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# Technical training

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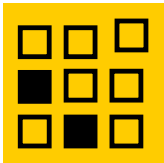
Hydraulic excavators and  
Off-highway trucks

**LIEBHERR**

Mining



# Training highlights



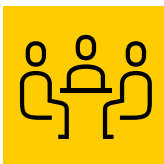
## **Structured, multi-level training courses**

Progressive, multi-level training programs designed to match and develop participants' skill levels, regardless of their level of experience with Liebherr equipment.



## **Factory-based training excellence**

Hands-on, professional training delivered at our factories that uses advanced simulators and state-of-the-art training media.



## **On-site training, on your schedule**

Flexible, on-demand training delivered at your site to maximise convenience and on-site personnel's familiarity with your own Liebherr machines.

# The training journey of a participant

## 01 Product familiarisation

Gain a strong foundation in Liebherr machines, essential safety protocols and key component layouts. This stage builds participants' confidence with Liebherr's off-highway trucks and hydraulic excavators by providing a basic understanding of Liebherr's machines, safety and walk-around inspection processes.

## 02 Fundamentals of electrical and hydraulics

Build essential knowledge of each machine's electrical and hydraulic systems. Participants learn to interpret schematics and apply hands-on techniques to effectively diagnose and troubleshoot equipment issues.

## 03 Principles of operation and maintenance

Understand the core systems of Liebherr's mining trucks and excavators through foundational training in conducting daily checks, level inspections and preventive maintenance – equipping participants with the knowledge needed to resolve issues when operational challenges arise.

## 04 Advanced technical training

Gain hands-on experience with simulators and diagnostic tools while exploring key machine sub-systems. Participants learn to analyse fault data and perform hydraulic setups for the core systems of Liebherr machines, including electrical, cooling, greasing and swing systems.



## On-the-job training

Experience by working alongside qualified Liebherr professionals. Guided by experienced mentors and Liebherr's best practices, participants develop essential skills by observing their Liebherr mentors, performing tasks in real time and referring to Liebherr's official service and maintenance procedures.

Training program	Objectives	Training chapters	Expiration	Recertification path
HEX 1	Acquire a basic understanding of the Liebherr Hydraulic Excavators in terms of maintenance, system and /or operation.	<ul style="list-style-type: none"> <li>– Product familiarisation</li> <li>– Fundamentals of electric and hydraulics</li> <li>– Principles of operation and maintenance</li> </ul>	5 years	<ul style="list-style-type: none"> <li>– Retake safety module and principles of operation and maintenance courses</li> </ul>
HEX 2	Acquire the skills needed to do HEX 1 tasks + troubleshoot a type of family of Liebherr Hydraulic Excavator without assistance	<ul style="list-style-type: none"> <li>– Advanced technical training</li> </ul>	5 years	<ul style="list-style-type: none"> <li>– Retake advanced technical training course</li> </ul>

HEX 1

Principles of operation and maintenance

HEX 2

Advanced technical training

Product familiarisation	Fundamentals of electric and hydraulic components	Principles of operation and maintenance	Advanced technical training
<ul style="list-style-type: none"> <li>– Safety familiarisation</li> <li>– Components location – undercarriage, uppercarriage and attachment.</li> </ul>	Basic electric and hydraulic fundamental modules	<ul style="list-style-type: none"> <li>– Maintenance level and daily checks</li> <li>– Air conditioning system</li> <li>– Cooling system</li> <li>– Grease system</li> <li>– Access ladder and service station</li> <li>– Swing system</li> <li>– Lubricant training</li> <li>– Liebherr operational excellence</li> <li>– Preventive Maintenance</li> <li>– Schematics Reading</li> </ul>	Advanced training of the particular Liebherr Hydraulic Excavator model

HEX 1 - First level of Liebherr Hydraulic Excavators technical training program

HEX 2 - Second level of Liebherr Hydraulic Excavators technical training program

Training program	Objectives	Expiration	Recertification path
OHT 1	<ul style="list-style-type: none"> <li>- Product familiarisation</li> <li>- Fundamentals of electric and hydraulics</li> <li>- Principles of operations and maintenance</li> </ul>	5 years	Liebherr Off-Highway Truck maintenance and operational procedures
OHT 2	<ul style="list-style-type: none"> <li>- Advanced technical training</li> </ul>	5 years	Advanced system operations and troubleshooting procedures by the particular Liebherr Off-Highway Truck model

OHT 1

Principles of operation and maintenance

OHT 2

Advanced technical training

Product familiarisation	Fundamentals of electric and hydraulic components	Principles of operation and maintenance	Advanced technical training
<ul style="list-style-type: none"> <li>- Safety familiarisation</li> <li>- Walk around</li> <li>- Components location</li> <li>- Superstructure</li> <li>- Power module</li> <li>- Axle box</li> <li>- Frame and external components</li> </ul>	Basic electric and hydraulic fundamental modules	<ul style="list-style-type: none"> <li>- Liebherr Off-Highway Truck schematics</li> <li>- 24 VDC electrical controls</li> <li>- Power conversion</li> <li>- Fluid power distribution</li> <li>- Dynamic brake and steering system</li> <li>- Drive control</li> <li>- Hoist system</li> <li>- Trolley interface box</li> <li>- Gear oil cooling system</li> <li>- Anto lube</li> <li>- Maintenance checks</li> <li>- Operator training</li> </ul>	<ul style="list-style-type: none"> <li>- Litronic plus advance system operations and troubleshooting procedures (advanced)</li> <li>- Electro- mechanical fluid power advance system</li> <li>- Advanced operator training</li> </ul>

OHT 1 - First level of Off - Highway Trucks technical training program

OHT 2 - Second level of Off - Highway Trucks technical training program