

SMARTBOARD

DRIVER MANUAL



WABCO Proudly Supported in New Zealand by Gough Transpecs & Gough TWL



WABCO

INTRODUCTION




Monitoring a wide range of trailer functions is important to improve the performance of haulage companies operations and reducing the costs of the vehicle fleet.

The SmartBoard provides a wide range of functions that can be accessed via symbols from the main menu. The chapters below describe the various functions.

The following rules apply:

- If a system is not available and no information can be retrieved from it, the corresponding menu symbol is not displayed.
- When the vehicle is at a standstill, the values that were last saved are displayed.
- These may deviate from the actual values (e.g. the tire pressure if a leak is present)

OPERATING INSTRUCTION


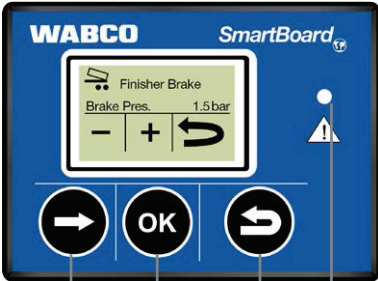


Button - Function

Selection of next menu item or next option

Confirmation and / or execution of the currently selected function

Back one menu level / or save settings



Messages

Signal lamp flashing: Check current message

Driver Manual


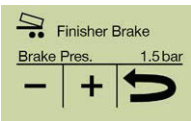

Icon	Function	Display	Description	Options
 Similar to Smart-Board icons	Name and / or descibtion of the function		Description of the information or function you see on left display	 The displayed buttons / functions are avialabe for the left display

TABLE OF CONTENT

	Function	Short Description	Page
	Air Suspension	Operating status of the Air Suspension e.g. lifting and lowering of vehicle body and lift axle	4
	Load Monitoring	Display of current axle loads	7
	Mileage Counter	Display of mileage and trip data	8
	Steering Axle Lock	Lock / Unlock steering axle	8
	Lining Wear	Status display for the brake linings	9
	SafeStart	Enable / Disable automatic brake in case of unsafe driving condition	9
	Bounce Control	Smooth release of brake to avoid bouncing caused by bogie tension	9
	Brake Release	Release service brake while the vehicle is at standstill	10
	GIO Function 1 & 2	Free configurable user functions	10
	Tire Monitoring	Display of tire information such as current tire pressure and nominal pressure	10
	Finisher Brake	Set target braking pressure for road finishers	10
	Vehicle Inclination	Display of inclination angle of the trailer	11
	Electronic Park Brake	Enable / Disable Electronic Park Brake	11
	Immobilizer	Lock / Unlock trailer brakes with a PIN	12
	(Immobilizer) Emergency Release	Emergency release for trailers locked by Immobilizer	12
	Actual Trailer Length	Display of actual trailer length	12
	Language	Change of language	13
	Extras	System information and settings	13
	Messages		16
	Component: TEBS D	Error Code messages of TEBS D	17
	Component: TEBS E (TEBS D/E)	Error Code messages of TEBS E	17
	Component IVTM	Error Code messages of IVTM / OptiTire	19
	Type of fault		19
	Hints		20
	Weight Calibration		21
	Load Monitoring		28

AIR SUSPENSION MENU



Air Suspension Menu


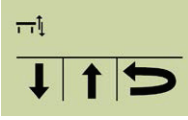


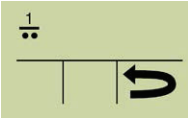





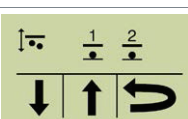
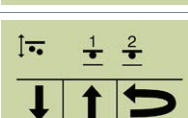



Function	Display	Description	Options
Operating status of Air Suspension Menu		Air suspension menu: the selected function is highlighted with a black box and the name is displayed in the middle of the menu	<ul style="list-style-type: none">Select next functionSelect function / activate functionSelect previous function
		Dashed box: Activated function Flashing: Deactivated function	<ul style="list-style-type: none">Select next functionSelect function / deactivate functionSelect previous function
		Go back to main menu: Select the arrow	<ul style="list-style-type: none">Go back to main menu

Air Suspension Functions

Function	Display	Description	Options
Up & Down		Lifting and lowering of entire vehicle body	<ul style="list-style-type: none">Lift vehicle
			<ul style="list-style-type: none">Lower vehicle
			<ul style="list-style-type: none">Stop*
Front Up & Down		Lifting and lowering of 2-point drawbar trailer	<ul style="list-style-type: none">Lift front axle
			<ul style="list-style-type: none">Lower front axle
			<ul style="list-style-type: none">Stop*
Rear Up & Down		Lifting and lowering of 2-point drawbar trailer	<ul style="list-style-type: none">Lift rear axle
			<ul style="list-style-type: none">Lower rear axle
			<ul style="list-style-type: none">Stop*
Left Up & Down		Lifting and lowering of 2-point semi-trailer	<ul style="list-style-type: none">Lift left side
			<ul style="list-style-type: none">Lower left side
			<ul style="list-style-type: none">Stop*


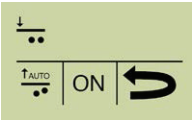
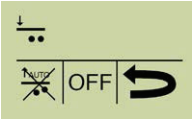

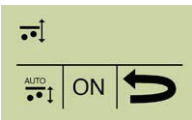
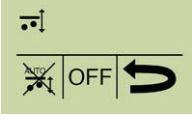

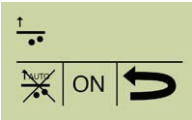
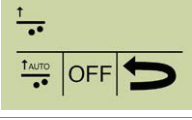


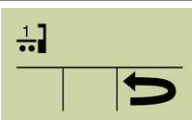
* Only if dead-man's function is deactivated in parameterization

AIR SUSPENSION FUNCTIONS


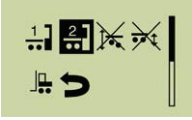
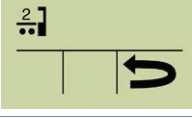



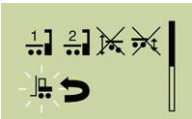
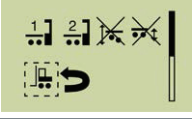


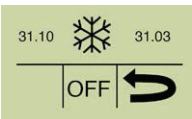
Function	Display	Description	Options
 Right Up & Down		Lifting and lowering of 2-point semi-trailer	<input type="radio"/> OK Lift right side
			<input type="radio"/> Lower right side
			<input type="radio"/> Stop*
 Request Driving Level		Lifting / Lowering to (pre-) selected driving level	<input type="radio"/> OK Start lifting / lowering
		Vehicle is lifting / lowering	<input type="radio"/> Stop lifting/ lowering
 Change Driving Level		Select available Driving Level. Menu will be displayed only if more than one Driving Level is parameterized	<input type="radio"/> Select next level <input type="radio"/> OK Apply level
 Unloading Level		See in menu if function is active (dashed box) or not	<input type="radio"/> OK Disable unloading switch (function will not be started if switch is active)
 Lift Axle Up & Down		The axle is lowered	<input type="radio"/> OK Lift axle (lift axle one will always be lifted before lift axle two)
		The axle is lifted	<input type="radio"/> Lower axle (lift axle two will always be lowered before lift axle one)
 Lift Axle OFF		Lift axle one and two are enabled	<input type="radio"/> Select lift axle <input type="radio"/> OK Disable lift axle (lift axle stays permanently lowered)
		Lift axle one is disabled	<input type="radio"/> Select lift axle one <input type="radio"/> OK Enable lift axle (lift axle can be lifted by lift axle functions)

* Only if dead-man's function is deactivated in parameterization


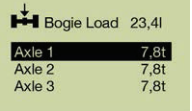
AIR SUSPENSION FUNCTIONS

Function	Display	Description	Options
 Traction Help		Traction Help automatic is activated	➔ Disable Traction Help automatic
		Traction Help is deactivated	OK Start Traction Help
		Traction Help automatic is deactivated	➔ Enable Traction Help automatic
		Traction Help is activated	OK Stop Traction Help
 OptiTurn™		OptiTurn automation is enabled	➔ Disable OptiTurn automatic
		OptiTurn is off	OK Start OptiTurn
		OptiTurn automation is disabled	➔ Enable OptiTurn automatic
		OptiTurn is on	OK Stop OptiTurn
 OptiLoad™		OptiLoad automation is disabled	➔ Enable OptiLoad automatic
		OptiLoad function is off	OK Start OptiLoad
		OptiLoad automation is enabled	➔ Disable OptiLoad automatic
		OptiLoad function is on	OK Stop OptiLoad
 Memory Level 1		Set and save Memory Level 1	OK Request Memory Level 1 OK Press > 5s to store current level as Memory Level 1
		Vehicle is lifting / lowering	OK Stop

AIR SUSPENSION FUNCTIONS

Function	Display	Description	Options
 Memory Level 2		Set and save Memory Level 2	OK Request Memory Level 2 OK Press > 5s to store current level as Memory Level 2
		Vehicle is lifting / lowering	OK Stop
 Automatic Level Control		Disable level control at standstill	OK Disable temporary OK Press > 5s to disable permanently
 Forklift Control		Forklift Control is disabled	OK Enable 2nd lift axle characteristic (due to attached forklifter)
		Forklift Control is enabled	OK Disable 2nd lift axle characteristic (due to attached forklifter)
 Traction Help in WinterTime		Winter mode is off Date will not be displayed if not parameterized*	OK Enable Traction Help in WinterTime function
		Winter mode is on Date displays range of wintertime (DD.MM to DD.MM)*	OK Disable Traction Help in WinterTime function
* Date is only available when the SmartBoard has an internal battery and it is parameterized in modulator.			

Load Monitoring

Function	Display	Description	Options
Display of current axle loads	 	Display of current axle loads	➡ Go to next axle

MILEAGE COUNTER



Mileage Counter

Function	Display	Description		Options
Display of mileage and trip data		Odometer	Displays mileage recorded by SmartBoard	➡ Go to next item
		Mileage	Displays mileage recorded by EBS	➡ Go to next item
		Trip EBS	Displays trip mileage counter EBS	➡ Go to next item
		Trip	Displays trip mileage counter SmartBoard	➡ Go to next item





Steering Axle Lock

Function	Display	Description	Options
Lock / Unlock steering axle		Steering Axle Lock is deactivated, axle is released	OK Enable steering axle lock
		Steering Axle Lock is activated, axle is locked	➡ Disable automatic function for steering axle







Lining Wear

Function	Display	Description
Status display for brake linings		All brake linings have a sufficient thickness and are OK
		At least one brake lining has reached a wear limit. Please contact a workshop



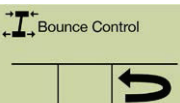



SafeStart

Function	Display	Description	Options
Enable / Disable automatic brake in case of unsafe driving condition (overruling the functional switch)		The brake is applied (function was activated by switch)	 Release SafeStart brake (parking brake has to be applied before)
		The brake is released	 Apply SafeStart brake (parking brake has to be applied before)







Bounce Control

Function	Display	Description	Options
Smooth release of brake to avoid bouncing caused by bogie tension		Bounce Control function is deactivated	 Activate Bounce Control - only possible if park brake is engaged
		Bounce Control function is active	 Stop

BRAKE RELEASE



Brake Release

Function	Display	Description	Options
Confirm total release of brake  Mind all safety precautions!	 Brake Release Func. "OK" to release brake  Regard all safety precautions!	Safety function. User has to mind all safety precautions	 Release brake




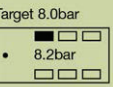

GIO Function 1 & 2



Function	Display*	Description	Options
Enable / Disable customer function 1 (/ 2)	Display and control options depend on customized function.		
For information about GIO functions, please contact your WABCO service partner.			


















Tire Monitoring

Function	Display	Description	Options
Display of tire pressure information	 Target 8.0bar 	Displays the current and nominal tire pressure from IVTM / OptiTire system	 Go to next tire pressure



Finisher Brake

Function	Display	Description	Options
Finisher Brake	 Finisher Brake Brake Pres. 1.5 bar  ON 	Finisher Brake is deactivated	 Enable Finisher Brake  Switch to brake pressure mode
	 Finisher Brake Brake Pres. 1.5 bar  OFF 	Finisher Brake is activated	 Disable Finisher Brake  Switch to brake pressure mode
Finisher Brake	 Finisher Brake Brake Pres. 1.5 bar  - + 	Setting brake pressure in steps of 0.5 bar	 Increase brake pressure  Decrease brake pressure



Vehicle Inclination

Function	Display	Description
Display of inclination of the trailer		Displays current Vehicle Inclination and max. allowed Vehicle Inclination
		A flashing attention symbol warns if the current is above max value



Electronic Park Brake

Function	Display	Description	Options
Activate and deactivate Electronic Park Brake		Park brake is deactivated either temporary or permanently	Activate park brake
		Park brake is activated (display during sleep mode)	-
		Brake has to be applied	-
		Park brake is activated	Deactivate park brake permanently Deactivate park brake temporarily

IMMOBILIZER



Immobilizer

Function	Display	Description	Options
Lock / Unlock trailer brakes with a PIN		The trailer wheels are unlocked. Lock trailer by entering PIN	<ul style="list-style-type: none">OK Select numbers 0 ... 9→ Go to next digit position↵ Confirmation of input
		Optional: engage parking brake before release	-
		The trailer wheels are locked. Unlock trailer by entering PIN	<ul style="list-style-type: none">OK Select numbers 0 ... 9→ Go to next digit position↵ Confirmation of input
Set new PIN	See Settings: Set new PIN page 15		



(Immobilizer) Emergency Release

Function	Display	Description	Options
Emergency function for Immobilizer		Allows up to 3 times to temporary release the brake even when Immobilizer is activated. As soon as vehicle stops, Immobilizer will be activated again. Remaining releases are displayed. Function is active while Immobilizer is locked	<ul style="list-style-type: none">OK Confirm emergency release



Actual Trailer Length

Function	Display	Description
Display of Actual Trailer Length		Displays the Actual Trailer Length (e.g. from extendable wood trailers)



Language

Function	Display	Description	Options
Select language out of the available languages*		The current language is English	→ Go to next language OK Select language
*Available language depend on language package.			































Extras Menu









Function	Display	Description	Options
Operating status of Extras Menu		System information and settings can be displayed and/or changed	→ Select function

Extras Functions

Function	Display	Description	Options
TEBS Data		Displays sensor data of trailer, e.g. voltages, supply pressure, braking pressure and bellow pressure	-
		Displays the recorded board data	→ Go to next item
		Read parameters from modulator	OK Select item → Go to next item OK Select
System Info		Displays the system information of modulator and IVTM, such as part number, software version, serial number, production date and Vehicle Identification Number (VIN)	→ Go to next item
		Displays the ID of an IVTM sensor wheel module	→ Go to next wheel module

EXTRAS FUNCTIONS

Function		Display	Description	Options
System Info	Smart-Board	 Smart Board Batterie  99% Part No 446 192 110 0 SW Version SB010606A	Displays the system information from SmartBoard, such as battery load, part number and software version	-
Settings	Units	 Units • Metric System Imperial System	Toggle between metric / imperial System	 Go to next item  Select system
	Splash Image	 Splash Image Display duration  01:0s Imperial System On Time w/o activity 60s	Change display duration (time of the start screen displays after turning on)	 Go to next item  Change time in seconds
		 Splash Image Display duration 01:0s Imperial System  On Time w/o activity 60s	Toggle screen saver On / Off	 Go to next item  Select On or Off
		 Splash Image Display duration 01:0s Imperial System On Time w/o activity  60s	Set time without activity	 Go to next item  Change time in seconds
	Load	 Load Warning Level  15.0t Overload Level 15.0t	Set warning level for load and set overload level	 Jump to next digit position  Select numbers 0 ... 9  Confirmation of input
	Main Menu Order		Change the main menu order	 Go to next item  Select menu item to be moved  Move item  Confirm new item order  Save new order

Function	Display	Description	Options
Settings	 Set PIN by old PIN Old PIN 0 _ _ _ New PIN _ _ _ _ Confirm _ _ _ _	> Set PIN by old PIN. New PIN setting by using old PIN for Immobilizer (see Immobilizer page 12)	 Go to next digit position  Select numbers 0 ... 9  Confirmation of input when all digits are filled in
	 Set PIN by PUK PUK 0 _ _ _ _ _ New PIN _ _ _ _ Confirm _ _ _ _	> Set PIN by PUK. New PIN setting by using PUK for Immobilizer (see Immobilizer page 12)	 Go to next digit position  Select numbers 0 ... 9  Confirmation of input when all digits are filled in

Notes

[illegible]

MESSAGES

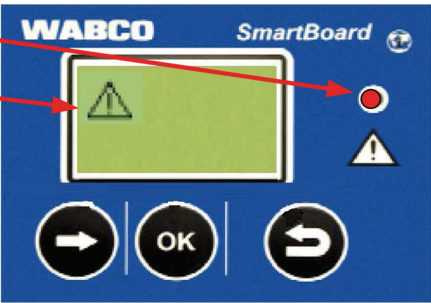
If the red light is illuminated
there is a message in the system



For fault info scroll across to
messages using



Confirm using

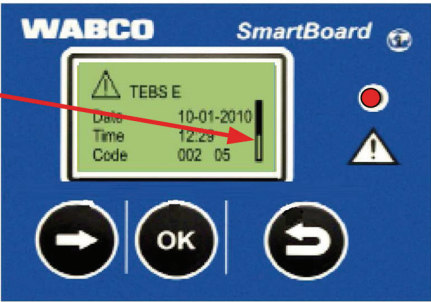


A message screen will appear with a
date and time the fault occurred
The code gives you a reference
to look the fault details up in the
following pages of this booklet

An example is given on the next
page



Scroll through the faults using



CODES OF MESSAGES

Code	Message
112	Switch "Automatic lowering of the lifting axle"
113	SmartBoard
114	Diagnostics power supply
115	Telematics
116	IVTM
117	ECAS Remote-Control Unit / Box
118	Axle load sensor external (axle c-d)
119	Axle load sensor external (axle e-f)
120	Distance sensor axle load (axle c-d)
121	Distance sensor axle load (axle e-f)
122	Freely programmable Function 3
123	Freely programmable Function 2
124	Freely programmable Function 1
125	Switch unloading level
126	Output speed signal
127	Distance sensor 2 (axle e-f)
128	Distance sensor 1 (axle c-d)
129	ECAS valve block
130	Output continuous positive voltage 2
131	Output continuous positive voltage 1
132	Output RSS active signal
133	Output ABS active signal
134	Finisher Brake
135	Not used
136	LIN Bus
137	Speed switch 2 (ISS 2)
138	Speed switch 1 (ISS 1) for manoeuvring aid
139	Valve residual pressure maintenance
140	Valve residual pressure maintenance for Traction Help
141	Lifting axle valve 2
142	Lifting axle valve 1
143	Pneumatic control line
144	Supply pressure sensor
145	External ELM
146	External ECAS
148	Internal ECAS / Calibration
156	Not used
157	Switch normal level 2
158	Switch Up
159	Switch Down
160	Brake release function
163	Axle load calibration
164	Not used
165	Trailer Length Proximity switch 1
167	Output Steering Axle Lock

Code	Message
168	Switch Output Steering Axle Lock
169	Immobilizer PIN invalid
170	Output tilt warning
178	Valve Immobilizer
179	Buzzer Immobilizer
180	Demand pressure at Router/Repeater
181	Router / Repeater power supply to local system
182	Router / Repeater power supply to following system
183	Router / Repeater CAN to local system
184	Router / Repeater CAN to following system
185	ECAS deactivation switch
186	Normal level 4 switch
187	Forklift control switch
188	Second axle load sensor external (axle c-d)
189	SafeStart
190	SafeStart pressure sensor
191	SafeStart warning lamp
192	Emergency Brake Alert
193	Green warning lamp
194	Brake temperature
195	eTASC rear axle
196	eTASC front axle
197	ECAS single block 2
198	ECAS front axle valve
199	Constrained normal level switch
200	GIO Service indication
201	Shared buzzer
202	Shared warning lamp
203	Service mode
204	GIO operating hours counter (ServiceMind) warning lamp
205	Output overload indication
206	Output overload indication 3rd modulator
207	Electronic Park Brake switch
208	Valve spring brake
209	2nd switch
210	Electronic Park Brake valve
211	Door locking system
212	Lift Axle Off Switch
213	Rear monitoring system switch
214	Trailer Length proximity switch 2
215	Trailer Length proximity switch 3

Code	Message
216	Trailer Length proximity switch 4
217	ECAS ramp level control input switch
220	Data link towing vehicle / trailer (TEBS D/E)
250	Not used
251	Power supply (TEBS D/E)
253	Parameter settings (TEBS D/E)
254	Trailer modulator (TEBS D/E)

Component IVTM

639	CAN (short circuit / bus off)
927	Warning lamp 2 (optional / pin 4)
928	Warning lamp 1 (standard / pin 2)
929	Tire data cannot be analyzed
1121	Data on the CAN data bus
3011... 3054	Pressure in tire
3111... 3154	Leakage in tires and valves

Code	Message
3410... 3500	Tire pressure deviation

Type of fault

00	Value too high
01	Value too low
02	Data is irregular or incorrect
03	Overvoltage / Short circuit to 24 V
04	Undervoltage / Short circuit to ground
05	Supply cable interruption
06	Current too high or circuit grounded
07	Distance too big
08	Slip
09	Signal failure
10	Jump up / Jump down
11 / 12	See failure note
13	Characteristics error
14	Special faults / See fault info
15	See failure note

Notes

[illegible]

HINTS

- The display of the menu items results from the fitted and parametrized systems.
- All data is for information only.
- The display information or messages correspond to the situation of the last or current driving operation.
- You can find a detailed explanation of message codes in the system description of SmartBoard in the product database INFORM under www.wabco-auto.com.
- Only an authorized workshop is allowed to change SmartBoard batteries (concerns not ADR version 446 192 111 0)

Switch-on / Switch-off

Power supply	Event	Consequence
Trailer vehicle coupled:		
ISO 7638	Ignition ON	Display on
	Ignition OFF	Display off (with IVTM after max. 20 min.)
Trailer vehicle uncoupled:		
Internal battery of SmartBoard (not in ADR version 446 192 111 0)	Pressing of a button (> 2 s)	Display on
	Pressing of a button	Display updated

Notes

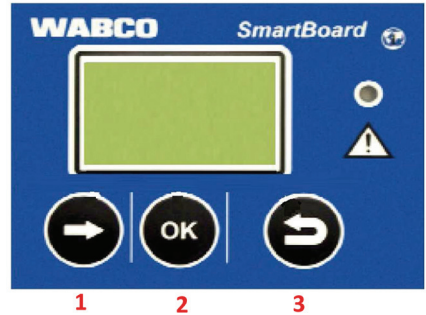
[illegible]

What the buttons do:


- 1 Select Button** - Selection of next menu item or next option
- 2 OK Button** - Confirm option highlighted
- 3 Back Button** - One press to go back one menu level, one long press to go back to main menu

Note-

Weigh trailer front group and rear group separately on an accurate weigh bridge at the time of calibration for the best results.



Step One

Scroll across to extras using 



Confirm with 



Step two

Scroll down to **settings** using 

Confirm using 



Step three

Scroll down to **sensor calibration** using 

Confirm using 

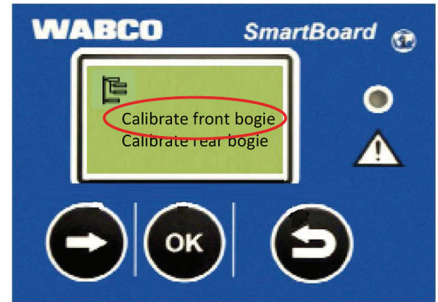


WEIGHT CALIBRATION - UNLADEN

Step Four (Only for full trailers) (Semi trailer skip to step eight)

Go to **calibrate front bogie** using ➡

Confirm using OK



Step Five

Go to **calibrate unladen** using ➡

Confirm using OK

**Note- Vehicle must be unladen when calibrating unladen
And have full air pressure in the system, on level ground
with the trailer brakes released**

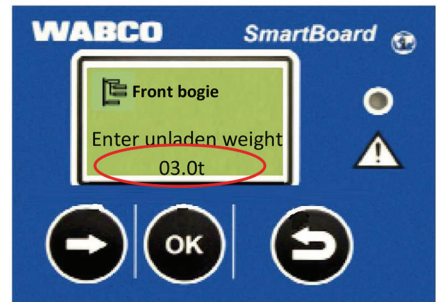


Step Six

Select the digit to change with ➡

Switch to the next digit with the OK button OK

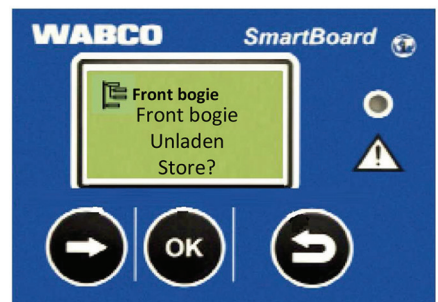
Confirm with ↩



Step Seven

Confirm with OK

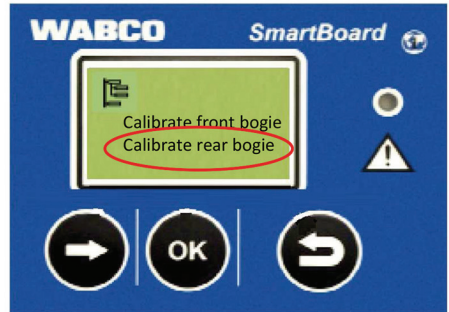
Note- A tick will come up to say calibration successful



Step Eight

Go to **calibrate rear bogie** using 

Confirm using 




Step Nine

Go to **calibrate unladen** using 

Confirm using 



Step Ten

Select the digit to change with 

Switch to the next digit with the OK button 

Confirm with 



Step Eleven

Confirm with 



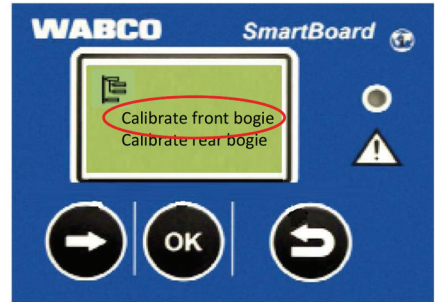
Note- A tick will come up to say calibration successful

WEIGHT CALIBRATION - PARTLY LADEN

Step One (Only for full trailers) (Semi trailer skip to step Five)

Go to **calibrate front bogie** using 

Confirm using 



Step Two

Go to **calibrate partly laden** using 

Confirm using 

**Note- Vehicle must be laden when calibrating partly laden
And have full air pressure in the system, on level ground
with the trailer brakes released**

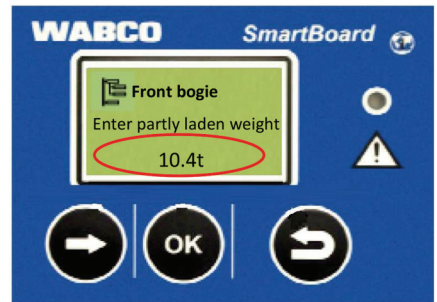


Step Three

Select the digit to change with 

Switch to the next digit with the OK button 

Confirm with 



Step Four

Confirm with 

Note- A tick will come up to say calibration successful



Step Five


Go to **calibrate rear bogie** using 

Confirm using 




Step Six


Go to **calibrate Partly laden** using 

Confirm using 

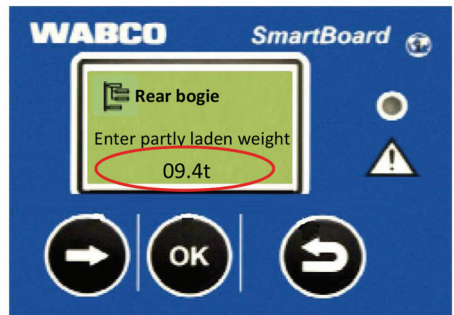


Step Seven

Select the digit to change with 

Switch to the next digit with the OK button 

Confirm with 



Step Eight

Confirm with 

Note- A tick will come up to say calibration successful



WEIGHT CALIBRATION - FULLY LADEN

Step One (Only for full trailers) (Semi trailer skip to step Five)

Go to **calibrate front bogie** using ➡

Confirm using OK

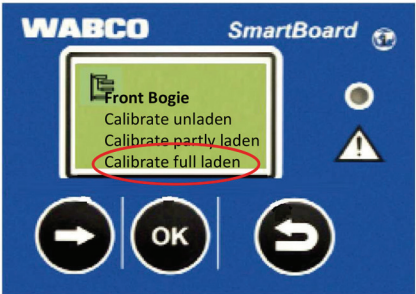


Step Two

Go to **calibrate Full laden** using ➡

Confirm using OK

Note- Vehicle must be fully laden when calibrating fully laden and have full air pressure in the system, on level ground with the trailer brakes released



Step Three

Select the digit to change with ➡

Switch to the next digit with the OK button OK

Confirm with ↩



Step Four

Confirm with OK

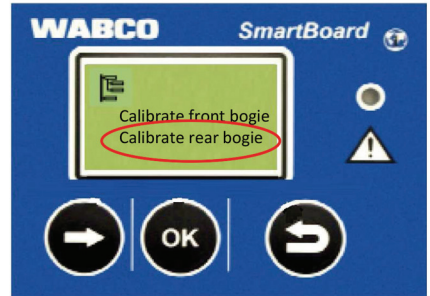
Note- A tick will come up to say calibration successful



Step Five

Go to **calibrate rear bogie** using ➡

Confirm using OK



Step Six

Go to **calibrate Full laden** using ➡

Confirm using OK



Step Seven

Select the digit to change with ➡

Switch to the next digit with the OK button OK

Confirm with ↩




Step Eight


Confirm with OK

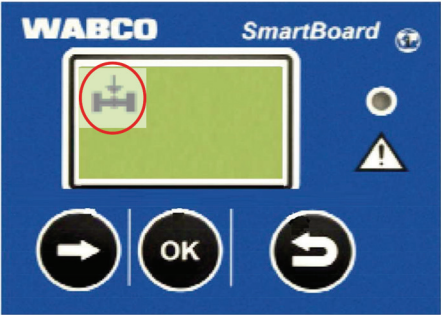


Note- A tick will come up to say calibration successful

Go back to main menu using 

Scroll across to load monitoring using 

Confirm using 

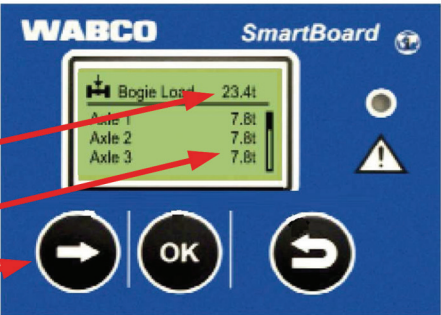


This will be where you go to get the weights

Total weight of trailer

Individual axle weights

Use to scroll through the axles



Notes

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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