

Volvo Construction Equipment  
Building Tomorrow



# LOAD ASSIST

Powered by Volvo Co-Pilot



# LIFT UP EFFICIENCY

Optimize your load cycles with Load Assist, powered by Volvo Co-Pilot – the revolutionary in-cab touchscreen display. Gain access to a set of smart apps and boost the efficiency of your operation.





# ON-BOARD WEIGHING

## Take control of your productivity

When it comes to loading the optimum amount of material, intuition can only get you so far. Are you moving enough material, or moving too much? Say goodbye to guess-work with the On-Board Weighing app. The dynamic load weighing system provides real-time insights into the bucket's load, so you can eliminate overloading, underloading, reweighing and waiting times.



### Lift the pace

Keep it moving with On-Board Weighing, a factory-fit system which allows you to measure your bucket load on-the go, eliminating any disruption to the workflow. Simply use Volvo Co-Pilot – the high-resolution 10" touchscreen – to monitor loading progress, track materials and trucks, and change work orders in seconds.

### Operate safely

Increase jobsite safety with a customizable alert, which notifies the operator if the bucket load exceeds a set limit. Get a full view of your surroundings when reversing thanks to the rear-view camera\* which automatically combines the rear-view and load information into a single screen. For additional safety, certain functions are disabled when speed exceeds 10km/h (6mph).  
*\*Radar detect system option cannot be combined in the Volvo Co-Pilot.*

## LOADED WITH BENEFITS

A simple layout and large font, visible even in bright light, illustrates the current, delivered, and to-be-delivered bucket tonnage.

### Loading made easy

A guided calibration process, colored bars which indicate load activity progress, and icons which give insight into why the weight is not locked properly, combine to facilitate the loading process.

### Work orders

Select customer name and target tonnage with just a few touches.

### Working modes

Choose Project mode to control the total load of multiple trucks, or Trip mode, ideal for loading single trucks or crushers.

### Superior production efficiency

Get it right first time with tonnage measurements accurate to within +/- 1% for every bucket-load. When site conditions or customer requirements make it impossible to lock the load within this margin, simply switch to within an accuracy of +/- 2%.

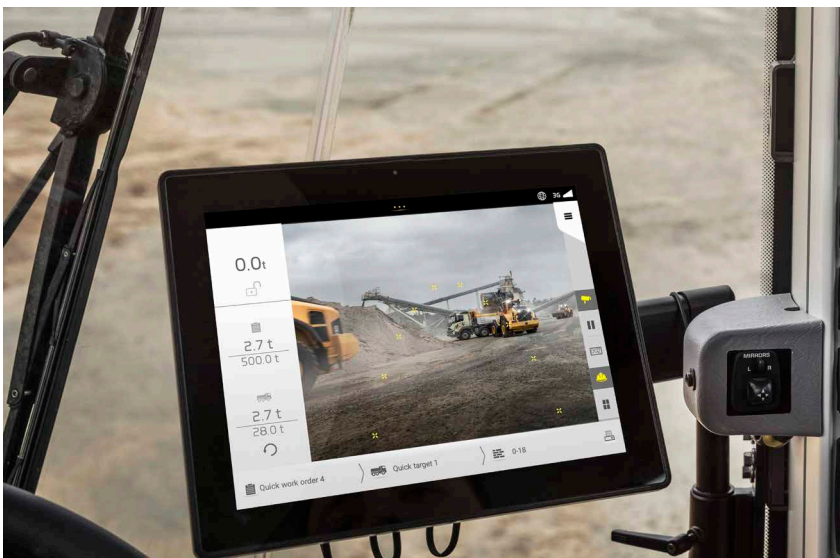


### Partial unloading

Managing the last bucket of the trip is easy with tip off capability.

### Buckets, and more

The versatile system is optimized for standard bucket operations, and suitable for high tip buckets and side dump buckets with only some reduction in weighing functionality. It is also compatible with forks and grapples (accuracy +/-2%).



### Reporting on demand

Production data is stored in the Volvo Co-Pilot and can be exported over the air to a cloud-based portal, or by using a USB-stick, enabling you to analyze machine usage and productivity. Fully integrated to the machine, the system populates CareTrack – combining productivity data and fuel data into a single report.

# OPERATOR COACHING

## Enhanced operator performance

As machines become more advanced, and with smarter technology, the Operator Coaching app helps to ensure operators are using their Volvo machine to its full potential. The intuitive app provides real-time guidance to operators, helping them understand how their actions influence machine productivity and efficiency, as well as identify areas for improvement or changes in their technique.



### **New levels of efficiency**

Understand when and how to use the many smart functions of your Volvo wheel loader to achieve optimum results on site. You can also set targets and objectives to continually develop and improve your operating practices to get the most out of yourself and the machine you are working with.

### **Lower operating costs**

Make better decisions behind the controls thanks to instant feedback on operating behavior, combined with real-time on-screen guidance. With information available at the blink-of-an-eye, operators can ensure they are working in a way which delivers optimum fuel efficiency and reduced machine wear.

## WHAT YOU GET

### Operating behavior

Monitor operator behavior with key indicators including: idling over active time, braking over distance, throttle position (%) and lock-up over distance.

### Score and trend

Real-time score and graphical visualization of operator performance across previous shifts enables follow-up and performance improvements.

### User ID

Create individual profiles and easily recall personalized saved data and objectives before each shift.

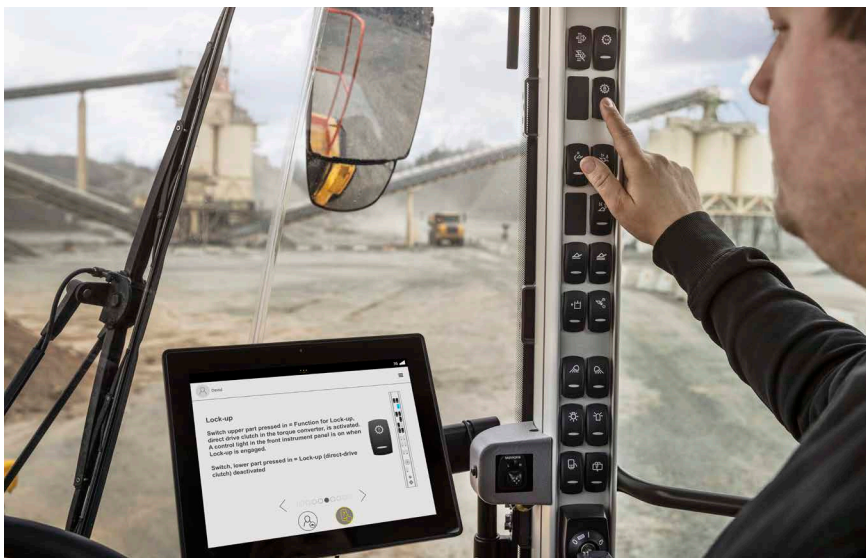


### Dashboard

Key information relating to machine utilization (operating time, average speed, fuel consumption, distance traveled) is clearly displayed on the Volvo Co-Pilot, and can be reset separately from the machine display.

### Notifications

Operators receive real-time guidance on how to best operate the machine, such as 'Activate Boom Suspension System' and 'Activate Lock-up'.



### Interactive guidance

Navigate the functions and get tips on how to use them.







# LONG TERM GAINS

Now complete with the Operating Coaching app, Load Assist helps wheel loader operators use their Volvo machines more effectively, and gives them the keys to unlock a more profitable operation.

# Load Assist in detail

## VOLVO CO-PILOT HARDWARE

Machine availability	Volvo L110H, L120H, L150H, L180H, L220H, L260H
Pressure sensors	2
Inertial Measurement Units (IMU)	3
Hydraulic temperature sensor	1
Display unit	10 inch touchscreen
• Resolution	1024 x 768
• Display modes	Day mode/Night mode
• Internal memory	16 Gb
• Extended memory	SD-card
• SIM card	Mini SIM, 3G or 4G
• USB connectors	2
• Number of languages	25

## ON-BOARD WEIGHING APP

Type of system	Fully dynamic*
Typical accuracy	1%*
Load range	Within the range of 5-150% of the machine working load
Certifiable/trade approved	NO
Unit of measure	Tonnes, short tons and lbs
Loading modes	Project and Trip mode
Loading multiple compartments	YES, up to 3 individual compartments
Tip-off functionality	Tip-off onto pile or tip-off onto truck
Pause functionality	YES
Rear-view camera	YES, when reversing only, OR at all times in full mode or split screen
Number of work orders	More than 100 000
Number of attachments	More than 100 000
Number of customers	More than 100 000
Number of trucks/targets	More than 100 000
Number of material types	More than 100 000
Data transferred via Cloud service via SIM card	Detailed data per bucket <ul style="list-style-type: none"> <li>• Weight</li> <li>• Material name</li> <li>• Target name</li> <li>• Customer name</li> <li>• Work order name</li> </ul>
Data transferred via USB	Detailed data per work order <ul style="list-style-type: none"> <li>• Work order name</li> <li>• Start and stop times</li> <li>• Total material loaded</li> <li>• Material type</li> <li>• Customer name</li> </ul>
Data transferred in CareTrack	<ul style="list-style-type: none"> <li>• Tonnes/tons</li> <li>• Liter/gallon</li> <li>• Ton(ne)/hour</li> <li>• Ton(ne)/liter or gallon</li> <li>• Liter or gallon of fuel/ton(ne)</li> <li>• Number of cycles</li> </ul>
Operator manual	<ul style="list-style-type: none"> <li>• Accessible via touchscreen</li> <li>• Available in 25 languages</li> </ul>
Calibration time	One 15-20 second calibration per day* or after changing attachment
Overload warning	<ul style="list-style-type: none"> <li>• Truck/target</li> <li>• Bucket</li> </ul>
Printer / Type	Thermal printer. Printouts can also be exported as pdf to USB
Printer / Connectivity	USB
Printer / Information on printout	<ul style="list-style-type: none"> <li>• Company name</li> <li>• Date</li> <li>• Time</li> <li>• Customer name</li> <li>• Work order name</li> <li>• Target</li> <li>• Weight</li> <li>• Bucket count</li> </ul>

\*Depending on working conditions.

**OPERATOR COACHING APP**

Unit of measure	Meters, litres, yards and gallons
Rear-view camera	YES, when reversing only
Other app integration	On-Board Weighing: Operator Coaching is accessed as a view within the view selector
Data/results	Linked only to individual operator profiles. Maximum 40 profiles allowed
Data transferred via Cloud service	N/A
Data transferred via USB	N/A
Data transferred via CareTrack	N/A
Printer / Connectivity	None
Screen views	3 views: main, interactive help and historical (graphs)
Measurements (which constitute overall score)	Idling, brake, throttle, lock-up*
Idling	% of operating time the machine is standing still with neutral gear active. Lower is better
Brake	The consumed brake energy per travel segment. Lower is better
Throttle	% of pedal position movement under > 75%. Higher % in the circle is better
Lock-up	% of distance driven with transmission lock-up engaged. Higher is better
Consumption	Total consumption measured since last reset
Operating time	Total operating time measured since last reset
Distance	Total distance measured since last reset
Average consumption	Average consumption measured since last reset
Overall score	Provides a summary evaluation based on the overall score "measurements"
Overall score graph	Provides a quick view of the overall score from the previous 2 hours
Resets	Manually performed through the menu OR after 8 hours of machine shutdown
Interactive help	Information on the switches located on the A-pillar
Notifications	Live status of automatic functions, plus basic suggestions for more efficient driving. Live operator feedback.

\*The Lock-up dial disappears if the transmission lock-up option is not detected.

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