



VORTEX

Wheel loader module

vortex.mimbus.com

The wheel loader module trains your students to perform practical maneuvers with the loader: excavation, stacks handling, loads handling and truck loading. Vortex is the most realistic solution on the market for construction equipment training. Offer your trainees the most efficient and the safest training existing to date.



BENEFITS

- ✓ *Reproduce realistic working conditions*
- ⌚ *Save time on your initial training and evaluations*
- ⌚ *Rapidly improve your trainees' real competencies*
- 🏠 *Place your trainees in a secured environment for training*
- 💰 *Reduce costs related to equipment wear, consumption and damage*



LEARNING STEP BY STEP



The wheel loader module offers a progressive training path, from beginner to confirmed level, to acquire competencies step by step, through practice and confidence reinforcement. The simulation accurately reproduces a real machine in a virtual environment.

Trainees are absorbed in a reality-like environment, where exercises conditions can be adjusted in real time by the instructor, thus influencing the trainees' performances.

TRAINEES' FOLLOW-UP AND MEASUREMENT

The system informs the instructor about:

- ✓ The time and the objectives completion
- ✓ The number of crashes (minor, major, critical)
- ✓ The buckets' capacity percentage, the moved and lost materials percentage
- ✓ The height of the bucket's use
- ✓ The filling rate and the number of loaded trucks per hour, the filling distribution in the truck
- ✓ The amount of contacts with the truck
- ✓ The cycle time of a completed exercise, and the inactivity time
- ✓ The maximum loads on the axles and collected during a rough handling
- ✓ The fuel consumption and the average power used

TECHNICAL CARD

HARDWARE	
Controls	Steering wheel, 3 pedals and joysticks (ISO and SAE standards)
Multi-trade driving station	2m ² (21.5 ft ²) floor space
Main display	Screen: 1x46 " or 1x 65"(curved) or 3 x46"
Secondary display	21" touch screen
SOFTWARE	
Simulated machine	Wheel loader
Engine power	105 KW (140 HP)
Transmission	4-speed and 4-wheel drive
Bucket capacity	2.3m ³ (812 ft ³), quick-release fastener to adapt pitchforks or lift arms
Available languages	French, English, Spanish...
Specific functions	Replay, to re-watch a performed action. Real-time breakdowns, real-time weather conditions changes, integrated tutorial
Recommended option	Instructor station, to analyze the results in detail

THE PEDAGOGICAL OBJECTIVES

The whole learning focuses on 4 main pedagogical axes: familiarization with the machine controls and movements, loading, unloading and work scenarios handling.

Through different modules and exercises, practice several times in order to:

- ✓ Familiarize with the loader's main controls
- ✓ Perform a pre-inspection, learn how to position the loader according to the template, how to lift or lower different trailers
- ✓ Learn how to load and transport materials
- ✓ Understand the relation between hydraulics and engine power during loading or excavation
- ✓ Learn how to dig a specific surface and how to handle material stack
- ✓ Correctly position a truck, learn to load it in a small space
- ✓ Learn to change tools and to work with complementary tools (pitchforks, lift arms)
- ✓ Handle the maneuvers with precision



Practiced with different weather conditions (rain, fog...), these modules and exercises only have one objective: mastering the machine.

High-fidelity real-time simulation, to learn in a completely safe way while recording the results.

Non contractual pictures

Developed by



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