TPMS Manager

WABCO

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List of abbreviations

1   List of abbreviations

Abbreviation	Meaning
ABS	Acrylonitrile butadiene styrene (plastic)
AFM	Aftermarket - retrofitting, third-party manufacturers
LCD	Liquid Crystal Display
OE	Original Equipment (manufacturer)
SMS	Strap Mounted Sensor; internal tire pressure sensor, mounted on rim with tape
TPMS	Tire Pressure Monitoring System
WIS	Wheel Internal Sensor; internal tire pressure sensor, mounted on valve
WM	Wheel Mounted (sensor); external tire pressure sensor, mounted on rim

2 Information about this document

2.1 Validity

This document applies to the following WABCO part numbers:

300 200 001 0

2.2 Symbols used

i	Important information, notes and/or tips

Descriptive text

– For individual action steps

1. Action step 1
2. Action step 2

   ⇨ Consequence of an action

• Listing

3 Basic safety instructions

3.1 Proper use

WABCO TPMS Manager is a battery-powered device for start-up and monitoring of commercial vehicle tire pressure sensors. The use of TPMS Manager does not replace tire pressure monitoring systems permanently installed in the vehicle.

3.2 Obvious misuse

The TPMS Manager must not be used for the start-up and monitoring of tire pressure sensors in passenger cars.

3.3 Qualification and knowledge of personnel

Trained specialist: A trained specialist is defined as someone who holds a recognised training certificate in the respective specialist field. The status may also apply to persons who have sufficient professional experience in the field to be able to assess and perform the tasks. Through the knowledge acquired, the trained specialist should be able to assess the tasks and implement them in compliance with the existing regulations, rules and guidelines.

3.4 Structure and explanation of warnings

3.4.1 Structure of the warning notes

Warnings are structured as follows:

- Signal word and pictogram
- Correct naming of the hazard
- Description of the consequences if the hazard is ignored
- Description of the measure(s) to prevent the danger

3.4.2 Explanation of the warning notes

⚠ DANGER
Indicates a hazard that will result in death or serious injury if not avoided.

⚠ WARNING
Indicates a hazard that may result in death or serious injury if not avoided.

⚠ CAUTION
Indicates a hazard that may result in slight or moderately serious injury if not avoided.

NOTICE
Indicates a hazard that may result in material damage if not avoided.

3.5 General safety instructions

⚠ WARNING
Danger to life when using the product with a pacemaker
This product emits electromagnetic and electronically generated waves that may interfere with the safe operation of pacemakers. People with pacemakers should never use this product.

- Follow all safety information, instructions and notices in this document to avoid personal injury and material damage.
- Follow regional and national regulations on accident prevention.
- Make sure your workplace is dry as well as adequately lit and ventilated.
- Secure the vehicle against rolling by using chocks.
- Ensure that the service brake is not being actuated when working on the brake.
- Attach a notice on the steering wheel stating that work is being carried out on the brake.
- Do not use the device near flammable liquids, explosive gases or vapours.
- Keep the machine away from heat sources.
- Do not use the machine with the battery cover removed.

3.6 Personal protection equipment

- Wear personal protective equipment to prevent injury:
  - Safety boots
  - Safety goggles

4 Scope of supply

TPMS Manager

USB adapter

Connector type A

Connector type C

Connector type G

Connector type I

USB cable

5 Technical data

Battery type:	Lithium-ion battery
Battery life:	Approx. 400 operations per full load
Dimensions (max. L, W, D):	16.5 cm x 9.5 cm x 3.8 cm
Housing material:	High impact resistant ABS
Response frequency:	Main frequencies: 315 MHz and 433.92 MHz (support for most specific frequencies)
Low battery indicator:	LCD bar display
Weight:	Approx. 1 kg
Temperature:	Operation: -20 °C to +55 °C Storage: -40 °C to +60 °C
Working height:	Up to 2000 m

6   Structure

	ON/OFF switch		Read out sensor
OK	Continue or confirm	C	Cancel, back
	Navigate up		Navigate down
	Navigate to the left		Navigate to the right

① Antenna

② Result lights

③ Trigger light

④ Battery charge indicator and light "Battery low"

⑤ Keyboard

7   Start-up

1	– Fully charge your TPMS Manager.	100%
2	– Download the PC software (WebVT).	
3	– Unpack and install WebVT.	
4	– Connect your TPMS Manager to your PC.	
5	– Register your TPMS Manager.	
6	– Update the software on your TPMS Manager.	
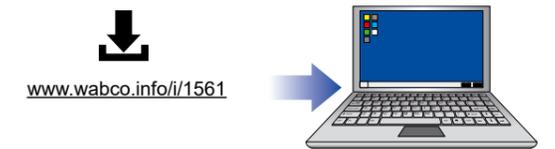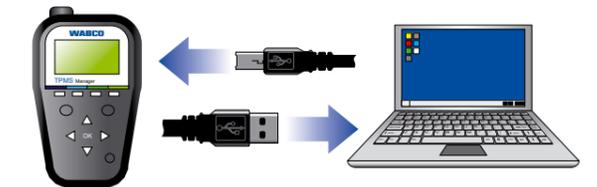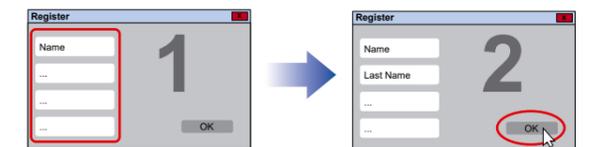
8 Functions

8.1 ON/OFF/battery charge level

– Press the *ON/OFF switch* once to turn on the TPMS Manager.

⇨ The main menu is displayed.

Display battery charge level

– Press and hold the *ON/OFF switch* for **up to 3 seconds** to display the battery level.

or

– In the *INFO* menu, press *ON/OFF* to display the battery level permanently.

Switching off

– Press and hold the *ON/OFF switch* for **more than 3 seconds** to turn off the TPMS Manager.

8.2 Checking the sensor

There are 3 options to choose from:

• Select vehicle: Select sensor by vehicle manufacturer, model and year of manufacture.

• Select sensor: Select sensor by sensor manufacturer and model.

• Scan mode: Find sensor automatically.

8.2.1 Read out sensor

– Press *up* or *down* to select the wheel to be tested
(optional function by means of which sensors can be assigned to a specific wheel. May be compulsory for some manufacturers. Follow the manufacturer's instructions.).

– Hold the TPMS Manager at a maximum distance of 30 cm from the sensor you want to check and press *Read out sensor*.

– Wait for the acoustic signal.

⇨ The sensor data is displayed.

Sensor data (example: WABCO WIS)

```
        WABCO   1
4217397556              0.0 BAR
  22 °C      433 MHz     BAT:OK
REMAINING          120 MONTHS
((📶)) START           (c) MENU
```

Display	Explanation
421 739 755 6	Identification number of the sensor that was read out (ID)
22 °C	Temperature measured by sensor
120 MONTHS REMAINING	Remaining lifetime for a new sensor
0.0 bar	Pressure difference between tire interior and exterior
433 MHz	Radio frequency
BAT: OK	Battery status
START	Check again
MENU	Back to the main menu

ⓘ The battery status and temperature of internally mounted sensors are only displayed when the sensor is read. In trigger mode, only ID and pressure are displayed.

8.2.2 Compatible WABCO sensors

Name	Sensor type
WIS	Wheel Internal Sensor; internally mounted sensor, mounted on valve
SMS	Strap Mounted Sensor; internally mounted sensor, mounted on rim
WM 2.2	Externally mounted sensor, manufactured until calendar week 20 in 2017
WM 2.4	Externally mounted sensor, manufactured after calendar week 20 in 2017

Date of manufacture (example)

Calendar week	Year
23	2017

8.2.3 Sequential learning of the sensors

This chapter describes the process for WABCO sensors. Sensors from other manufacturers may have to be learned in a different way. Follow the manufacturer's instructions.

The OptiTire™ Diagnostic Software offers the possibility to learn sensors sequentially. If you use this function, the learning is performed counter-clockwise, starting with the front left-hand wheel. With twin wheels, the left wheel (in the direction of travel) is learned first.
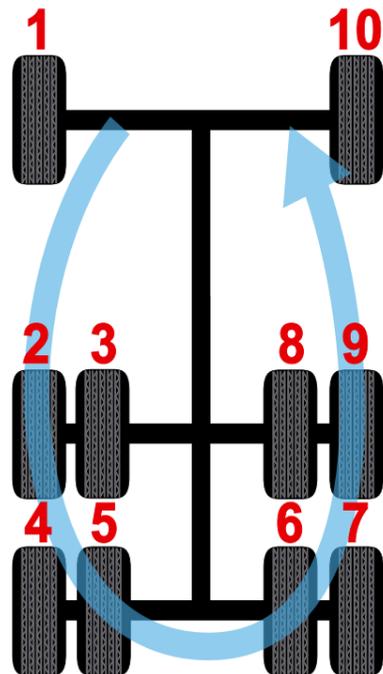
8.3 Search part number

Identify sensor part numbers by vehicle manufacturer and display alternatives.

There are 3 options to choose from:

OE Part #: Original part

OE sensor reference: Alternative from the original equipment manufacturer

AFM Part: Reference number for retrofit parts

8.4 Settings

8.4.1 Region

Change the region in which the TPMS Manager is used.

8.4.2 Units

Change units for temperature and air pressure.

Supported units:

	Bar	Kilopascal	Pound per quarter inch
Celsius	bar / °C	kPa / °C	PSI / °C
Fahrenheit	bar / °F	kPa / °F	PSI / °F

8.4.3 Format

Display sensor ID in decimal, hexadecimal or manufacturer-specific (automatic).

8.4.4 Buzzer ON

The TPMS Manager may trigger a buzzer when checking a sensor. The buzzer can be switched on or off in the settings menu.

– Use *up, down, left* or *right* to switch between on and off.

– Click *OK* to confirm.

8.4.5 Contrast

Change screen contrast from 0 % to 100 %.

– Press *up, down, left* or *right* to increase the contrast.

– Press *down* to reduce the contrast.

– Click *OK* to confirm.

Functions

8.4.6 Auto OFF

The TPMS Manager can automatically turn itself off after a defined period of inactivity (1 minute to 60 minutes). The function can be disabled.

– Press *up, left* or *right* to increase the duration.

– Press *down* to reduce the duration (0 = DISABLED).

– Click *OK* to confirm.

8.5 Info

Display the current software version and information about the device.

Displayed information

Name	Explanation
SN	TPMS Manager serial number
Version	Current software version
Database	Revision status of the database (vehicles/sensors)
Receiver	Status of the installed receivers

8.6 Language

Change the language of all menus.

8.7 Latest sensor data

Display the most recently read sensor data. The data will be deleted when you restart. If the memory is empty, the machine displays the message "NO DATA".

Troubleshooting

9 Battery

Low battery indicator.

The TPMS Manager operates on 5 volts and has an integrated battery detection circuit. A fully charged battery can perform about 400 sensor tests (about 80-100 vehicles). A full charge takes about 6 hours.

9.1 Recharge

– Plug the USB cable into the USB port (1) on the TPMS Manager.

– Plug the USB cable into the charger adapter.

– Connect the charger adapter to a corresponding output.

  ⇨ The red "CHARGING" LED lights up.

  ⇨ After charging, the "CHARGING" LED lights up green.

> ℹ Using TPMS Manager when battery power is low is not recommended because data transmission may not be reliable.

9.2 Replacement

The TPMS Manager must be sent to your WABCO partner for battery replacement.

> ℹ Do not open the TPMS Manager or manipulate the seal on the TPMS Manager. As soon as the seal is broken, the guarantee becomes void.

10 Troubleshooting

If the TPMS Manager is unable to trigger one or more sensors, check the following possible causes:

• The vehicle has no sensor.

• The sensor, module or ECU itself may be damaged or defective.

• Your TPMS Manager may require a software update.

• Check the "Auto Off" time settings for the screen display.

• Your TPMS Manager is damaged or defective.

11 Update software

NOTICE
Damage to TPMS Manager when unplugging during the update process
Disconnecting the TPMS Manager or turning off the computer during the update process may cause damage to the TPMS Manager.
– Do not disconnect the TPMS Manager or turn off the computer during the update process.

> (i) To update the system software, WebVT must be installed on your computer. For more information, please read chapter "7 Start-up", page 13.

Once a new log is available, the TPMS Manager must be updated.

1 – Fully charge your TPMS Manager.

2 – Connect your TPMS Manager to your PC.
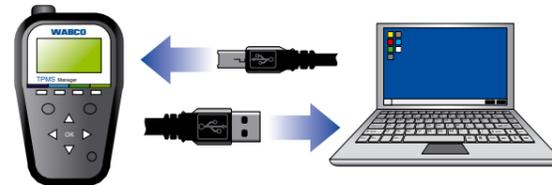
3 – Update the software on your TPMS Manager.

12 Recycling

Do not dispose of the lithium-ion battery or the device and/or accessories in the bin.
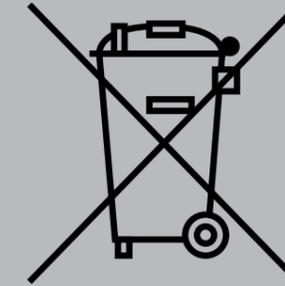
These components must be collected and recycled.
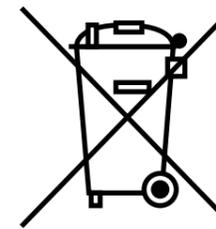
The crossed-out wheeled bin means that the product must be disposed of separately at the end of its life. This applies to your TPMS Manager, but also to all extensions marked with this symbol. Do not dispose of these products as unsorted household waste. For further information please contact WABCO.

13 Disposal

- The final and professional decommissioning and disposal of the product must be carried out in accordance with the applicable legal regulations of the country of use. In particular, the regulations for the disposal of batteries, equipment and the electrical system must be observed.

- Electrical appliances must be collected separately from household or commercial waste and recycled or disposed of in accordance with regulations.

- If applicable, take the old device to the company's internal disposal department, which will then forward it to specialist companies (specialist disposal companies).

- In principle, it is also possible to return the old device to the manufacturer. For this purpose, contact the manufacturer's customer service. Any special agreements must be observed.

- Electrical and electronic equipment must be collected separately from unsorted municipal waste and recycled or disposed of properly, because harmful substances can cause lasting damage to health and the environment if disposed of improperly.

- Detailed information can be obtained from specialist waste management companies or the responsible authorities.

- The packaging must be disposed of separately. Paper, cardboard and plastics must be recycled.

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ZF Friedrichshafen AG

ZF is a global technology company and supplies systems for passenger cars, commercial vehicles and industrial technology, enabling the next generation of mobility. ZF allows vehicles to see, think and act. In the four technology domains Vehicle Motion Control, Integrated Safety, Automated Driving, and Electric Mobility, ZF offers comprehensive solutions for established vehicle manufacturers and newly emerging transport and mobility service providers. ZF electrifies different kinds of vehicles. With its products, the company contributes to reducing emissions and protecting the climate.

ZF, which acquired WABCO Holdings Inc. on May 29, 2020, now has 162,000 employees worldwide with approximately 260 locations in 41 countries. In 2019, the two then-independent companies achieved sales of €36.5 billion (ZF) and $3.4 billion (WABCO).

With the integration of WABCO, the leading global supplier of braking control systems and other advanced technologies that improve the safety, efficiency and connectivity of commercial vehicles ZF will create a new level of capability to pioneer the next generation of solutions and services for original equipment manufacturers and fleets globally. WABCO, with almost 12,000 people in 40 locations worldwide, will now operate under the ZF brand as its new Commercial Vehicle Control Systems division.

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