























SmartBoard Display / Controller (EN)

General

As an option, Humbaar trailers can be equipped with a SmartBoard device as a display and control unit for various functions.

The display/control functions of the SmartBoard device depend on the components installed on the trailer.

List of possible functions:

	Air suspension		Bounce control
	Loading		Relaxation function
	Odometer		Brake release
	Diagnostic memory		GIO Function 1 & 2
	Steering axle lock		Tyre pressures
	Brake lining wear		Finisher brake
	SafeStart		Vehicle tilt
			Electronic parking brake
			Wheel clamp
			Wheel clamp emergency unlocking
			Current length of the trailer
			Language
			Extras

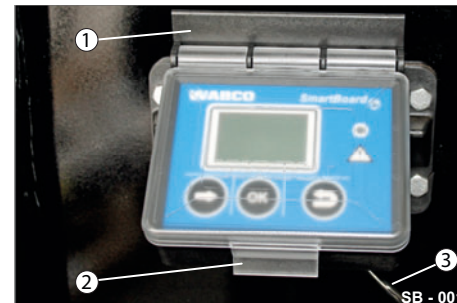


Abb. 1 SmartBoard device

- 1 Housing
- 2 Protective cover
- 3 Electrical power cable



The SmartBoard device should not be used in regions with temperatures below -20 °C!



Refer to the WABCO manufacturer documents for additional information about operating the SmartBoard device and its safety!

The Wabco manufacturer documents are available on its homepage (www.wabco-auto.com).

General information

- The menu elements are displayed in accordance with the installed and configured system.
- All the data is purely informational!
- The displayed information and messages correspond to the situation of the latest or current driving operation.
- A detailed definition of the message codes can be found in the SmartBoard system description in the INFORM product database at www.wabco-auto.com.



Batteries may only be replaced by an authorized speciality workshop (does not apply for the ADR version)!



The SmartBoard device is not calibrated!
Displayed values can deviate from actual values!

Switching the SmartBoard on/off



Abb. 2 Display ON / Display

A requirement for using the SmartBoard device is the power supply by the ISO 7638 5-pin or 7-pin plug connection or by a battery connected to the Trailer's EBS E-Modulator.

The SmartBoard can be used without the ISO 7638 plug connection. The SmartBoard device is supplied with power by the internal battery (not in the ADR Version).



The standard device is not suitable and not approved for ADR-compatible vehicles.

Switching on the display

ISO 7638 power supply / battery

Trailer hitched:

- ▶ Turn on the tractor-unit ignition.
Display is ON.
Display of the trailer's EBS functions.

Power supply by internal battery.

Trailer unhitched:

- ▶ Press any button for longer than 2 seconds.
Display is ON.
Standard SmartBoard display.

Switching off the display

- ▶ Turn off the tractor-unit ignition.
The background lighting goes out after 30 seconds.
The display shuts off automatically after:
 - for hitched trailer
with EBS after 45 s / with EBS E after 75 s.
 - for unhitched trailer
after 15 s

Operating the display

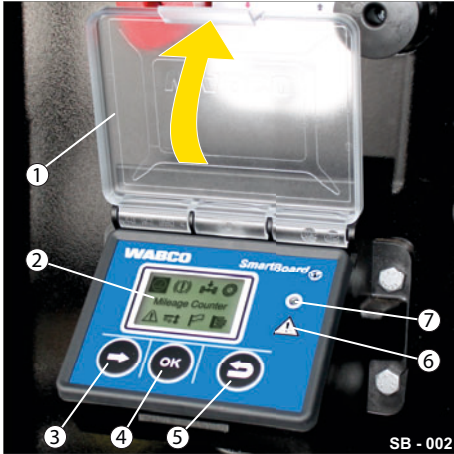


Abb. 3 SmartBoard opened

- 1 Protective cover
- 2 Display
- 3 Selector button: Selection of the next menu element or the next option
- 4 OK button: Confirmation / execution of the current selection
- 5 Return button: back one menu level
- 6 Message symbol
- 7 Signal lamp

- ▶ Open the protective cover (Abb. 3/ 1).
- ▶ Activate the SmartBoard device.
- ▶ Use the selector button to choose the corresponding function (Abb. 3/ 3).
- ▶ Press the OK button to confirm the corresponding function (Abb. 3/ 4).

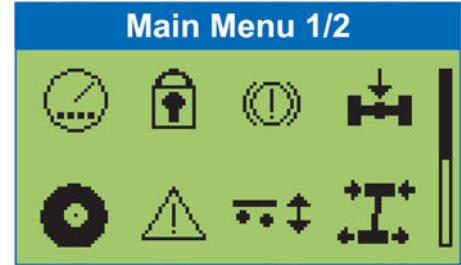


Abb. 4 Main menu field 1

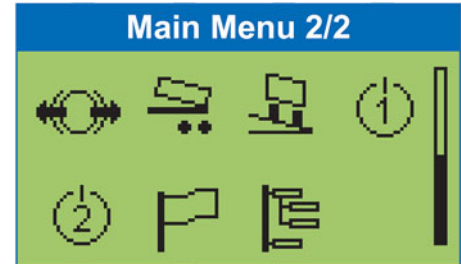

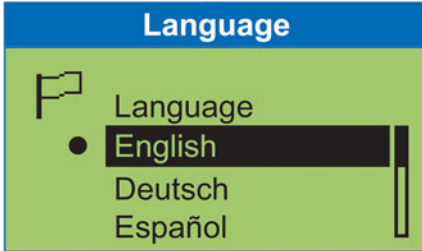



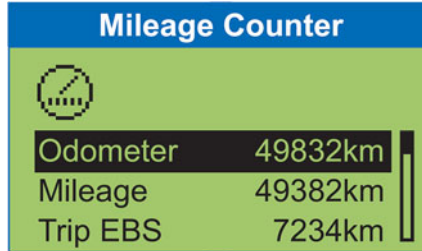
Abb. 5 Main menu field 2


The menu elements are displayed in accordance with the installed and configured system.

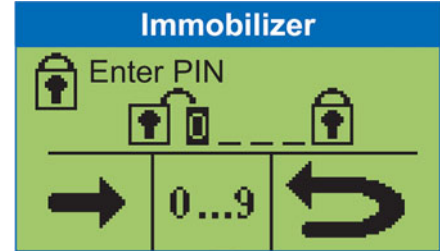
 Select/change language.



 Display of odometer and trip data.



 Using a PIN to lock/unlock the trailer brake.



Package A

- English
- Deutsch
- Español
- Nederlands
- Français
- Русский
- Italiano
- Türkçe
- Polski

Package B

- English
- Deutsch

Odometer: Mileage recorded by SmartBoard

Mileage: Mileage recorded by EBS


Trip EBS: Trip mileage counter EBS

Trip: Trip mileage counter SmartBoard

Immobilizer

- Lock Trailer
- Unlock Trailer


SmartBoard functions (optional)

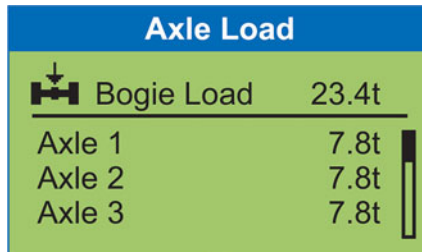
 Status display for the brake linings.



Lining Wear


- Status of BVA (Brake lining wear indication)

 Display of the current axle loads.



Axle load indication

- Display of bogie load
- Display of individual axle load

 The SmartBoard device is not calibrated!

The operator is responsible for compliance with the max. permissible axle loads!

Pressure-sensor calibration

The SmartBoard is delivered with set values of 15 t each for the first and second warning thresholds. The warning threshold are not activated by this. The SmartBoard offers the option of calibrating the pressure sensors for the axle load display of the trailer's EBS E.



The parking brake and the service brake must be released during calibration!

Calibration improves the accuracy of the axle-load display. The more precisely the vehicle weight is determined and the pressure sensors calibrated, the more accurate the axle-load display. Faulty calibration causes incorrect axle-load display values!

The calibration must be repeated when the air suspension or the Trailer EBS E Modulator are replaced.



See the documents of the SmartBoard device for information on the pressure-sensor calibration process.



Display of the tyre information such as current tyre pressure and target pressure.



Display of diagnostics and system messages.
Check if the warning lamp is flashing.



Release service brake during standstill.

Tire Monitoring

Target 8.0bar

8.2bar

Messages

TEBS E

Date 10-01-2010

Time 12:29

Code 002 05

Brake Release

Release Brake
"OK" to release brake

Regard all safety precautions!

Tire monitoring

- Tire pressures of individual tires
- Target pressure
- Configuration

Messages

Signal lamp flashing: Current message

Signal lamp can switched off in the sub menu Event LED.

Menu symbol flashing: Details on message

Danger of injury due to vehicle moving!

- Observe all safety necessary instructions.
- Ensure that there no one is in the danger zone of the trailer when actuating this function.

6 SmartBoard functions (optional)



Braking of tipper trucks operating behind road-laying machines.



Display of the trailer tilt.




Freely configured GIO functions can be set on the Trailer EBS.

Finisher Brake




Finisher Brake
Brake pres. 2.0bar




ON



Vehicle Inclination



0.0°



Max. 7.5°


GIO function I



1



Road finisher brake




Adjusting brake target pressure (0,5 ... 6,5 bar)

ON Activation/Deactivation of Road finisher brake

Vehicle inclination

0.0° Current vehicle inclination



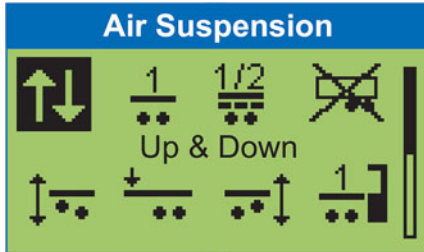
Max. Warning threshold 7,5°

Switch options

- Button
- Switch
- "Dead man's switch"



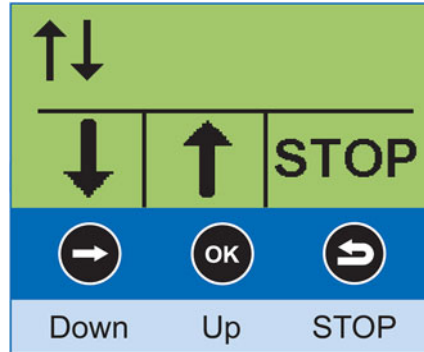
This group of functions can be used to operate the air suspension system in various different ways.



Danger of injury due to vehicle moving!

- Observe all safety necessary instructions.
- Ensure that there no one is in the danger zone of the trailer when actuating this function.

Assignment of the operating buttons on the SmartBoard device.



OptiTurn™ manoeuvring aid

The manoeuvring aid improves the capacity of the lorry semi-trailer combination for driving around bends and roundabouts and when manoeuvring up to loading ramps.

OptiLoad™ drawbar-load reduction

The draw-bar load reduction system automatically distributes the weight of the load onto the supporting axles of the lorry semi-trailer combination without the need to shift the load in the semi-trailer.

- Lifting & lowering
- Driving level
- Change driving level
- Unloading level
- Lifting/Lowering lifting axle(s)
- Traction help
- Manoeuvre assistance
- Setting and saving memory level 1
- Setting and saving memory level 2

6 SmartBoard functions (optional)



The relaxation function prevents the body from "jumping" when the brake is released.

Torque Release Function



Torque Rel. Func.



The device settings can be changed and additional functions can be called up.

Extras



Extras

- ▶ TEBS Data
- ▶ System Info
- ▶ Settings

TEBS data

- Trailer Info. display
- ODR data
- Parameter memory

System Info

- System
- IVTM
- Smart Board

Settings

- Units
- Clock
- Splash Image
- Event LED
- Tire
- Start Display
- Load
- Sensor Calibration
- IVTM
- Set new PIN

Auto Config



Danger of injury due to vehicle moving!

- Observe all safety necessary instructions.
- Ensure that there no one is in the danger zone of the trailer when actuating this function.

Safety instructions / warnings



Carefully read all of the safety instructions before starting any device diagnostics, replacement or commissioning!

Always follow these safety instructions to prevent personal injury or material damage.



Read and follow the safety instructions in the operating manual of the vehicle manufacturer!



The SmartBoard housing must not be opened, with the exception of a speciality workshop changing the battery. Painting the SmartBoard device is prohibited.

The following precautions must be taken before work is performed on the vehicle (repair, replacement of a device, diagnostics etc.) :

- Only trained and qualified professionals are permitted to work on the vehicle.
- The company's accident prevention regulations and the national requirements must be complied with.
- Suitable protective clothing must be worn as required.
- The workplace must be dry and adequately lit and ventilated.



WARNING



Of unsecured vehicle rolling away!

Risk of injury (crushing, impact, being run over, etc.) due to brake activation when work is being performed on the vehicle (e.g. pressure-sensor calibration).

- ▶ Check that the transmission is in "neutral" and that the tractor parking brake is actuated.
- ▶ Place chocks under the tyres to secure the vehicle from rolling away.
- ▶ Post a visible sign on the steering wheel indicating that work is being performed on the vehicle and that the brake must not be activated.



Operating a SmartBoard device which is not ADR-approved (with battery operation) is prohibited for ADR vehicles!

Responsibility lies with the vehicle operator.



Abb. 6 Vehicle in accordance with ADR (battery operation prohibited)



Abb. 7 Vehicle without ADR (Standard design with battery operation)

An ADR-compatible SmartBoard device is to be installed in accordance with the report TUEH - TB 2007 - 132.00.

The report is available at www.wabco-auto.com.



WARNING



Vehicle moves!

If the hand brake is released, for example, following the unloading process, the body can suddenly spring up as the air suspension lifts the vehicle with to their bellows still being full and the load having been removed - impact/crush hazard!

- ▶ Post a visible sign on the steering wheel indicating that work is being performed on the vehicle and that the brake must not be activated.



- ▶ Keep persons away from the vehicle's danger zone.
- ▶ Check before activating the relaxation function that no persons/animals are located in the vehicle's danger zone.



WARNING



Lift axle lowering!

Persons can be hit/crushed under the wheel when the lift axle is lowered!



- ▶ Keep persons away from the vehicle's danger zone.
- ▶ Check before activating the lift axle that no persons/animals are located in the vehicle's danger zone.

Cleaning/Serviceing the SmartBoard device



Disconnect the power supply when performing cleaning and maintenance work!

The SmartBoard device in itself is maintenance-free.

Occasional cleaning, depending on the operating environment, is recommended.

Cleaning

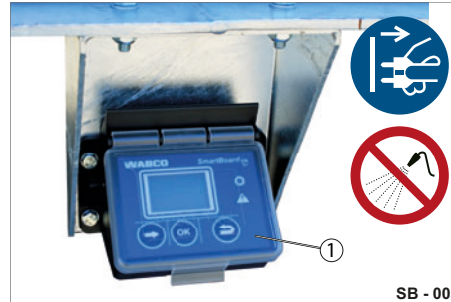


Abb. 8 SmartBoard device closed

1 Protective cover



To prevent damage to the display or keypad, no solvents or other chemicals must come into contact with the SmartBoard device.

The SmartBoard device must only be cleaned with a soft, damp cloth without cleaning agent.

NOTICE

Using high-pressure cleaners!

The SmartBoard device can be damaged by high-pressure cleaners.

► Ensure before cleaning that the cover of the SmartBoard device is closed.



► Do not spray water jets directly at the SmartBoard device.

► Open the protective cover and clean the user interface / display with a soft / damp cloth.

► Check that the protective cover is not damaged - replace the protective cover if cracks/splits are detected in the plastic.

Performing diagnostics

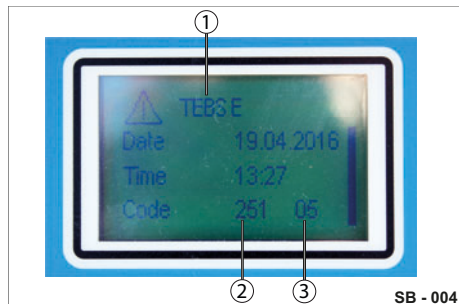


Abb. 9 Menu message

- 1 System providing the message
- 2 Affected component
- 3 Type of error (code)

The diagnostics are carried out using the diagnostics interface of the trailer EBS E or the ISO plug-in connection via CAN.

The SmartBoard device must be connected to the trailer EBS for this and the vehicle supplied with power by the ABS socket.

The diagnostics enable the following functions:

- Display of diagnostic messages
- SmartBoard parameter setting
- Update of the SmartBoard's internal operating software
- Saving a start screen (splash image) to the SmartBoard

To perform diagnostics, you require:

- a suitable diagnostic connection
- Hardware: PS / Laptop and Diagnostic Interface Set
- Diagnostic software



Also follow the SmartBoard device operating instructions for reading the code messages.

The code messages are specific for the installed system/components (TEBS D / TEBS E / IVTM).

Read error type (code)

Code	Meaning
00.	Value too high
01.	Value too low
02.	Data is irregular or incorrect
03.	Ovoltage / short circuit to 24 V
04.	undervoltage / short circuit to ground
05.	Supply-line interruption
06.	Power too high or power circuit laid to ground
07.	Air gap too large
08.	Slip
09.	Signal failure
10.	Upward/downward jump
11/12	See error information
13.	Characteristic curve error
14.	Special errors / see error information
15.	See error information / residual pressure

- Read and evaluate the message in accordance with the displayed error type (Abb. 9/ 3).

Battery replacement



Not applicable to the ADR version!

Batteries may only be replaced at authorised speciality workshops.



Abb. 10 Battery display

The SmartBoard has a replaceable battery.

The battery status can be accessed in the menu: <Extras> <System Info> <SmartBoard>.

If the battery is flat, the SmartBoard can only be operated using an existing power supply from the tractor vehicle.

A repair kit is available as No. 446 192 920 2 which includes a description of the work steps in detail.

Also see the spare parts sheet at www.wabco-auto.com
Menu item: INFORM.

The battery's service life is designed for an average of 5 years.

The service life may be shorter if the device is frequently used on an unhitched trailer.

When the battery has only 10% of its original charge, the "Battery almost flat" message appears for 1 second following the start logo and disclaimer is shown for 1 second after the device is switched on.

Disposal



Batteries are hazardous waste!

They must never be disposed of in household waste.

- ▶ Dispose of hazardous waste in compliance with the national environmental protection regulations.
- ▶ The SmartBoard device can be taken to a recycling centre as an electronic device in accordance with the national regulations.



Humbaur GmbH herewith confirms its compliance with all relevant EU directives for the approval and safe operation of the SmartBoard device.

You can request an EU declaration of conformity from us separately.

