# cmlabs (

# **Backhoe Loader Training Pack**



#### Simulated Equipment Specs

Engine Power: 83 kW (111 HP) Operating Weight: 8300 kg (18,298 lbs) 5-speed, PowerShift transmission with clutch cutoff Mechanical Front Wheel Drive (4WD) Extendable Dipperstick Hydraulic Quick Coupler

### **Overview** /

The Vortex<sup>®</sup> Backhoe Training Pack is the only training solution on the market that is capable of simulating a backhoe's backlash and instability. Thanks to this capability, it is ideal for teaching novices how to leverage the flexibility of this machine, and control its center of gravity for efficiency on the job site.

## Key features & benefits /

With the Backhoe Training Pack, trainees learn the requirement for careful, methodical operations, thanks to the looseness in the machine's linkage that replicates that of the real backhoe.

The training pack also simulates changes in stability and traction as tires are placed under stress by rapid movements or heavy loads — and the simulated backhoe can even tip as a result of instability. This means trainees can feel free to fail without the risk of damaging equipment or themselves.

A progressive learning program covering basic operating skills ranging from maneuvering and controls handling, to trenching, bench loading, and truck loading. On-screen indicators and bestpractice hints that enable trainees to learn at their own pace, or as part of an instructor-led training program. Performance metrics and customizable scoring that provide an objective assessment of operator capabilities and development.





# A complete training solution

The Backhoe Training Pack features a mid-sized machine that provides trainees with experience on the type of backhoe they will be operating on the majority of job sites.

This training solution is unique on the market, in that trainees can switch between bucket and loader at any time to solve any operating challenge using their own best judgment.

The backhoe's hydraulic quick-coupler also allows trainees to switch out the bucket for forks or chains, to solve additional challenges.

Its advanced learning tools include a Grade Quality Sensor (GQS) overlay that can be activated at any time during the exercise. In addition to real-time feedback on excavation height, slope, and consistency, the GQS also provide an overall excavation performance score to operators.

The Training Pack's progressive learning exercise program is suitable for all training approaches, whether it's a quick refresher, a one-week training session, or a course that lasts several months.



# Supported Vortex Hardware Platforms

The Vortex Backhoe Training Pack can be installed on any Vortex simulator hardware platform, with different configurations to meet your budget, space, and training requirements. Vortex simulators are built to last, designed for years of 24/7 operator training.

Vortex Edge laptop-based instructional platform

Vortex Trainer portable single display trainer

Vortex Advantage with one, three, or five immersive displays

### Learning program

The Backhoe Training Pack features learning exercises ranging from beginner to advanced, designed to progressively teach precision and efficiencies:

- ✓ Understanding the controls and vehicle positioning
- Loading and unloading from trailer
- ✓ Bucket positioning
- Earth moving and transport
- ✓ Stockpile management
- Excavation and grading
- Truck loading
- Using the quick coupler

#### **Performance measurement**

The Backhoe Loader Training Pack gives trainers objective insight into student performance and abilities. Trainers can measure key student performance metrics such as:

- Movement efficiency and accuracy
- ✓ Collisions and shock loads
- Fuel consumption, cycle time, and idle time
- Volume of material excavated per bucket load and in total

Instructors can generate reports based on customizable scoring parameters, and review against benchmarks or past training sessions.



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