TRAINING 2024

Course catalog

Dubai – United Arab Emirates

January – June / 2024

Contact and Trainers

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Overview

Our Capabilities:

Our factory-certified instructors offer operating systems, components, maintenance and repair training on our Grove, GMK and Manitowoc products.

Manitowoc Crane Care is an innovative leader in advanced crane industry training. Our onsite and online training curriculum is designed with your profits and your safety in mind. With professional and experienced instructors, our training helps you develop the product knowledge you need to be as productive as possible.

Our Facilities:

Dubai, UAE: Our site offers a state-of-the-art classroom. A large hands-on simulator lab to include simulators of multiple generations of Grove Rough Terrain, GMK All Terrain and Manitowoc Crawler operating systems. A multiple bay training building is also used to accommodate multiple products for troubleshooting. On-location training is also available.

Available lab workstations:

- Two generations of GMK simulators to include RCL's
- Four generations of Grove Rough Terrain RCL simulators
- Four generations of Grove Rough Terrain simulators
- EPIC & CANBUS Hydraulic/Electrical Simulators
- Hydraulic and Electrical workstations

Practical Information

Our Location: Jebel Ali Free Zone, Dubai, UAE

Our International Profile: Hundreds of trainees from the region and the world pass through the training center annually. Lectures are conducted in the English language.
(other languages available on demand)

Our Certifications: All conducted training courses are accredited by the Manitowoc Training Centers in the United States and Germany.

Our Global Offer: Thirteen 1-week training modules covering; Crane Foundation, Operator, Rough Terrain, All Terrain Cranes and Custom designed courses according to your needs.

Registration: Dates are tentative and registration is based on a “first come, first serve” basis with a priority to confirmed (prepaid) orders. You will find enclosed “registration purchase order" forms which must be filled in and returned to the Training Center for confirmation. Trainees must be over 18 years old and must be declared fit to work at heights. Trainees are expected to fully respect the safety rules of the facility where the training is taking place. MANITOWOC denies responsibility for accidents and/or illnesses that might occur during the training courses. We therefore request, that you cover your trainees against any kind of risks and provide them with the necessary insurance certificates and forms.

Travel arrangements: Please inform the Training Center of the trainee’s travel arrangements. If they are flying to Dubai, we can assist with hotel bookings, transportation, visa applications, etc.

Clothing: Most of our training programs involve numerous practical exercises outside. Please let the trainees know that they should therefore, bring suitable shoes and clothing. We will lend gloves, safety glasses and helmets to the trainees.
For the practical parts of the training: working clothes, gloves and steel-capped shoes are needed.

Cost: Refer to schedule. In order to avoid misunderstandings, please inform all trainees that hotel rooms, meals and other expenses, i.e. telephone, weekend trips, taxi, etc. are not included and must be paid by trainee.

Cancellation: In case of cancellation, please inform the training Center immediately in order to avoid extra charges.

Course summary

Product Line	Course Name	Location
Section 1	**Introduction courses**	
	Crane System Theory	Dubai, UAE
	Crane Technology & Operation	Dubai, UAE
Section 2	**Rough Terrain courses**	
Grove RT	GROVE 1.1 (Intro to CANBUS)	Dubai, UAE
	GROVE 2.1 (Service Tool/ CanLink)	Dubai, UAE
	GROVE 3.1 (Orchestra)	Dubai, UAE
	GROVE 4.1 (Hybrids)	Dubai, UAE
	GROVE 5.1 (CCS)	Dubai, UAE
	GROVE 6.1 (Flashing)	Dubai, UAE
	CERTIFICATION	Shady Grove, USA
Section 2	**All Terrain courses**	
GMK	GMK 1.1 (Operational Aspects)	Dubai, UAE
	GMK 2.1 (Electric & Hydraulic)	Dubai, UAE
	GMK 3.1 (ECOS ESX Tech. & Diag.)	Dubai, UAE
	GMK 4.1 (EKS 4 & 5 Tech. & Diag.)	Dubai, UAE
	GMK 5.1 (CCS Tech. & Diag.)	Dubai, UAE
	GMK 6... (Engine & Transmission)	Wilhelmshaven, Germany
	GMK 7.1 (Steer By Wire)	Dubai, UAE
	GMK 8.1 (6400-1 Tech. & Diag.)	Wilhelmshaven, Germany
	CERTIFICATION	Wilhelmshaven, Germany

Introduction Courses

Course Name	Page
Crane System Theory	7
Crane Technology & Operation	8

Aim of training course

This course is designed to provide a basic understanding of hydraulic, electrical and pneumatic principles and how they are applied on the different Manitowoc product lines and will be used as a prerequisite for all introductory level courses.

Program

This course will consist of classroom time utilizing programs covering the basics of hydraulic, electrical and pneumatics along with their components and how these components operate and interact with each other. Schematics are used to help the students gain an understanding of schematic layouts and component symbols used on the different product lines.

Teaching methods

4.5 days theory and practice in hydraulic, electrical and pneumatic schematics and systems. Hydraulic and Electrical test benches are incorporated into the course to help give the student a better understanding of the hydraulic and electrical theories learned in the classroom portion of the training

Equipment

- Training room
- Technical documents
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Prerequisites

- Trainees must be over 18 years old
- Trainees have to bring their PPE

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Dates

- 08.01.2024 – 12.01.2024
- 29.04.2024 – 03.05.2024
- More dates on request

Cost

- Training fee $1.250.00*

*Training conducted in the UAE is subject to 5% VAT

Aim of training course

This program assumes no basic service and operational knowledge of Grove Rough Terrain, Truck Mounted and All Terrain crane systems. We start the course with an in-depth review of crane terminology and technologies so the students can relate to a crane's individual components and systems. Programs covering Grove RT load charts are used to expose the students to how load charts are constructed and how to properly read and interpret them. After completion of the RT cranes, the study will move forward into the GMK product line, here the students will be exposed to the GMK style load charts. Exercises will be conducted in class to assure a full grasp of both product types.

Program

Safety Devices, Load capacity charts, Outrigger loads, Wind loading, Operator Manuals, Crane terminology & symbols, PAT and EKS/RCI appreciation, swing-away-lattice, power tilt jib, luffing jib, Mega wing lift

Teaching methods

Detailed theory of operation,
Use of specific documents

Prerequisites

- Trainees must be over 18 years old
- Trainees have to bring their PPE

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 22.01.2024 – 26.01.2024
- 15.04.2024 – 19.04.2024
- More dates on request

Cost

- Training fee $1.250.00*

*Training conducted in the UAE is subject to 5% VAT

Rough Terrain Courses

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Grove 3.1 (Orchestra)	12
Grove 4.1 (Hybrids)	13
Grove 5.1 (CCS)	14
Grove 6.1 (Flashing)	15

GROVE 1.1 (Intro to CANBUS)

Aim of training course

Have the basic understanding of LMI systems and circuits. Properly check the systems voltage supplies and circuit measuring points. Be able to properly replace main boards, pressure transducers and perform basic system adjustments. Receive the PAT LMI Error code viewers.

Program

The course takes the students into the inner workings of the LMI systems through explanations of the overall system schematics. In-depth sessions covering the individual circuits, digital inputs, measuring channels, and basic adjustments will give the student the foundation necessary for the troubleshooting phase. System induced problems will provide students the opportunity to utilize the troubleshooting manuals and procedures learned to diagnosis and repair the problems.

Teaching methods

Lectures and practical exercises (measurements & adjustments). Practical Trouble-shooting on an RT crane or simulators.

Prerequisites

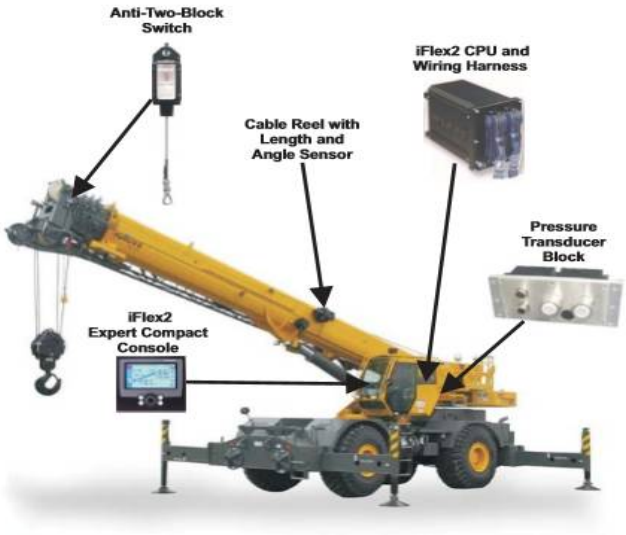
- Crane System Theory and
- Crane Technology & Operation

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants



Equipment

- Training room
- Technical documents
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 15.01.2024 – 19.01.2024
- 08.04.2024 – 12.04.2024
- More dates on request

Cost

- Training fee $1.650.00*

*Training conducted in the UAE is subject to 5% VAT

GROVE 2.1 (Service Tool & CanLink)

Aim of training course

Identify components used on the RT cranes and explain their basic function. Make system checks using recommended test procedures and be able to understand the indicated readings. Troubleshoot system problems utilizing schematics and service software.

Program

This program assumes basic knowledge of operation, and hydraulic & electrical systems as covered in the previous courses. Students will gain an understanding of components and systems through the intense study of system schematics. HED Service Software will be loaded onto student's laptops. The class is divided into groups and assigned to a crane to review the hydraulic and electrical system components on that model. Students are required to conduct test procedures to troubleshoot and repair problems induced on their crane.

Teaching methods

Lectures and practical exercises (measurements & adjustments). Practical Trouble-shooting on an RT crane or simulators.

Prerequisites

- GROVE 1.1 (Intro to CANBUS)

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 05.02.2024 – 09.02.2024
- More dates on request

Cost

- Training fee $1.650.00*

*Training conducted in the UAE is subject to 5% VAT

GROVE 3.1 (Orchestra)

Aim of training course

Identify components used on the RT cranes and explain their basic function. Make system checks using recommended test procedures and be able to understand the indicated readings. Troubleshoot system problems utilizing schematics and service software.

Program

This program covers CANBUS technology used on Orchestra Grove RT cranes. This gives the students a working knowledge of these systems and a foundation for proper troubleshooting techniques and test procedures. Orchestra Software will be loaded onto student's laptops for the purpose to conduct hands-on sessions covering proper software operation and trouble shooting techniques. A portion of the class will cover current OMS (Outrigger Monitoring System) systems used on RT and TM/TMS models.

Equipment

- Training room
- Technical documents
- Simulators

Teaching methods

Lectures and practical exercises on simulator. Interactive presentations and use of test benches.

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Prerequisites

- GROVE 2.1 (Service Tool & CanLink)

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Dates

- 12.02.2024 – 16.02.2024
- 06.05.2024 – 10.05.2024
- More dates on request

Cost

- Training fee $1.750.00*

*Training conducted in the UAE is subject to 5% VAT

GROVE 4.1 (Hybrids)

Aim of training course

Have basic knowledge of operation, hydraulic & electrical systems of TMS9000E and RT9150E models.

Program

This program covers current CANBUS technology used on Grove hybrid cranes. Students will gain an understanding of components and systems through the intense study of system schematics. A session will familiarize the students with the operation of the ECOS and EKS systems used on these models. Sessions on reading ELAN schematics and Service Software operation will give students the basics for applying trouble shooting techniques. Hands on sessions will be conducted to re-enforce classroom material on system operation and diagnostics.

Equipment

- Training room
- Technical documents
- Simulators

Teaching methods

Lectures and practical exercises (measurements & adjustments). Practical Trouble-shooting on an RT crane or simulators.

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Prerequisites

- GROVE 3.1 (Orchestra)

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Dates

- On request

Cost

- Training fee $1.750.00*

*Training conducted in the UAE is subject to 5% VAT

GROVE 5.1 (CCS)

Aim of training course

Have an understanding of CCS systems. Have the foundation to troubleshoot system problems by utilizing the schematics and service software procedures on current production CCS cranes.

Program

This course will cover the new operating system that will be across all Manitowoc products in the future. Only Shady Grove products will be covered. The course will walk the students through overall setup and navigation of new components such as the displays and all other cabin related CCS system setup. After the system itself is thoroughly understood, Students will be walked through the entire crane electrically and hydraulically with the aid of schematics. The final portion of the class will cover the new CST service software which will be used to diagnose electrical issues and calibrate sensors .

Teaching methods

Lectures and practical exercises (measurements & adjustments). Practical Trouble-shooting on an RT crane or simulators.

Prerequisites

- GROVE 4.1 (Hydrids)

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 19.02.2024 – 23.02.2024
- 13.05.2024 – 17.05.2024
- More dates on request

Cost

- Training fee $1.950.00*

*Training conducted in the UAE is subject to 5% VAT

GROVE 6.1 (Flashing)

Aim of training course

Have an understanding of Flashing and Calibration of all major components on past and current Grove Rough Terrain cranes.

Program

This course covers FLASHING & CALIBRATION of the following:
1.) Flashing / loading software for Gen.1, Gen.2 & Gen.3 HED based machines. Including loading of 770 charts, CAN open transducer calibration along with the use of Application Configurator program to upload error logs for diagnostics.
2.) Flashing of all Hirschman components. I-Flex 2 I-Flex 5 and the current Expert systems 2/5. All central units and displays will be covered.
3.) Flashing of all ECOS related control units, both ESX and GVIOM, RT9150 and TMS 9000 related.
4.) Flashing of Wylie I-4300, I-4500 LMI's for YardBoss and ShuttleLift.
5.) Flashing and Calibration of new Crane Control System (CCS)

Teaching methods

Lectures and practical exercises (Flashing of all Rough Terrain RCL and Operating systems). Practical on Rough Terrain cranes or simulators.

Prerequisites

- GROVE 5.1 (CCS)

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 04.03.2024 – 08.03.2024
- 24.06.2024 – 28.06.2024
- More dates on request

Cost

- Training fee $1.950.00*

*Training conducted in the UAE is subject to 5% VAT

All Terrain Courses

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GMK 1.1 (Operational Aspects)	17
GMK 2.1 (Electrics & Hydraulics)	18
GMK 3.1 (ECOS ESX Tech. & Diag)	19
GMK 4.1 (EKS 4 & 5 Tech. & Diag)	20
GMK 5.1 (CCS Tech. & Diag)	21
GMK 7.1 (Steer By Wire)	22

GMK 1.1 (Operational Aspects)

Aim of training course

This course is designed for individuals who are new to GMK cranes but would also be an excellent refresher course for more experienced technicians. The course covers the setup and operation focused on current production GMK cranes. The course will be approx. 40% classroom and 60% practical.

Program

The course features a GMK crane and will cover the carrier controls and proper use of transmission and driving controls, outriggers, suspension and rear steering system. Superstructure cab controls will be covered including the proper setup of the ECOS & EKS or CCS systems. Hands-on operation of the boom in semi-automatic and automatic modes. Each student will be expected to demonstrate proficiency in all aspects of crane setup and operation. Each student will also be given tasks to complete during the week to include load chart, outrigger pad load, maintenance manual, and operator's manual exercises.

Teaching methods

Lectures and practical exercises on GMK cranes and simulators.

Prerequisites

- Crane System Theory and
- Crane Technology & Operation

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- Simulator
- GMK crane

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- On request

Cost

- Training fee $2,250.00*

*Training conducted in the UAE is subject to 5% VAT

GMK 2.1 (Electrics & Hydraulics)

Aim of training course

Designed as a guideline through the technology of GMK cranes. The student will gain a deeper knowledge of the electric and hydraulic systems of the cranes and get instructions for logic troubleshooting of this systems.

Program

- Overview of the electrical function groups, navigating through the electrical schematics (ELAN and SEE), connections between electric, hydraulic and pneumatic schematics, tasks of troubleshooting in electrical systems.
- Overview of hydraulic components and their schematic symbols. Navigation through the hydraulic schematics.
- Overview of the carrier hydraulic and pneumatic systems. Overview of the superstructure hydraulic system.

Teaching methods

Lectures and practical exercises on GMK cranes and simulators.

Prerequisites

- GMK 1.1

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 11.03.2024 – 15.03.2024
- 20.05.2024 – 24.05.2024
- More dates on request

Cost

- Training fee $1,850.00*

*Training conducted in the UAE is subject to 5% VAT

GMK 3.1 (ECOS Tech. & Diag.)

Aim of training course

This course will show the technology (design and function) and the diagnostic (troubleshooting, adjustment, flashing) of ECOS “Electronic Crane Operating System”. This training shows the detailed theory of the operating system and its control application for particular functions and in the practical part the logical trouble-shooting with help of the service SW for adjustment, flashing and configurating.

Program

- ESX modules, I/O boards, GVIOM, display, HMI, AMG/AMM, joysticks, level sensor, precision length sensor
- Digital outputs, PWM outputs
- Digital and analog inputs
- CAN-Bus systems
- Sensors and actuators
- Introduction of logical troubleshooting and error code diagnostics
- Adjustment of inputs and outputs with service software
- Flashing / updating of displays and ESX modules

Teaching methods

Lectures and practical exercises on GMK cranes and simulators.

Prerequisites

- GMK 1.1 & 2.1

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- PC with service software
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 18.03.2024 – 22.03.2024
- 27.05.2024 – 31.05.2024
- More dates on request

Cost

- Training fee $1,850.00*

*Training conducted in the UAE is subject to 5% VAT

GMK 4.1 (EKS 4 & 5 Tech. & Diag.)

Aim of training course

This training will show the RCL systems EKS4 and EKS5, the principles and technology.

In this training course the participants will attain the diagnostic level of EKS4 and EKS5.

Program

- History of EKS systems
- Crane physics, RCL technology
- EKS4 & EKS5, bus node cards, Tilt I/O boards, pressure transducers, slewing sensors, standard display / graphic display
- CAN-Bus system for sensors
- Communication to ECOS
- Error codes diagnostics & diagnostic tools
- Addressing of sensors and Tilt I/O boards
- Flashing of graphic display, flashing of EKS5
- Adjustment of RCL system with service software

Teaching methods

Lectures and practical exercises on GMK cranes and simulators.

Prerequisites

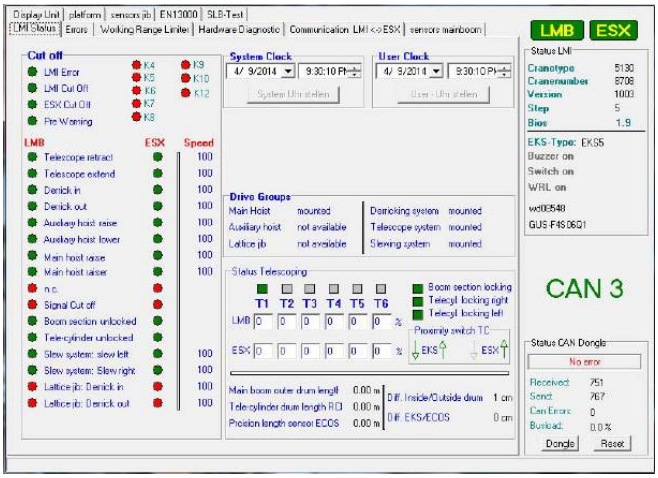
- GMK 1.1 - 3.1

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants



Equipment

- Training room
- Technical documents
- PC with service software
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 25.03.2024 – 29.03.2024
- 03.06.2024 – 07.06.2024
- More dates on request

Cost

- Training fee $1,850.00*

*Training conducted in the UAE is subject to 5% VAT

GMK 5.1 (CCS Tech. & Diag.)

Aim of training course

This course will show the technology (design and function) and the diagnostic (troubleshooting, adjustment, flashing) of CCS “Crane Control System”. This training shows the detailed theory of the operating system and its control application for particular functions and in the practical part the logical trouble shooting with the help of service software for calibrations, flashing and configurating.

Program

- CCS modules, display, joysticks, jog dial, HMI, level sensor, precision length sensor
- Digital outputs, PWM outputs
- Digital and analog inputs
- CAN-Bus systems
- Sensors and actuators
- Introduction of logical troubleshooting and error code diagnostics
- Adjustment of inputs and outputs with service software or via CCS display
- Flashing / updating of CCS modules and displays
- GroveConnect (Telematic system)

Teaching methods

Lectures and practical exercises on GMK cranes or simulators.

Prerequisites

- GMK 1.1 – 4.1

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- PC with service software
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 01.04.2024 – 05.04.2024
- 10.06.2024 – 14.06.2024
- More dates on request

Cost

- Training fee $1,850.00*

*Training conducted in the UAE is subject to 5% VAT

GMK 7.1 (Steer By Wire)

Aim of training course

The “Steer by Wire” course will provide detailed knowledge of this specific system.

Due to legal regulations work and/or repair on SBW systems is only authorized to those, who have successfully completed this course.

Program

- Steer by Wire control units ESX 4 and 5
- Mobil Elektronik SLC’s
- Introduction of sensors
- Laptop computer as a service tool with applied Steer by Wire – software
- Flashing of units
- Calibration and adjustment of the MTW and Mobil Elektronik SBW system
- Logical troubleshooting
- Error codes diagnostics and diagnostic tools

Teaching methods

Lectures and practical exercises on GMK cranes and simulators.

Prerequisites

- GMK 1.1 – 6.1

Duration

- 4.5 days
- Mon - Thu 8:00am to 16:00pm
  Friday 8:00am to 12:30pm*
  (*trainer notification)

Number of participants

- 6 participants

Equipment

- Training room
- Technical documents
- PC with service software
- Simulators

Validation of knowledge

Daily homework, Daily tasks and Final test at the end of the training course. Presentation of certificate

Dates

- 22.04.2024 – 26.04.2024
- 01.07.2024 – 05.07.2024
- More dates on request

Cost

- Training fee $1,950.00*

*Training conducted in the UAE is subject to 5% VAT

Laptops required for GMK training courses should be configured as follows

Must be of a “PC” type. Apple/Macintosh/I-book, Linux and Android based computers are not currently compatible with any training material and/or service software.

Windows 10 is acceptable in a 32-bit or 64-bit version, any existing Microsoft Office must be installed in the 32-bit version. For older Windows versions we don’t give any support.

The PC and/or username must have only Latin letters and/or numbers (ASCII codes 48-57, 65-90, 97-172). ***No special characters like ä, ö, ü, ß, é, è etc. are allowed.*** For PC’s outside Latin characters’ countries there could be some problems occur with the software tools. Here it is recommended to install the Windows as an English version and add after your local version.

It is also recommended that the laptop has the following specifications

- ✓ 1366 x 768 or higher display resolution
- ✓ x86 compatible processor
- ✓ minimum of 4GB RAM
- ✓ minimum of 150GB free HDD space
- ✓ 2 USB port type A or adapter to type A
- ✓ Integrated RS232 port or USB to RS232 adapter, configured to COM1

In addition to Windows 10, the laptop should have the following software installed

- ➢ current Adobe Reader,
- ➢ current Microsoft Access or Microsoft AccessDatabaseEngine, if MS Office is installed, it must be the **32bit** version
- ➢ 7-zip or other ZIP program,
- ➢ Media player configured to play the following types of video files and audio files wmv, .avi, .mpeg, .mp3, etc., and Quicktime

The user should also have full “**Administrative rights**” to add/install various software programs and software drivers used during and after training, especially the folders **c:\Temp** and **c:\Manitowoc** must be accessible without any restrictions.

It is highly recommended that most of Grove/GMK service programs utilize a DB-9 serial port connection to the crane configured as “**COM1**”. If the laptop does not have a DB-9 serial port the recommended alternative is a PCMCIA Adapter Serial card (DB-9), configured as **COM1**. This is preferred over a USB to serial adapter. Any serial adapters may work but are not 100% reliable to work with all Grove/GMK service programs. For a better satisfaction, we recommend serial adapter with FTDI chip set. If USB serial adapters are used, the laptop must have a minimum of two (2) standard USB A ports available or an adapter to USB type A.

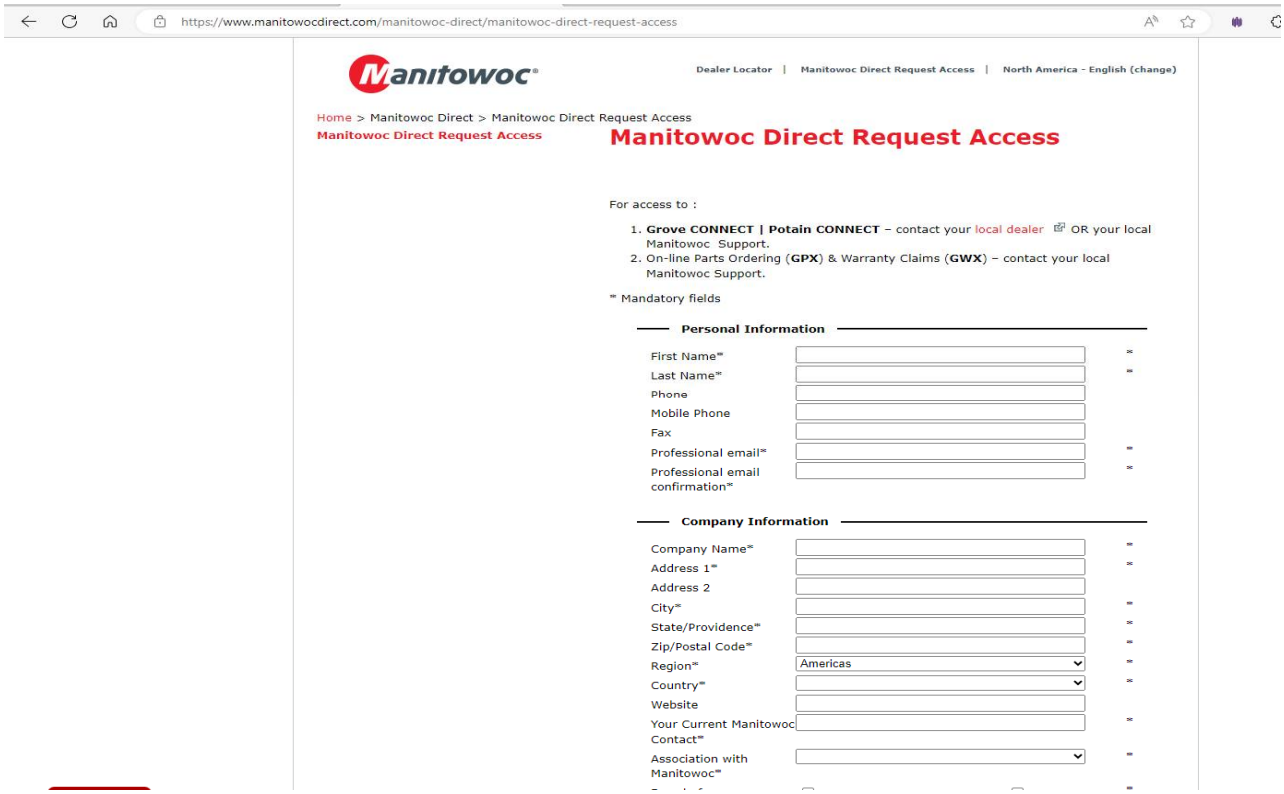
Manitowoc - Training is not responsible for providing or configuring any non-Manitowoc software and/or serial adapters of any type necessary for use with any service programs.

Manitowoc Training Center Virtual Access

What will you find…

- Selection of all training courses
- Online registration in the LMS
- Dates of the training courses
- E- Learning Modules

Request access now, see below:



Administration

Address & Location map

MANITOWOC CRANE GROUP ME FZE

MIDDLE EAST TRAINING CENTER

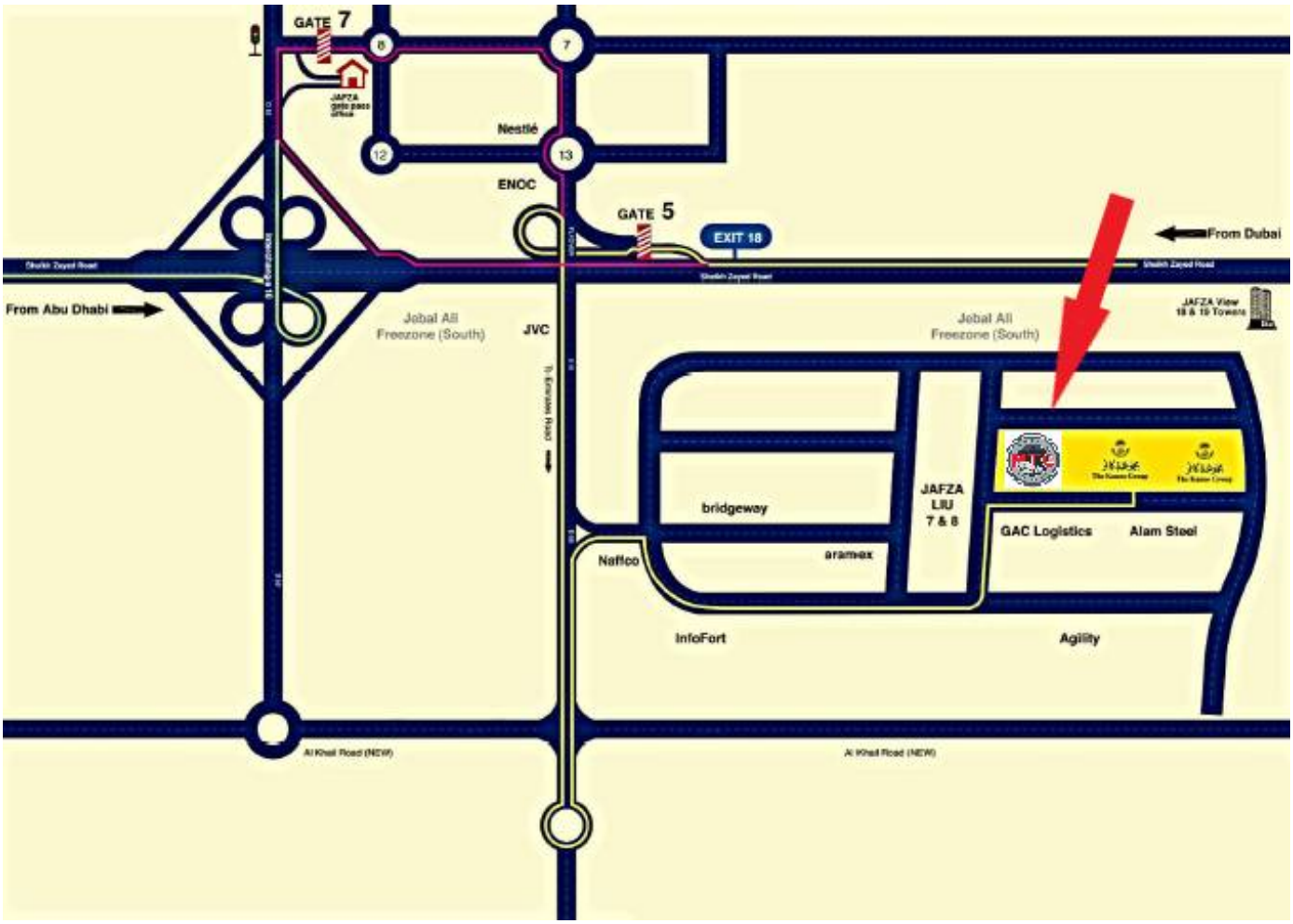
Jebel Ali Free Zone

P.O. Box: 261734

Dubai, United Arab Emirates

Phone: ++971 (0)4 8862677
Fax: ++971 (0)4 8862678/79

E-mail: kavungal.firoz@manitowoc.com
GPS: : 24°58'29.3''N 55°06'04.5''E



return to:

MANITOWOC CRANE GROUP FZE – Middle East Training Center

Jebel Ali Free Zone – P.O. Box: 261734 – Dubai, UAE

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Date of Registration: _____

Course Name: _____

Course Date: _____

Course Location: **Dubai, United Arab Emirates**

Costs: _____

Company: _____

Contact: _____

Address: _____

Contact Phone: _____

Contact E-mail: _____

Invoice Recipient: _____

Purchase Number: _____

Participant(s): 1_____

2_____

3_____

4_____

5_____

6_____

Hotel Booking: _____

Flight Details:_____ Arrival :_____Flight Number: _

Transfer Needed? _____

Remark: **Please do NOT show up to class until you received confirmation of your attendance.**

PPE is mandatory Safety shoes, proper outfit (no shorts), gloves, helmet and goggles.

Notes

Manitowoc Training Centers

Americas

Shady Grove, Pennsylvania, USA
Manitowoc, Wisconsin, USA
Monterrey, Mexico
Sao Paulo, Brazil

Europe, Middle East, Africa

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