OptiLink™

WABCO

REGIONS IN WHICH OPERATION OF THE OPTILINK™-ECU IS PERMITTED.

The conditions and requirements for operating WLAN transmitting stations is regulated differently in the various regions. Use of certain channels may be prohibited or operation may not be permitted at all.

You will find a list of the regions in which operation of the OptiLink™-ECU is permitted as of 10/08/2016 here: http://www.wabco.info/i/65

Please obtain information about whether use is permitted at the time of operation from the respective region or contact your WABCO partner directly.

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1   General information

List of abbreviations

ABBREVIATION	MEANING
BVA	(German: Bremsbelagverschleißanzeige); brake lining wear indicator
ECAS	Electronically Controlled Air Suspension
ECU	Electronic Control Unit
ODR	Operating Data Recorder
WLAN	Wireless Local Area Network

Purpose of the document

This document is for the driver of trailer vehicles equipped with the OptiLink™ system.

The installation, start-up, operation and functions of the OptiLink™ app are described in this document.

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Symbols used

⚠ WARNING	**Type and source of hazard**
	Potential hazard situation which can cause **serious personal injury or death** if the safety instruction is not observed.
	– *Follow this step to ward off the hazard.*

! Important information, instructions and/or tips that you must always observe.

Reference to information on the internet

– Action step

⇨ Consequence of an action

■ List

General information

Technical documents

- Open the WABCO INFORM online product catalogue:
  http://inform.wabco-auto.com
- Search for documents by entering the document number in the search field *Product number*.

The WABCO online product catalogue INFORM provides you with convenient access to the complete technical documentation.

All documents are available in PDF format. Please contact your WABCO partner for printed versions.

Please note that the publications are not always available in all language versions.

DOCUMENT TITLE	DOCUMENT NUMBER
OptiLink – Installation Manual	815 XX0 226 3
OptiLink – User Manual	815 XX0 231 3

*Language code XX: 01 = English, 02 = German, 03 = French, 04 = Spanish, 05 = Italian,
06 = Dutch, 07 = Swedish, 08 = Russian, 09 = Polish, 10 = Croatian, 11 = Romanian,
12 = Hungarian, 13 = Portuguese (Portugal), 14 = Turkish, 15 = Czech, 16 = Chinese,
17 = Korean, 18 = Japanese, 19 = Hebrew, 20 = Greek, 21 = Arabic, 24 = Danish, 25 = Lithuanian,
26 = Norwegian, 27 = Slovenian, 28 = Finnish, 29 = Estonian, 30 = Latvian, 31 = Bulgarian,
32 = Slovakian, 34 = Portuguese (Brazil), 98 = multilingual, 99 = non-verbal

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Your direct contact to WABCO

As well as our online services, trained staff in our WABCO Customer Centres are at your disposition. Contact us if you need assistance.

- You can find your WABCO partner here:
  http://www.wabco-auto.com/en/how-to-find-us/contact/

2 Safety information

⚠️ **Observe all required provisions and instructions:**

- Read this publication carefully.
  Adhere to all instructions, information and safety information to prevent injury to persons and damage to property.
  WABCO will only guarantee the safety, reliability and performance of their products and systems if all the information in this publication is adhered to.
- Always abide by the vehicle manufacturer's specifications and instructions.
- Always comply with the Company accident prevention guidelines.

⚠️ **Information for dependable operation of the vehicle with the OptiLink™ app:**

- Adhere to the regional and national road traffic regulations.
- Do not operate the mobile terminal (smartphone or tablet) when driving. Always fully concentrate on the driving when at the wheel. Phoning or using the OptiLink™ app at the wheel - even via an intercom - can distract and lead to accidents.
- Undertake settings (e.g. on the volume at the mobile terminal) before driving off. For safety reasons, no control commands are taken up by OptiLink™ during sections of the drive.
- Fasten the mobile terminal or securely deposit it when driving. Make sure that the following applies:
  - No view of the traffic must be impaired.
  - No limitation must be placed on control element functioning.
- Only those instructed who have knowledge of the configured vehicle functions may undertake controls with the OptiLink™ app. Incorrect operation leading, for instance, to vehicle movements can cause injuries to persons and damage to objects in the vicinity.
- Only operate vehicle functions when you have an unlimited view of the vehicle and those persons or objects in the vicinity. Ensure that no-one is put at risk from vehicle movements.
- Instruct those on using the mobile terminal before they pass it on.
- Switch off the mobile terminal where its use is not permitted.

⚠️ **Information on using the OptiLink™ app for assured control of the vehicle's functions:**

- The OptiLink™ app allows vehicle functions to be controlled which in the event of incorrect or unintentional handling can cause accidents and injuries to third parties:
  - When controlling vehicle functions, be attentive and undertake any safety steps, where necessary.
  - Do not leave the mobile terminal unattended when the OptiLink™ app is active.
  - Do not put the mobile terminal with the OptiLink™ app active into one's pocket as this could inadvertently trigger vehicle functions. When not in use, close down the OptiLink™ app or at least return to the instrument panel (▶ Fig. 4, page 12) of the OptiLink™ app.

3 Introduction

The OptiLink™ app described in this document is for monitoring and controlling a trailer vehicle.

Requirements for using the OptiLink™ app:

■ Mobile terminal (smartphone or tablet) with the Android OS operating system as from Version 4.1 (Jelly Bean).

■ Trailer vehicle equipped with the OptiLink™ system.

The OptiLink™ ECU and mobile terminal communicate per WLAN. Additionally an authentication (pairing) is needed for control commands to the trailer vehicle ▸ Chapter "5.2 Authentication (Pairing) "Mobile Terminal – Trailer Vehicle"", page 11. Authentication (pairing) ensures that only control commands are transmitted to "our own" trailer vehicle.

Given a WLAN connection, the OptiLink™ app retrieves ongoing information of the trailer vehicle and displays it. For this, the trailer vehicle needs to be provided with power. In addition, the towing vehicle needs to have its ignition switched on or the WABCO Trailer EBS needs to be in the standby mode.

The scope provided of also controlling the trailer vehicle functions per the OptiLink™ app largely depends on its equipment – for instance, the level of the chassis can only be controlled conditional upon the trailer vehicle having OptiLevel™ (ECAS or eTASC). The OptiLink™ app only displays the available functions in the trailer vehicle.

The connection quality between the OptiLink™ app and trailer vehicle depends on the distance between the OptiLink™ ECU at the trailer vehicle and where the user is with the mobile terminal.

Hindrances between the user and the OptiLink™ ECU can considerably reduce the possible distance; this affects the panels of the driver's cabin, for instance.

The transmission and reception quality of the mobile terminal also has a role to play.

A severance of the connection results in OptiLink™ ending any control that has been started. The user needs to approach the vehicle for the connection to be resumed. The desired function again needs to be actuated.

4 Installation of the OptiLink™ App

Suitable for the installation are smartphones or tablets with the Android OS operating system as from Version 4.1 (Jelly Bean).

The OptiLink™ app can be downloaded from the Google Play Store and installed free of charge.

– Open the "Google Play Store" app on your smartphone or tablet on which the OptiLink™ app is to be installed.

– Enter the "OptiLink™" search word in the search field.

– Click the "OptiLink™ app".

– Click the *Install* button to start the installation on your smartphone or tablet.

– Confirm the access authorisations of the OptiLink™ app.

⇨ The OptiLink™ app is stored on your mobile terminal and displayed with the adjacent icon.

– Start the OptiLink™ app by clicking on the icon.

– Continue with the start-up ▸ Chapter "5 Start-up", page 9.

5 Start-up

5.1 First Steps with the OptiLink™ App

The mobile terminal needs to be connected to the WLAN network of the trailer vehicle.

– Go across to the vehicle which is equipped with OptiLink™.

– Switch on the ignition.

– Start the OptiLink™ app.

⇨ The start screen is displayed:

Fig. 1 Start screen of the OptiLink™ app

!Familiarise yourself with the OptiLink™ app before using it for the first time with the vehicle.

When starting the OptiLink™ app select the *Demo* mode ▶ Chapter "6.1 Setting up the OptiLink™ App", page 12.

To exit the *Demo* mode, terminate the app with the return button of the mobile terminal.

– Read the *Final user licence agreement* by tapping the link.

– Accept the final user licence agreement by tapping *Accept and Start*.

– In the *Select trailer* menu tap the button *Add trailer*.

⇨ The networks available nearby are shown in the OptiLink™ app.

– Select your trailer vehicle (designation: ..._OptiLink_...).

– If requested, enter the network password (provided by the vehicle manufacturer).

– For easy recognition purposes, (optionally) submit a name for the trailer vehicle (e.g. registration plate or trailer type). The network name is retained should you not submit a name.

– (Optionally) take a photo of the trailer vehicle or the registration plate by tapping the camera symbol.

– Tap *Store* to store the vehicle data.

– Now select the vehicle just established to set up a connection.

⇒ The OptiLink™ app is now connected with the vehicle.

⇒ The following window appears given a successful connection:
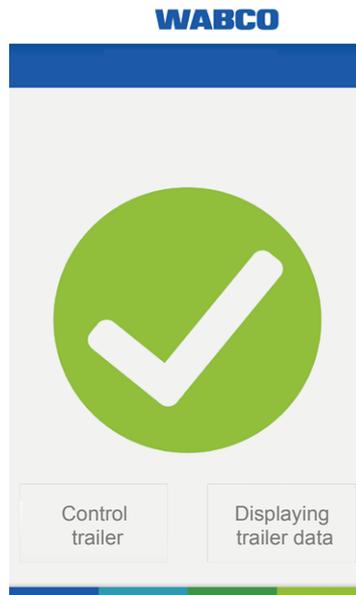
Fig. 2   Connection successful

– Now choose whether you want to control the trailer (▶ Chapter "5.2 Authentication (Pairing) "Mobile Terminal – Trailer Vehicle"", page 11) or only to have the data shown (▶ Chapter "5.3 Displaying trailer data", page 11).

5.2   Authentication (Pairing) "Mobile Terminal – Trailer Vehicle"

For actuation purposes, the trailer vehicle needs to be coupled with the towing vehicle and the ignition needs to be switched on.

– In the *Connection status* menu select the button *Control trailer*.

– Press the service brake until the display bar is in the marked area (**A**) and maintain this pressure for the time indicated (▸ Fig. 3, page 11).

⇨ Release the parking brake of the trailer vehicle if the bar is displayed completely in blue. Secure the vehicle with brake wedges, if necessary.

⇨ The appearance of the green icon with the hook means that your trailer vehicle is successfully coupled with the towing vehicle.

⇨ You can now control the trailer vehicle.
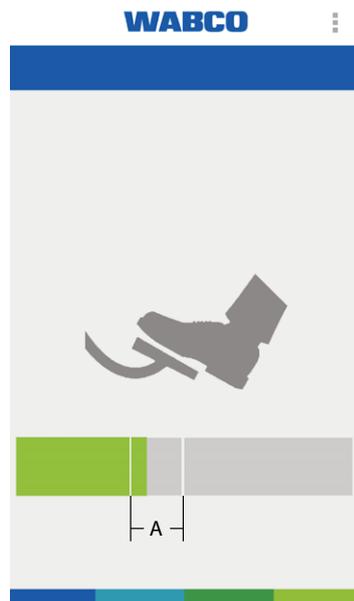
Fig. 3   Authentication "Mobile terminal – Trailer vehicle" (language-neutral representation)

! Authentication only needs to be carried out once given that no other user carries out an authentication with this vehicle.

Connection of the mobile terminal to another trailer vehicle necessitates a renewed, once-only authentication.

5.3   Displaying trailer data

To see the trailer data only, connect yourself via the button *Display trailer data*. The vehicle functions cannot be actuated in this mode.

– If requested, enter the trailer data password (provided by the vehicle manufacturer).

6 Operation

6.1 Setting up the OptiLink™ App

The instrument panel is displayed once the connection has been successfully carried out:
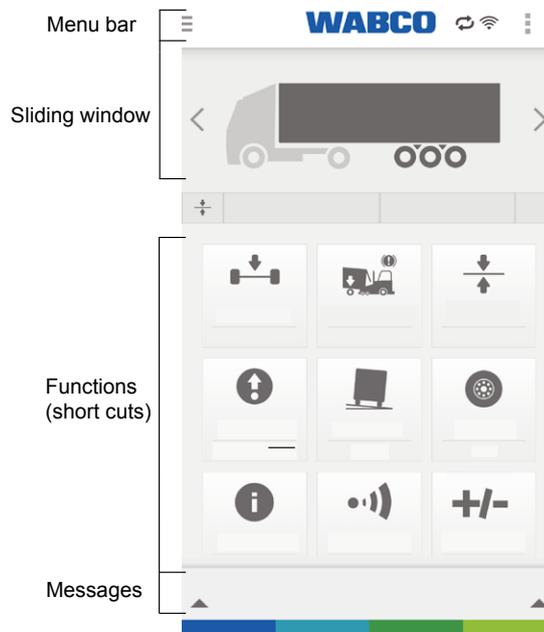
Fig. 4   Example: Instrument panel (language-neutral)

6.1.1 Menu bar

THE MENU BAR SYMBOLS					
≡	Menu	⇄	Authentication has occurred. Functions may be actuated.	🛜	WLAN field strength
⋮	Menu replacement should some mobile terminals not have the menu symbol.	👁	Observation mode. Functions cannot be actuated.	⊗	No connection to the vehicle.

6.1.2 Sliding window

The sliding window allows you to see the status of the functions.

You can scroll between the functions by swiping to the left or right or by using the arrow keys (left and right).

6.1.3 Functions

This is where the most frequently used user-specific functions (short cuts) can be created.

– Tap here on **+/−** or - via the menu button - select the link *Edit shortcuts*.

⇨ The function overview appears:
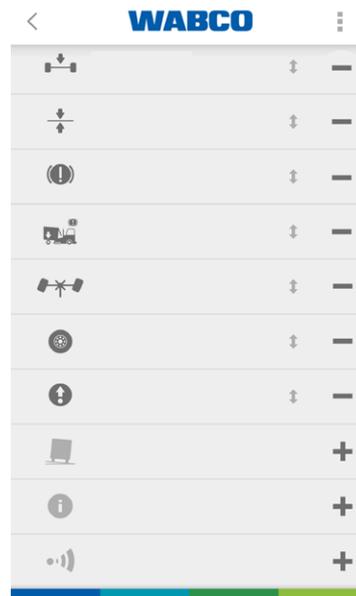
Fig. 5 Example: List of functions (language-neutral)

KEY			
+	Add the instrument panel functions	**−**	Remove functions from the instrument panel

Arrange the functions above which you use most frequently.

– Tap on the function wanted and by means of a holding and moving action shift it to the position wanted in the function list.

– The return button gets you back to the instrument panel where the functions in their previously arranged order can be seen. (▶ Fig. 4, page 12).

6.1.4 Messages

The messages signal the general condition of all the functions.

The general condition is reported as a warning if one or several functions exceed a critical value.

Tapping or swiping (upwards from the bottom) the warning produces a display of all the function warnings. This window is closed by renewed tapping or swiping (from the top downwards).

A direct jump to the function is done by selecting the function warning

The displayed messages can be deactivated in the settings ▶ Chapter "8.4 Displaying warnings", page 16.

6.1.5 Safety test

⚠ WARNING	**Deactivation of the safety function can lead to injuries**
	Deactivation of the safety function can lead to uncontrolled or unintentional vehicle reactions which may cause injuries.
	– *WABCO recommends keeping the safety test switched on.*

The safety test takes place at the first-ever control request of a safety-critical function. Its purpose is to afford protection from any unintended operations, such as when the smartphone is to be in one's pocket.
To this end, a specified figure is to re-traced with one's finger.
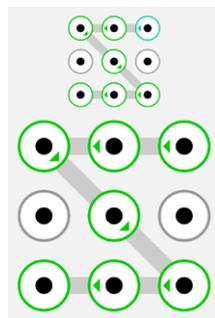
Fig. 6	**Example:** Figure correctly re-traced	Fig. 7	**Example:** Figure incorrectly re-traced
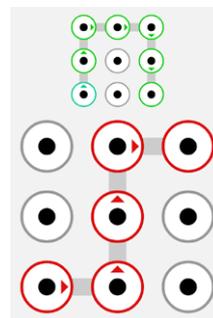
The function is controllable once the safety test is successfully carried out.

If the function has not been actuated for some considerable time, then in the case of a renewed actuation the safety test is to be repeated.

The *Settings* => *Safety test* menu button of your mobile terminal can be used to deselect this function ▸ Chapter "8.5 Safety test", page 16 .

6.2 Using the mobile network when connected with a trailer vehicle

There is no connection to the internet via the mobile phone system when a connection is ongoing with the trailer vehicle. Close or deactivate the OptiLink™ app for the time when mobile network data is needed for navigation or emails.

6.3 Changing between several trailer vehicles

Just as with the first trailer vehicle, another one equipped with OptiLink™ can be created via the OptiLink™ app and controlled following the authentication (pairing). The vehicle selection list allows changing to be undertaken between the vehicles. For this, press the return button to close the OptiLink™ app and re-boot.

7 Functional overview

An overview of all possible OptiLink™ functions is shown in the table.

Only those functions supported by the trailer vehicle are shown in the OptiLink™ app.

ICON	FUNCTIONAL DESCRIPTION	ICON	FUNCTIONAL DESCRIPTION
	Diagnosis Display of the diagnostic message(s). Emailing the diagnostic message(s).		**TailGUARD™ (reverse monitoring system)** Activation on engaging the reverse gear. Display of object distances. Acoustic signals necessitate an appropriate setting of the appliance volume.
	ODR data Read-out of the trailer vehicle operating data (loading states, trips, diagnostic message). Emailing the report.		**Immobilizer** PIN-based locking / unlocking of the trailer vehicle. Changing the PIN via the existing PIN. Changing the PIN via PUK.
	Axle load Display of the overall load of all the axles or the loads of individual axles. Warning on the permitted axle loads being exceeded. Display of the statuses of the lifting axles.		**GIO** Switch functions as per the vehicle manufacturer's definition. Refer to the vehicle manufacturer's documentation for functions and safety information.
	OptiTire™ Display of tire pressures and temperatures as well as sensor battery states.		**OptiLevel™** Control of the ECAS functions (lifting/lowering) of the trailer vehicle.
	Tilt warning Display of the trailer vehicle inclination. Warning given a risk of tilting. Switch on the appliance volume for an acoustic signal.		**Lifting axle** Lifting and lowering the lifting axle Extra functions such as OptiTurn™ / OptiLoad™ and traction help can be switched on/off.
	BLWI (brake lining wear indicator) Display of the wear conditions of the brake linings of the trailer vehicle.		**Display of TEBS data** Display of the ongoing operating data of the TEBS system.
	Road finisher brake Generation of permanent braking of the asphalt tipper vehicle in front of the road finisher. Setting the braking pressure.		**Vehicle test before the drive begins** An inspection app can be separately installed and opened from the OptiLink™ app

8 Settings

A tap on the menu button in the instrument panel view gets you into Menu *Settings*.

8.1 Language selection

The regional settings of the mobile terminal specify the language used (*automatic*).

You can set a different language.

8.2 Selection - metric / imperial

The regional settings of the mobile terminal specify the use of units of measurement (*automatic)*.

You can set a metric at variance to this (*metric, imperial*).

8.3 Display TailGUARD™ Menu on activation

You can deselect the automatic display of the TailGUARD™ sub-menu when starting the TailGUARD™ function.

8.4 Displaying warnings

Messages can be deactivated /activated with the function warnings.

8.5 Safety test

The safety enquiry before the control of safety-critical functions can be deactivated.

⚠ WARNING	**Danger of accidents**
	Deactivation of the safety functions can lead to uncontrolled or unintentional vehicle reactions which may cause injuries.
	– *Leave the safety functions activated to avoid injuries.*

8.6 Overload values

The overload warning is displayed as a function of the axles.

The basic settings can be overwritten in this menu. For this, change the *Standard value* to *User defined*.

9 Frequently asked questions

QUESTION	REPLY
Can mobile data be received while there is a WLAN connection with the trailer vehicle?	No. Close or deactivate the OptiLink™ app for this time in order to obtain a connection to the mobile data network.
Can I phone with the mobile terminal while the OptiLink™ app is connected with the WLAN?	Yes. Inputting or establishing a renewed connection is not needed once your phone call is over.
Can the mobile terminal be simultaneously connected to a number of trailer vehicles?	This is not possible.
With the OptiLink™ app active do I receive system messages from the trailer vehicle?	Yes. System messages are displayed on the display.
Do additional charges arise for using the OptiLink™ app?	Using the OptiLink™ app for its sole purpose only is free. Costs may arise on sending emails.
What is the battery consumption of the OptiLink™ app?	The OptiLink™ app does not consume a high level of power. If the mobile terminal is regularly used, we would recommend a holder for it and a continuous supply of power. The OptiLink™ app remains permanently active when the power is supplied to the mobile terminal from an external source.
Can the trailer vehicle be simultaneously operated per OptiLink™ and another operating element (e.g. SmartBoard)?	Yes. Should implausible commands be simultaneously given via OptiLink™ and e.g. SmartBoard, then the last transmitted command is carried out or the function is suppressed by the system.
What happens if I lose the phone?	WABCO recommends the use of a keypad lock to stop the app being misused. Replacement of the phone results in a renewed start-up ▸ Chapter "4 Installation of the OptiLink™ App", page 8 and ▸ Chapter "5 Start-up", page 9.

10 Problems and corrective measures

PROBLEM	CORRECTIVE MEASURES
The OptiLink™ app cannot be installed.	– Check the internet connection. – Check the Android version of the mobile terminal in respect of the requirements placed on it.
Authentication (pairing) cannot be carried out with the trailer vehicle.	– Check if the ignition is switched on. – Check to see if you have selected the right trailer vehicle. – Check if on actuating the brake there is a change to the OptiLink™ app display. – Check if you have possibly engaged the parking brake.
A function cannot be carried out.	– Check if the trailer vehicle possesses the function wanted. – Check if the conditions for the function are on hand.
Measured values are displayed in incorrect units.	– Check on the regional settings of your mobile terminal. – Check if the correct units have been selected in the settings.

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