in appendix D "Technical data/Drawings" of the material number-specific operating instructions for information on the permissible operating conditions.

- ▶ Be sure to observe the permissible operating conditions.



The service life of the MOBILEX GFB 8000 planetary gearbox depends on the proper assembly, installation, commissioning and application conditions, such as for following factors, for example: speed, torque, duty cycle, operating conditions and temperatures.

10 Servicing and repair

NOTE

Unpunctual inspection and maintenance work!

Property damage!

- ▶ Perform the required inspection and maintenance work at the intervals described in these instructions.

Regular care, maintenance and inspection extend the service life of the planetary gearbox.

During warranty, repair work on the MOBILEX GFB 8000 planetary gearbox should only be performed by the Rexroth Service. The warranty expires if the product is opened, modified or changed during warranty.

- ▶ Take the machine or vehicle out of service for all inspection, maintenance and repair works.
- ▶ Let the planetary gearbox cool down to approx. 50°C before touching it.

10.1 Cleaning and care

NOTE

Penetrating dirt and liquids!

Damage to the planetary gearbox!

- ▶ Extreme cleanness is required when working on the planetary gearbox.
- ▶ Do not use a high-pressure cleaner for the cleaning of the planetary gearbox.
- ▶ Seal all openings with suitable protective caps and/or protection devices, so that no detergents can penetrate into the system.
- ▶ Check all seals and plug-in connector covers for tight fit to make sure that no humidity can enter the planetary gearbox during cleaning.
- ▶ Remove coarse dirt on the outside and keep sensitive and important components such as valves clean.

Damage to the seals!

Damage to the seals by aggressive detergent or solvent!

- ▶ Do not use any aggressive detergents or solvents.
- ▶ Use a dry cloth made of lint-free fabric to clean the planetary gearbox.

10.2 Inspection

- ▶ Perform visual controls and inspections as specified in chapter 10.3 “Maintenance schedule planetary gearbox”.

10.2.1 Visual inspections

- ▶ Check for leakage in accordance with the intervals specified in the maintenance schedule in chapter 10.3 “Maintenance schedule planetary gearbox”. Signs of leakage include more and more frequent moisture areas on the partition seams or even oil drops.

10.2.2 Checking the oil level of the planetary gearbox

CAUTION

Danger of burns!

The planetary gearbox heats up to a max. of 90 °C during operation in the oil sump, so that you can burn yourself!

- ▶ Allow the planetary gearbox to cool down to approx. 50 °C before touching.
- ▶ To protect yourself from burns, wear appropriate protective clothing such as heat-resistant safety gloves.
- ▶ Always wear protective goggles.

Risk of injury!

Solid particles, such as metal particles or metal abrasion, which are in the lubricating oil or on the screw plug can cause injury!

- ▶ Wear appropriate protective clothing.

NOTE

Risk of damaging the planetary gearbox!

If the oil level is too high or too low, damage or failure may result to the planetary gearbox. If the oil level is too high, this may indicate that a foreign fluid, e.g. pressure fluid or water, may have ingressed. If the oil level is too low, this may indicate an oil leak!

- ▶ Check for any leaks if the oil level is too low.
- ▶ Determine the cause before refilling. Contact the Rexroth Service located in your area, for the address refer to appendix A “Address directory” in the material number-specific operating instructions.

NOTE

Risk of damaging the planetary gearbox!

If you mix different oil types or the same oil types from different oil manufacturers, this may change the oil properties!

- ▶ For re-filling, always use the same oil type from one oil manufacturer.
- ▶ Never mix synthetic lubricating oils with mineral oils or with other synthetic lubricating oils.
- ▶ Fill the planetary gearbox with the oil quantity indicated in the technical data.
- ▶ Make sure to determine the exact oil quantity on the gearbox.

- ▶ Check the lubricating oil level of the planetary gearbox in accordance with the intervals specified in the maintenance schedule in chapter 10.3 “Maintenance schedule planetary gearbox”.
- ▶ Refer to the dimensioned drawing of the planetary gearbox for information about the position of the oil filler opening, the oil level control system and the oil drain.

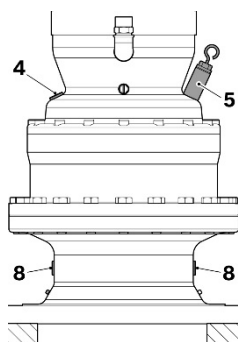


Strictly observe the lubricating oil manufacturer's product data sheets and safety data sheets when handling lubricating oil. These are not included within the scope of supply.

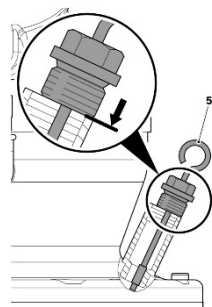
Procedure

Use oil dipstick **5** to check the planetary gearbox oil level:

Observe the information on the planetary gearbox dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions!



- Oil filler opening **4**: for filling the lubricating oil
- Oil dipstick **5**: for checking the lubricating oil level
- Oil drain opening **8**: for draining the lubricating oil

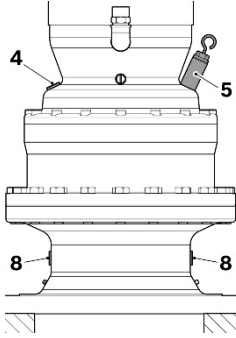


- 1** Allow the planetary gearbox cool down to approx. 50 °C after standstill.
- 2** Turn the oil dipstick **5** out of the extension. Use a dry and lint free cloth to remove any lubricating oil sticking to the dipstick.
- 3** To check the oil level, move the oil dipstick **5** to the position as shown in the figure on the left.
- 4** Pull out the oil dipstick **5**.
- 5** The oil level is correct if it is between the marks Min. and Max. of the oil dipstick **5**. See dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- 6** If the oil level is too low, fill in lubricating oil. Proceed as described in the chapter 8.1.5 “Filling lubricating oil via the oil filler opening” (planetary gearbox without circulating oil lubrication).
- 7** If the oil level is too high, drain lubricating oil until it is between the marks Min. and Max. of the oil dipstick **5**. Proceed as described in the chapter 8.1.5 “Filling lubricating oil via the oil filler opening” (planetary gearbox without circulating oil lubrication).
- 8** Turn oil dipstick **5** back into the extension.

10.2.3 Acoustic inspections

- ▶ Perform daily noise tests. A grinding or whistling noise that possibly occurs at high speeds indicates a malfunction. Inform the competent superior or operator without delay of any changes during planetary gearbox operation such as unusual running noise.

10.2.4 Checking and tightening screw connections



- ▶ Check, as specified in the maintenance plan, that all screw connections are tightly secured. Especially check:
 - the gearbox mounting screws
 - the motor fixing screws
 - the screw plug oil filler opening **4**
 - the screw plug oil drain opening **8**
- ▶ Tighten the screws of the planetary gearbox at the torque specified for the corresponding screws in the planetary gearbox spare parts drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions. Also observe the frame drawing of the machine/vehicle manufacturer.

10.3 Maintenance schedule planetary gearbox



The material number-specific operating instructions may include a maintenance schedule which is different from the maintenance schedule in the general operating instructions. The maintenance schedule in the material number-specific operating instructions always applies.

- ▶ Check whether there is a different maintenance schedule for your planetary gearbox in the material number-specific operating instructions.
- ▶ The maintenance schedule, shown in table 6 “Maintenance schedule planetary gearbox” only applies for the planetary gearbox. Therefore observe not only with the maintenance schedule of the planetary gearbox but also with the maintenance schedule included in the machine/vehicle manufacturer's operating instructions.

Table 6 Maintenance schedule planetary gearbox

Interval	Action	NOTE
After 150 motor operating hours	Perform the first oil change.	refer to chapter 10.4.2
Daily	Perform noise test	refer to chapter 10.2.3
Weekly	Perform visual inspection	refer to chapter 10.2.1
	Perform oil level check	refer to chapter 10.2.2
Monthly	Check that the planetary gearbox mounting screws are tightly secured	If necessary, retighten mounting screws
Every six months	With existing grease nipple Use lithium multi-purpose grease L-XBCHA3 (GB 7324-94) or FAG Arcanol MULTI3 or Klüberplex BE 31-222 to grease the lubricating point (output shaft)	If the bearing of the output shaft in the output shaft housing is grease-lubricated, there is at least one grease nipple on the output side that you should use to relubricate the bearing.
Every year, however not later than after 1500 motor operating hours	Perform oil change.	refer to chapter 10.4.2

10.4 Maintenance

If used in accordance with the intended purpose, the planetary gearbox is low-maintenance.

The service life of the planetary gearbox essentially depends on the quality of its lubricating oil. We therefore recommend changing the lubricating oil at least once a year or every 1,500 operating hours (whichever is earlier).

10.4.1 Approved lubricating oils



Fill the planetary gearbox MOBILEX GFB 8000 only with lubricating oil which has been approved for this planetary gearbox according to the selection list – industrial gear oils in appendix B “Required and supplementary documentations” in the material number-specific operating instructions for these planetary gearbox.

10.4.2 Changing the lubricating oil

NOTE

Damage to the planetary gearbox!

If you mix different oil types or the same oil types from different oil manufacturers, this may change the oil properties!

- ▶ For re-filling, always use the same oil type from one oil manufacturer.
- ▶ Never mix synthetic lubricating oils with mineral oils or with other synthetic lubricating oils.
- ▶ Fill the planetary gearbox with the oil quantity indicated in the technical data.
- ▶ Make sure to determine the exact oil quantity on the gearbox.



Carry out an oil change before the planetary gearbox has completely cooled down. This ensures that solid particles have not yet settled.



Strictly observe the lubricating oil manufacturer's product data sheets and safety data sheets when handling lubricating oil. These data sheets are not included within Rexroth's scope of supply.

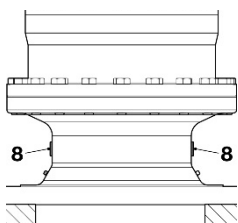
Change the lubricating oil at the intervals specified in the maintenance schedule. If existing, observe the maintenance schedule in the material number-specific operating instructions.

Procedure

Performing the lubricating oil change:

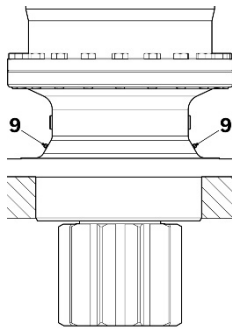
Observe the information on the planetary gearbox dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions!

- Oil drain openings **8**: for draining the lubricating oil



- 1 Put the planetary gearbox out of service. Proceed as described in the instructions of the machine or the overall vehicle.
- 2 Check the oil level as described in chapter 10.2.2 “Checking the oil level of the planetary gearbox”.
- 3 Place a catch basin with sufficient capacity under the planetary gearbox.
- 4 Loosen one of the screw plugs of the drain openings **8** slowly, so that any existing pressure can be released.
- 5 Remove afterwards the screw plugs from the oil drain openings **8**.
- 6 Drain the lubricating oil completely in the catch basin.

- 7 Check visually whether e.g. water, metal particles or mud are in the drained lubricating oil.
- 8 In case of important contamination, find out the cause before refilling. Contact the Rexroth Service located in your area, for the address refer to appendix A “Address directory” in the material number-specific operating instructions.
- 9 If the lubricating oil is contaminated, flush the lubricating oil system carefully before filling the planetary gearbox with new lubricating oil.
- 10 Dispose of this drained lubricating oil in accordance with local country regulations.
- 11 Check whether the seals on the screw plug threads of the oil drain openings **8** are still in perfect condition and can be reused. Replace the damaged seals.
- 12 Screw the screw plugs of the oil drain openings **8** back into the bores.
- 13 Then fill the planetary gearbox with clean lubricating oil according to the selection list – industrial gear oils. Proceed as described in chapter 8.1.4 “Filling the planetary gearbox with lubricating oil”.



10.4.3 Greasing the output shaft bearing

If the output shaft bearing in the output shaft housing is permanently greased, the planetary gearbox is not provided with a grease nipple. But if the bearing is grease-lubricated, the planetary gearbox has at least one grease nipple **9**.

- ▶ Grease the output shaft bearing at the intervals specified in the maintenance schedule. If necessary, use lithium multi-purpose grease L-XBCHA3 (GB 7324-94) or FAG Arcanol MULTI3 or Klüberplex BE 31-222 to grease the output bearing in the output shaft housing via grease nipples **9**.

10.4.4 Maintenance of the static multiple-disk parking brake

The static multiple-disk brake integrated in the planetary gearbox is maintenance-free if used as intended.

! WARNING

Risk caused by the failure of the static multiple-disk parking brake!

The use of the static multiple-disk parking brake for braking the gearbox may cause its destruction.

- ▶ Operate the static multiple-disk parking brake only after a complete stop of the, e.g. superstructure.
- ▶ Always replace the disks, the springs and the sealing elements after a functional impairment or thermal overload and by any repair work on the multiple-disk parking brake.

Danger of delayed stopping of the static multiple-disk parking brake!

Delayed application of the static multiple-disk parking brake can lead to accidental turning of the e.g. superstructure.

- ▶ Please ensure that the brake line of the static piston is pressureless within 0.5 s.

10.5 Repair

Rexroth offers a comprehensive range of service for repair of the MOBILEX GFB 8000 planetary gearbox.

During warranty, the planetary gearbox has to be repaired by Rexroth Service. The warranty expires if the product is opened, modified or changed during warranty.

- ▶ Please contact Rexroth Service in your area in case repairs are required. The corresponding contact is indicated in appendix A “Address directory” of the material number-specific operating instructions.

10.5.1 Repairing the static multiple-disk parking brake



WARNING

Hazard from multiple-disk parking brake failure!

Risk of injury or material damage caused by malfunctions as well as thermal overload of the multiple-disk parking brake! This can lead to damage to the multiple-disk package and to decreasing brake action or failure of the multiple-disk parking brake.

- ▶ Always replace the disks, the springs and the sealing elements after a functional impairment or thermal overload and by any repair work on the multiple-disk parking brake.
- ▶ Please contact Rexroth Service in your area in case repairs are required. The corresponding contact is indicated in appendix A “Address directory” of the material number-specific operating instructions.

If functional impairment or thermal overload makes repairs necessary, these must only be performed by trained staff or employees of the Rexroth Service. The corresponding contact is indicated in appendix A “Address directory” of the material number-specific operating instructions. By these repairs the disks, the springs and the sealing elements must always be replaced. Rexroth does not assume any liability for damage of any kind due to non-observance of these provisions.

10.6 Spare parts

CAUTION

Use of improper spare parts!

Spare parts that do not meet the technical requirements defined by Rexroth may cause damage to persons and property!

- ▶ Only use Rexroth original spare parts for repairing the Rexroth planetary gearbox, otherwise the planetary gearbox functional safety cannot be guaranteed and the warranty expires.

Only part of the items of the parts list shown in the appendix of the material number-specific operating instructions can be supplied as spare parts kits, e.g.:

- Sealing kit
- Planet carrier complete
- Brake repair kit
- ▶ Ask our Spare Parts Sales Department for the corresponding spare parts kits.
- ▶ Place spare parts orders in writing. In cases of urgency, you can also order by phone if you confirm your order promptly by fax or e-mail.
- ▶ The parts list of the MOBILEX GFB 8000 planetary gearbox is material number-specific.
- ▶ Place spare parts orders with the Rexroth Service.
- ▶ Please provide the following information from the name plate with your order:
 - Material number (planetary gearbox)
 - Serial number
- ▶ Provide the following data from the parts list:
 - Drawing number
 - Item number
 - Exact designation
 - Material number/order no. (single part)
- ▶ Also provide this information:
 - Quantity of the desired spare parts
 - Desired shipping mode (e.g., express, freight, air freight, parcel service, etc.)



Refer to www.boschrexroth.com and the address directory in appendix A “Address directory” of the material number-specific operating instructions for the addresses of our national agencies.

11 Decommissioning

The MOBILEX GFB 8000 planetary gearbox is a subassembly that does not have to be decommissioned. For this reason the chapter in this manual contains no information. How to disassemble and replace the MOBILEX GFB 8000 planetary gearbox is described in chapter 12 “Disassembly and replacement”.

12 Disassembly and replacement

Prior to disassembly, the following documents must be readily accessible:

- Dimensioned drawing of the planetary gearbox
- Spare parts drawing of the planetary gearbox
- Hydraulic diagram for the machine or vehicle (supplied by the manufacturer)
- if necessary, terminal diagram "Electric" for the machine or vehicle (supplied by the manufacturer)
- Material number-specific operating instructions of the planetary gearbox
- Assembly drawing for the machine or vehicle (supplied by the manufacturer)

If present, you also require the following documents:

- General operating instructions of the axial-piston motor
- Product-specific operating instructions of the axial-piston motor
- Operating instructions of the electric motor

If your planetary gearbox is equipped with connections for circulating oil lubrication or oil cooling, please observe the "disassembly" instructions in the following document included in the material number-specific operating instructions:

- Chapter G "Supplementary connections"

In addition, observe the instructions of the machine or vehicle manufacturer. If the material number-specific operating instructions includes action steps for "Disassembly" that deviate from the general operating instructions, the action steps in the in the material number-specific operating instructions apply.

12.1 Required tools

The planetary gearbox can be disassembled with standard tools. No special tool is required.

12.2 Preparing the disassembly

WARNING

Danger to life!

If the machine or vehicle is not put out of service before disassembling the planetary gearbox, you may suffer serious injuries and/or the product or vehicle parts may be damaged!

- ▶ Relieve any system pressure and cut off power supply for the relevant part of the machine or the vehicle. Refer to the manufacturer's operating instructions for more information on how to do this.
- ▶ Protect the machine or vehicle against restarting.

12.3 Disassembling the planetary gearbox from the machine or chassis frame



CAUTION

Danger of burns!

The planetary gearbox heats up to a max. of 90 °C during operation in the oil sump, so that you can burn yourself!

- ▶ Allow the planetary gearbox to cool down to approx. 50 °C before touching.
- ▶ To protect yourself from burns, wear appropriate protective clothing such as heat-resistant safety gloves.
- ▶ Always wear protective goggles.

Risk of injury!

Solid particles, such as metal particles or metal abrasion, which are in the lubricating oil or on the screw plug can cause injury!

- ▶ Wear appropriate protective clothing.

NOTE

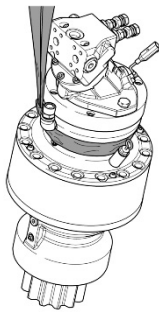
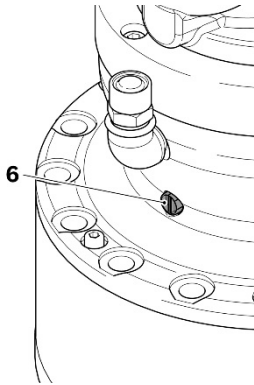
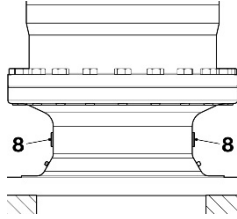
Risk of damaging the planetary gearbox!

Improper procedure when removing the planetary gearbox may damage the planetary gearbox!

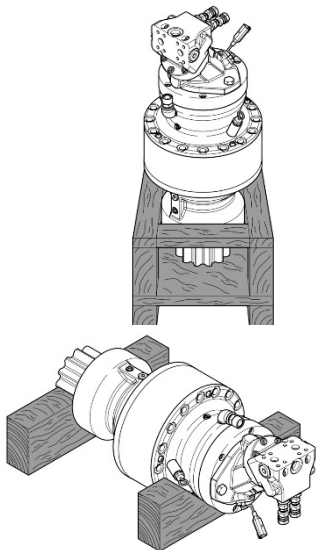
- ▶ Avoid strong impacts on the planetary gearbox during disassembly.
- ▶ Avoid exerting axial forces and high compression forces on the gearbox housing.
- ▶ Make sure that the planetary gearbox is not tilted during disassembly.

This chapter describes how to disassemble the planetary gearbox from the machine or chassis frame. It is assumed that the machine or vehicle part has been prepared for disassembly as described in chapter 12.2 “Preparing the disassembly”.

- Procedure** For disassembling the planetary gearbox from the machine/chassis frame:
- 1 Power down the machine or vehicle in question.
 - 2 Check whether the hydraulic system is pressure relieved.
 - 3 Secure the deactivated machine or deactivated vehicle part against inadvertent activation.
 - 4 Let the planetary gearbox cool down until it can be disassembled without any risk.
 - 5 Place a catch basin under the planetary gearbox in order to collect any leaking hydraulic fluid or lubricating oil.



- 6** Loosen one of the screw plugs of the drain openings **8** slowly, so that any existing pressure can be released.
- 7** Remove afterwards the screw plugs from the oil drain openings **8**.
- 8** Drain the lubricating oil completely in the catch basin.
- 9** Dispose of this drained lubricating oil in accordance with the local country regulation.
- 10** Check whether the seals on the screw plug threads of the oil drain openings **8** are still in perfect condition and can be reused. Replace the damaged seals.
- 11** Screw the screw plugs of the oil drain openings **8** back into the bore.
- 12** Loosen the supply lines of the axial-piston motor. Proceed as described in the machine/vehicle operating instructions or the operating instructions of the axial-piston motor.
- 13** Seal the hydraulic lines on the axial-piston motor using the appropriate plugs.
- 14** Loosen the brake release line of the static multiple-disk parking brake on the planetary gearbox. The corresponding connections are shown and labeled in the planetary gearbox dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- 15** Close the brake release connection **6** at the planetary gearbox with a corresponding plug according to the parts list. For this, observe appendix E “Parts list” of the material number-specific operating instructions.
- 16** Loosen the connections of all units and mounting parts that are required for planetary gearbox operation. Observe the information on the planetary gearbox dimensioned drawing in appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- 17** Protect the supply lines against contamination.
- 18** Make sure that neither dirt nor foreign substances penetrate in the lines or the planetary gearbox.
- 19** For the planetary gearbox weight, refer to appendix D “Technical data / Drawings” of the material number-specific operating instructions.
- 20** In addition, observe the weight of the axial-piston motor.
- 21** Attach the planetary gearbox carefully using appropriate means of attachment such as e.g. swivel hooks, shackles or suitable equipment on an appropriate lifting equipment such as a crane hook. Observe chapter 6.1 “Transporting the MOBILEX GFB 8000”.
- 22** Secure the planetary gearbox against uncontrolled movements, e.g. sliding.
- 23** Tighten the means of attachment without lifting the planetary gearbox. Make sure that the planetary gearbox is not tilted.
- 24** Untighten and remove the mounting screws of the connection between machine or chassis frame and planetary gearbox.



- 25 Lift the planetary gearbox carefully from the machine or chassis frame.
- 26 Make sure that the surface is stable.
- 27 Set down the planetary gearbox vertically on the output pinion or place it horizontally on a flat, stable ground.
 - When setting down the planetary gearbox vertically, use suitable measures to protect the gearbox from tipping over. Use e.g. a suitable wooden frame.
 - When setting down the planetary gearbox horizontally, use suitable measures to protect the gearbox from rolling away. Use e.g. wedges or scantlings (see adjacent sketches).
- 28 Remove all means of attachment such as straps, chains, swivel hooks, shackles or devices which are still attached.

12.4 Preparing the planetary gearbox for storage reuse

This chapter only describes how to prepare the planetary gearbox for storage reuse.



For queries, please contact a Rexroth's subsidiary located near you or the main plant directly. Refer to www.boschrexroth.com and the address directory in appendix A “Address directory” of the material number-specific operating instructions for the addresses of our national agencies.

- 1 Carefully close all the openings of the planetary gearbox.
- 2 Clean the planetary gearbox as described in chapter 10.1 “Cleaning and Care”.
- 3 For preservation, fill the planetary gearbox with lubricating oil approved for this planetary gearbox. See selection list – industrial gear oils in appendix B “Required and supplementary documentations” in the material number-specific operating instructions. Fill the planetary gearbox as described in chapter 8.1.3 “Filling the planetary gearbox with lubricating oil” of this operating instructions.
- 4 Preserve the surfaces of external flanges, shaft ends and flange surfaces with a preservative (e.g. PERIGOL VCI 230 or CUSTOS 10-38). Observe chapter 6.2.1 “Preservation” and the associated product data sheets and safety data sheets.
- 5 Store the planetary gearbox as described in chapter 6 “Transport and storage”.

13 Disposal

13.1 Environmental protection

NOTE

Ground water and/or soil contamination caused by careless disposal!

Damage to property and the environment caused by careless disposal of the planetary gearbox, the packaging material, the lubricating oil, the hydraulic fluid!

- ▶ Eliminate leaks immediately.
- ▶ Dispose of the gearbox, the packaging material, the lubricating oil and the hydraulic fluid or the pressure fluid according to the national regulations of your country.
- ▶ Dispose of the lubricating oil residues and/or hydraulic fluid/pressure fluid residues according to the respective valid safety data sheets.
- ▶ Dispose of mounting parts and cabling according to the respective manufacturer's regulations.

Careless disposal of the planetary gearbox, the hydraulic fluid, the lubricating oil and the packaging material may lead to environmental pollution.

- ▶ Dispose of the planetary gearbox, the hydraulic fluid, the lubricating oil and the packaging material according to the national regulations of your country.
- ▶ Dispose of hydraulic fluid or lubricating oil remains according to the applicable product data sheets and the safety data sheets for hydraulic fluids or lubricating oils.
- ▶ Observe the following supplied instructions for disposing of the planetary gearbox in an environmentally friendly manner:
 - RE 77943: Information on the environmentally sound disposal of “Gearboxes for mobile and stationary applications” in the appendix of the material number-specific operating instructions.

14 Extension and conversion

You may not modify the MOBILEX GFB 8000 planetary gearbox.



Warranty by Rexroth shall only apply to the delivered configuration and extensions which were provided for in the configuration. After a conversion or extension by the customer, the warranty will expire.



The axial piston motor adjusting screws are protected by safety caps against unauthorized adjusting. Removing the safety caps will void any warranty claims. If the setting has to be changed, contact the responsible Rexroth Service. For the address, please refer to chapter 10.6 “Spare parts”.

15 Troubleshooting and fault correction

The following troubleshooting table 7 may assist you in troubleshooting. The table does not claim to be complete.

In practice, problems may arise that cannot be considered here.

15.1 Troubleshooting procedure

- ▶ Even when under time pressure, proceed in a systematic and targeted manner. Random and unplanned disassembly and adjustment of individual values can make it impossible to determine the original cause of a malfunction.
- ▶ Get an overview of the planetary gearbox operation in connection with the machine or vehicle.
- ▶ Try to clarify whether the planetary gearbox has performed the required function in the machine or vehicle before the error occurred.
- ▶ Try to understand the changes of the machine, vehicle where the planetary gearbox is installed:
 - Were there changes in the conditions of use or the area where the gearbox was deployed?
 - Has maintenance work been performed recently? Does an inspection or maintenance log exist?
 - Have changes (e.g. conversions) or repairs been performed on the overall system of the planetary gearbox? If yes: What were these?
 - Has the lubricating oil or the hydraulic fluid been changed?
 - Has the gear unit or the machine, the vehicle been operated in accordance with the intended purpose?
 - How is the malfunction evident?
- ▶ Gain a clear picture of what caused the malfunction. As necessary, ask the direct operator.
- ▶ If appropriate, record the situation as you encountered it by taking digital photographs and send these to Rexroth Customer Service.

Table 7 Malfunction table of the MOBILEX GFB 8000

Malfunction	Possible cause	Remedy
Changed gearbox noises	Damaged gears	Notify Customer Service. Check toothed components for flaws such as pittings. Let the damaged parts be replaced by Rexroth Service.
	Bearing play	Notify the Rexroth Service.
	Bearing defective	
Noises	Gearbox fastening has become loose	Tighten screws with the required tightening torque.
The operating temperature is substantially higher than normal	The oil level is too high or too low	Allow the planetary gearbox to cool down to approx. 50 °C. Check the oil filling level. If required, fill with lubricating oil or drain off lubricating oil if oil level is too high.
	The lubricating oil is too old or badly contaminated	Check in the operating instructions of the system, machine or vehicle when the last oil change took place, if appropriate proceed to an oil change. Proceed as described in chapter 10.2 "Inspection".
Leaking oil	Defective output seal.	Check seals as far as possible, replace if necessary. If the leak cannot be eliminated, Rexroth Service must be notified.
	Seals on partition seams or on the locking screws are defective	
Lubricating oil is foaming	Incompatibility of the filled in lubricating oil with the oil remains or the preservation oil of the planetary gearbox.	Replace the lubricating oil and rinse with appropriate purging oil.
Decreasing or non-existent brake action	Thermal overload of the multiple-disk brake	Contact the Rexroth Service. Let trained staff or Rexroth Service employees carry out an inspection on the multiple-disk brake. Replace the disks, springs and sealing elements.



If the malfunctions occurred cannot be eliminated, contact one of the contact addresses indicated on www.boschrexroth.com or in the address directory in appendix A "Address directory" of the material number-specific operating instructions.

16 Technical data

For the technical data of the MOBILEX GFB 8000 planetary gearbox, please refer to appendix D “Technical data / Drawings” of the material number-specific operating instructions.

17 Appendix

The documents of chapter 17 “Appendix” are enclosed in the appendix of the material number-specific operating instructions. Also refer to chapter 1.2 “Required and supplementary documentations”.

Bosch Rexroth AG

Gearbox Technology

Nortkirchenstr. 53

44263 Dortmund

Germany

Phone +49 231 22819-5

info.gears@boschrexroth.de

www.boschrexroth.com/gears

Additional information at:
www.boschrexroth.com/gears

