

FIT FOR THE FUTURE

WITH INDIVIDUAL TRAININGS



MOBILE HYDRAULICS &

MOBILE ELECTRONICS

PREPARE FOR THE FUTURE CHALLENGES.



In addition to the standard trainings of our training program, which can be carried out at your place as well, we are offering individual trainings to qualify your crew members.

We, of the Bosch Rexroth company rely on a module concept, which helps you to concentrate on **focus topics**, to connect Mobile Hydraulics and Electronics in the training as well, and to prepare your team for the challenges of the future. Additionally, you can freely choose from our three different learning methods, the one that suit you best.

Together we work on your success and design a tailored training program for your special needs. You can **profit** from our Know-How gained over the years and from qualified trainers, which are highly interested in a very **specific advanced training** for your team.

TOPICS

The modules are divided into four different topics, that offer a variety of possibilities in the compilation of your individual training.



LEARNING METHODS

- **Face-to-face training:** at one of our locations or directly at your site – with high amount of practical exercises.
- **Online training:** experience our online trainings flexible from wherever you want to.
- **Blended learning:** as a combination of both.



In the following we present you the modules of our four focus topics in the area of Mobile Hydraulics and Mobile Electronics.






TOPICS AND FOCUS MODULES OF OUR INDIVIDUAL TRAINING




BASICS

To introduce to your personal individual training we highly recommend some technical basics, which prepare your crew for the content constructively and refresh basic knowledge. We value content-wise variety, which is the basis for motivation and agility in the training as well.

MOBILE HYDRAULICS

-  101 **Hydraulic fundamentals**
Function and construction of a hydraulic system
-  102 **Accessories, hose, reservoir, cooler, filter**
Hydraulic accessories and correct handling
-  103 **Initial commissioning**
Safe handling while hydraulic commissioning

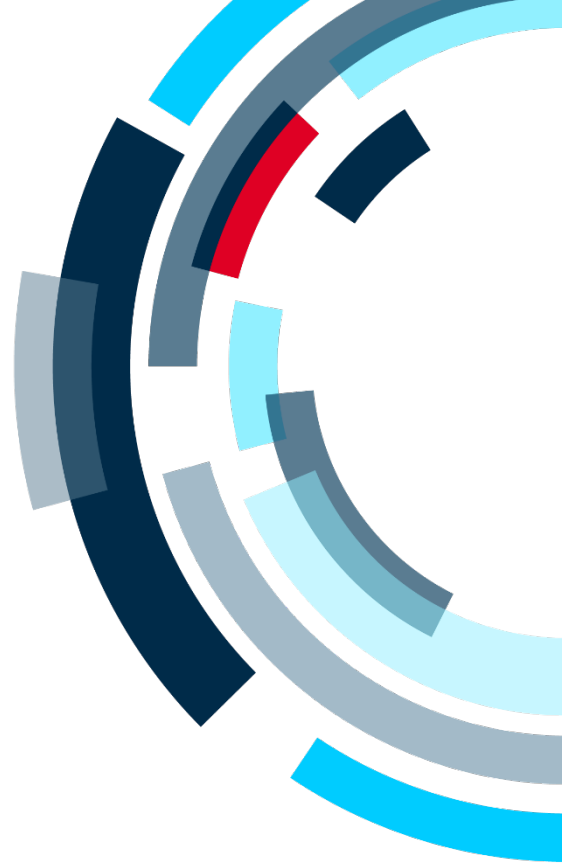
MOBILE ELECTRONICS

-  401 **CAN fundamentals**
Introduction to the serial bus system CAN
-  402 **CAN protocol SAE-J1939**
Basics of the CAN protocol SAE-J1939-71
-  403 **CAN protocol CANopen**
Basics of the CAN protocol CANopen

DYNAMIC. CLEVER. SUCCESSFUL.

PRODUCTS

The range of products of Bosch Rexroth Mobile Hydraulics reaches out far beyond pumps, motors and control blocks. Discover the variety of variants and modules, which are the basis for your competitiveness on the future market.



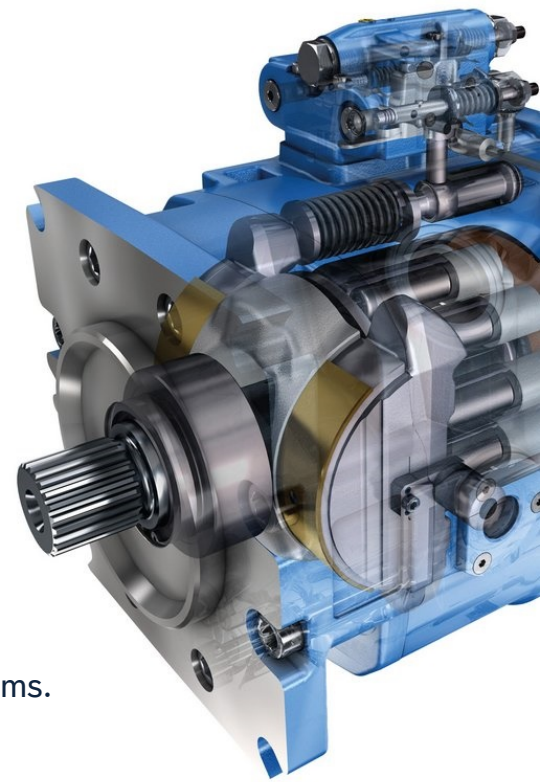
MOBILE HYDRAULICS

- 201 **Fluids**
Hydraulic fluids, characteristics and standardization
- 220 **M-series**
Control blocks
 - 221 MO/RCS Open-centre control block, size 16-25
 - 222 M8/RCS Open-centre control block, size 32
 - 223 M9/RCS Open-centre control block, size 30, 35
 - 224 M7/RS LUDV-control block, size 20 – 25
 - 225 M6/RS LUDV-control block, size 15 – 22
 - 226 M4 Load-Sensing-control block, size 12, 15, 22
- 203 **SBX4**
Load-Sensing control blocks, structure and function
- 204 **LT**
Hydraulic power brakes

EXPLORE MORE.

PRODUCTS

The A-series reflects the product line of the axial-piston units. Among them there are pumps and motors for the open and closed circuit, as well as ones for single and multi-circuit systems.



MOBILE HYDRAULICS



205	A-series Axial Piston units	
206	A1VO	Variable pump: economical Load Sensing
207	A2FM	Universally useable high pressure motor until 450 bar
208	A4VG	High pressure motor for applications „Closed Circuit“
209	A4VSO	For hydrostatic drives in „Open Circuit“
210	A6VM	Axial Piston Variable motor: high speed
211	A7VO	Robust high pressure pump until 400 bar „Open Circuit“
212	A8VO	For machines with multi-circuit system e.g. excavators
213	A10VG	Medium-pressure pump for applications „Closed Circuit“
214	A10VO	Univ. medium pressure pump until 280 bar „Open Circuit“
215	A11VO	Univ. high pressure pump with through drive until 400 bar
216	A15VSO	Univ. high pressure pump with through drive until 420 bar
217	A18VO	High-pressure pump for use in commercial vehicles

BE PREPARED FOR THE FUTURE.

PRODUCTS

In addition to that Bosch Rexroth is an absolutely strong partner in Mobile Electronics and supports you and your team with promising solutions to be used in the area of Mobile Hydraulics.

Our trainings help you to exhaust every single possibility for success and to profit from our many years of expertise.

MOBILE ELECTRONICS

- 601 **Rexroth Controller**
Requirements and functions of mobile control units
- 602 **Rexroth Sensors**
Structure and function of the Rexroth family of sensors
- 603 **Rexroth IoT (COS)**
Connected Off-Highway Solution (COS)

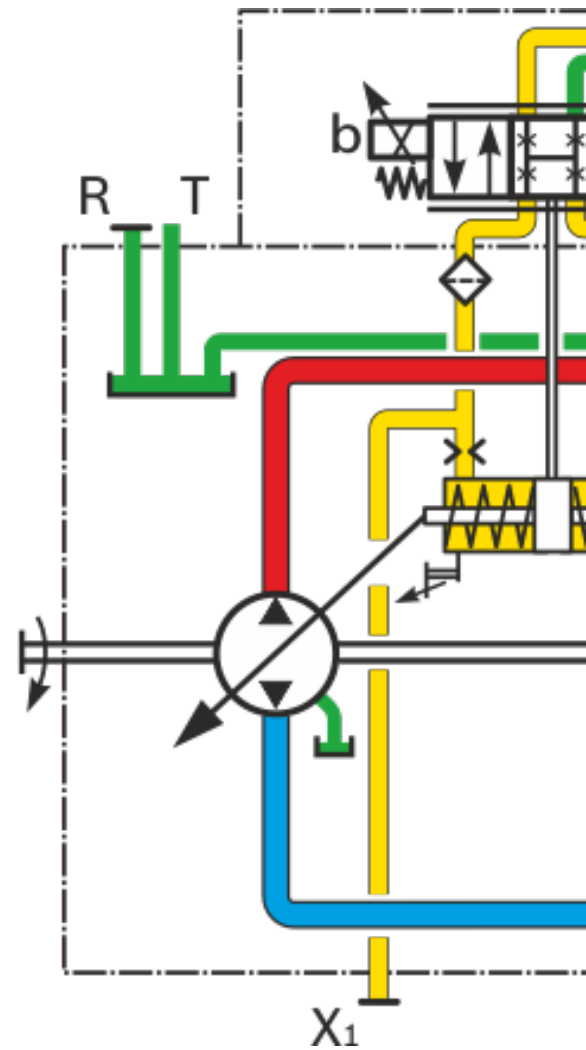


SMART. INDIVIDUAL. GOAL ORIENTED.

SYSTEMS

To use and implement our products even more efficient, there has to be a detailed understanding of the hydraulic basics and of the processes in the machine's working process as well as its components. Lay the necessary foundations in your team now.

- 301 **OK OC**
Mobile hydraulics „Open Circuit“
- 302 **OK LUDV**
Open hydraulic circuit with LUDV
- 303 **OK LS**
Open hydraulic circuit with Load Sensing
- 304 **GK travel drive**
Closed hydraulic circuit for travel drive
- 305 **GK winch**
Closed hydraulic circuit on example „winch“
- 306 **GK slew drive**
Closed hydraulic circuit for slew drive
- 307 **Applications, e.g. wheel loaders, excavators, etc.**
Practical module: Mobile hydraulics applications



WE MOVE FOR YOUR SUCCESS.

TOOLS

At least to be able to connect Mobile Hydraulics with Electronics, different tools are required, which support the control of Rexroth components as well as guarantee an optimum utilization and efficiency.

- 501 **BODAS-service V3.62**
Introduction to the control and application of the diagnosis tool for the Bosch Rexroth controller of BR2x and 3x
- 502 **CANalyzer fundamentals**
Using CANalyzer as an analysis tool for ECU networks and distributed systems
- 503 **BODAS Service V3.6**
Diagnosis of BODAS control units (BR2x/3x)
- 504 **BODAS Service V4**
Diagnosis of BODAS control units (BR40)
- 505 **BODAS Studio**
Authoring tool for generation of application specific diagnostic procedures
- 506 **BODAS-DI-4 Basics**
Introduction to DI4 programming
- 507 **Get ready for BR40**
Prerequisites for programming RC series 40



WITH COMPETENCE AND EXPERTISE FIT FOR THE FUTURE.

Now design your own training by choosing some of the modules mentioned above. We guarantee a balanced proportion between theory and practice inside every single module.

Do you have additional questions about the system or the preparation for your training? Please do not hesitate to contact us. We will support you at choosing the perfectly fitting training modules and even at time management.



Please find some more information on our website
www.boschrexroth.com/training-mobile-hydraulics

or contact us directly at
training.elchingen@boschrexroth.de



EXAMPLE INDIVIDUAL TRAINING

IN A CUSTOMER-SPECIFIC CONTEXT



On the following pages you will find some examples for compiling an individual training tailored to your certain needs .

The mentioned examples focus on different situations in your daily business life, where you as an entrepreneur can rely on the support of Bosch Rexroth.

1

You would like to implement a new Rexroth product, but you do not have gained any experience with that?

In this case you could compile the topics for your training like this:

Module 101 Hydraulic fundamentals

Module 215 Pumps and motors: A11VO

Therefore you would concentrate on the possibilities of the product and it's technical data, as well as on the variable program at all.

2

You own several machines from different OEM 's and would like to make your team fit for maintenance?

In this case you could compile the topics for your training like this:

- Module 101** Hydraulic fundamentals
- Module 307** Applications, e.g. wheeled loader, excavator, etc.
- Module 203** SBX4
- Module 205** Pumps and motors: A-series

- Module 303** Control concept: OK LS
- Module 304** Control concept: GK travel drive
- Module 305** Control concept: GK winch

- Module 401** CAN fundamentals
- Module 402** CAN protocol SAE-J1939
- Module 502** CANalyzer fundamentals

- Module 103** Initial commissioning

The focus of this training lies in troubleshooting, understanding the system and the possibilities of measuring. Simple maintenance work as well as the right initial commissioning after the change of the components will round off the content of your training.

3

You bought a new machine (e.g. wheeled loader) and would like to get your team trained on this certain machine?

In this case you could compile the topics for your training like this:

Module 101 Hydraulic fundamentals
Module 307 Application: Wheeled loader travel drive and implement hydraulics

Module 225 Mobile control block: M6
Module 208 A4VG
Module 210 A6VM
Module 214 A10VO

Module 304 Control concept GK travel drive
Module 302 Control concept OK LUDV

Therefore the training is going to be built up directly on the level of the material number. That means, your training focusses on the components, which were really implemented in your machines, and this fact makes us able to coordinate the training also on special solutions. (exclusively for OEM`s!)

If you are interested and like to discuss the preparation of a training plan for your crew with a team of trainers, please do not hesitate to contact us at

training.elchingen@boschrexroth.de

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