WEngineering

Data display V2

WEngineering

Function overview

- Display a lot of useful data
- Displaying the maximum values
- Display control by touch + F/G models by multifunction wheel
- Time measurement (0-100, 100-200, 200-250)
- Reading and deleting the error memory
- Correction of vehicle speed and engine power
- Control of a series or an externally installed exhaust flap
- Deactivating/activating the popcorn/blubber thrust shading function
- Shift flash configurable for each gear
- Display 4 values in the diagram simultaneously and define them yourself
- Display and define 6 values in the dashboard menu simultaneously
- Diagram recording function for 25 seconds
- Start Set image yourself
- Temperature monitoring water/oil/charge air/exhaust gas temperature
- Convert units bar/psi, kmh/mph, °C/°F
- 2 colour designs (white, orange)
- Automatic change to the night design
- Automatic display dimming (E6x models from 2006 onwards)
- 1 input for a pressure sensor
- 1 input for one NTC temperature sensor 0-150°C

Overview of the displayed signals

- Speed [Km/h]

- Torque [Nm]

- Power [hp]

- Boost pressure [Bar]

- Speed [rpm]

- Engine oil temperature [°C] (Except diesel E-models)

- Outdoor temperature [°C]

- Acceleration in direction of travel [m/s²].

Overview of the displayed signals

- Accelerator pedal position [%]

- Exhaust gas temperature [°C]

- Exhaust gas temperature 2 [°C]

- Water temperature [°C]

- Air mass [g/s]

- Charge air temperature [°C]

-Accumulation pressure before DPF (Diesel only)

- Gearbox temperature [°C] (F models only or with DKG gearbox)

Overview of the displayed signals

- Ignition angle reduction [°] (Petrol engine only)

- Lambda

- Rail print/petrol print [bar]

-DPF Differential pressure (Diesel only)

Main menu

Day design
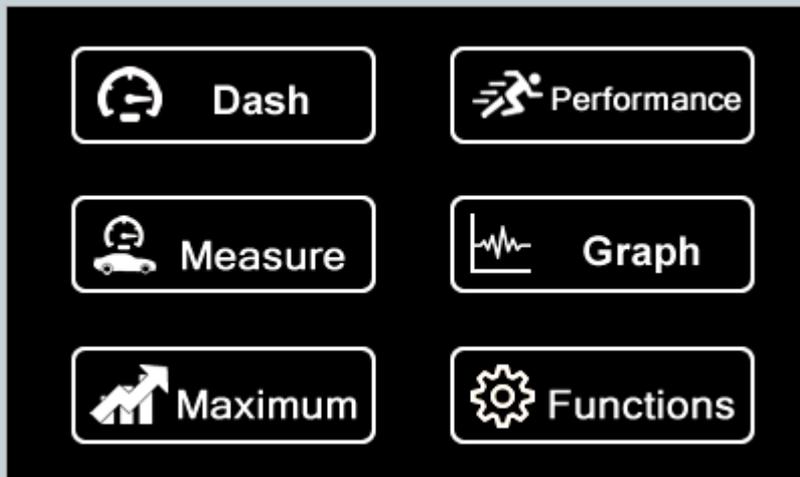
Night design
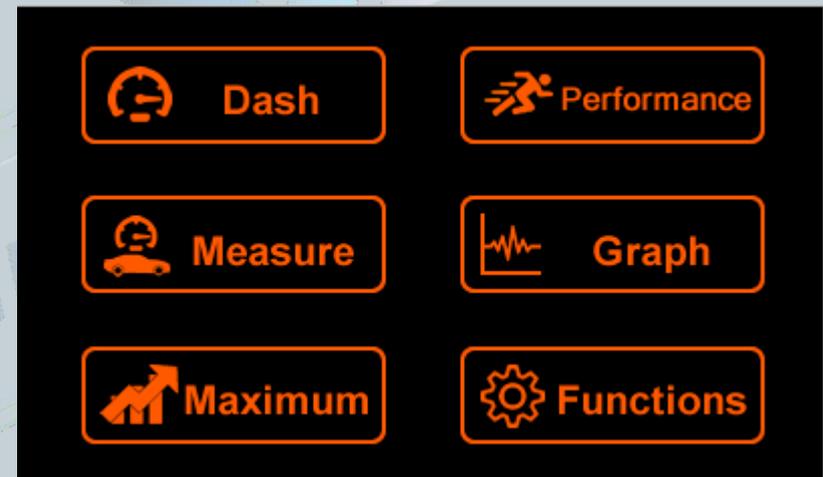
Operating concept Display

1. Screen Dash -> Boost

2. Quick button
and display of
the boost
pressure.
The maximum
deflection learns
automatically while
driving

1. Logo

Pressing on certain icons takes you to the screens provided for this purpose or triggers the following actions

a function.

1. Next Screen

2. Quick key for controlling the standard exhaust flap.

Operating concept Display

1. Screen Dash -> Torque

On vehicles without a transmission temperature sensor, the cooling water temperature is displayed in this area

Torque. The maximum deflection learns automatically while driving

WEngineering
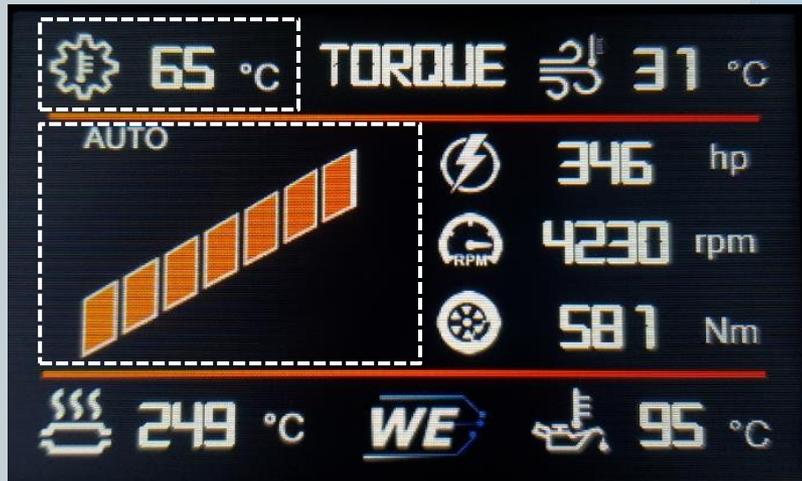
Operating concept Display

1. Screen Dash -> Temperature

2. If the value falls below the set min. value the bar turns "Blue".
If the max. value is exceeded, the value is exceeded, the
Bar from "Green" to "Red".

1. "Setup" Here the limit values can be set individually. be configured
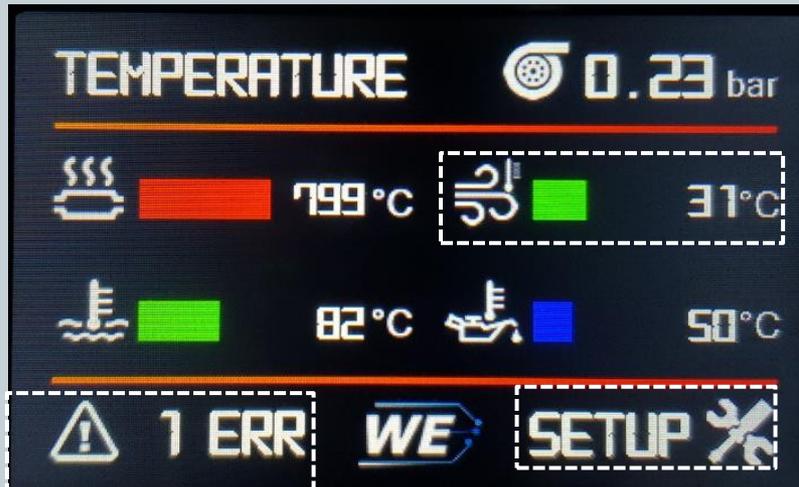
3. as soon as a max. value is exceeded, an error is entered. By clicking on the button, the environmental data can be viewed, e.g. how high the boost pressure, speed, power, etc. was.

Operating concept Display

1. Screen Dash -> Custom Screen
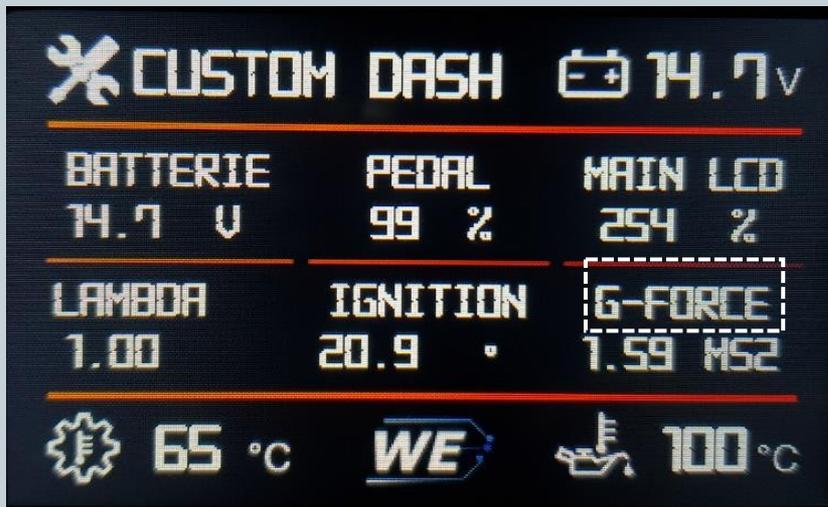
In this menu, 6 values can be displayed according to their own needs.

To configure a different signal, click on the text.

Operating concept Display

1. Screen shift flash

This area flashes as soon as the maximum set speed is exceeded.

Shift flash settings
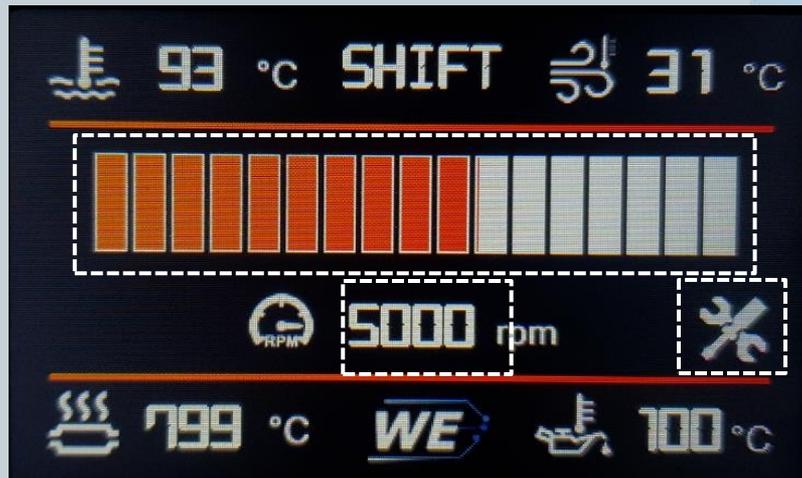
Maximum speed for the current gear

Operating concept Display

1. Screen Measure

1. Measurement

2. Time

3. Status

Icon	Meaning
- Timeout	-Active measure ment	-Successful measurement

The speed can be corrected in the menu Functions -> Setup -> Adjust.

Operating concept Display

1. Screen Graph

1. Record

2. Status

In the graph, 4 values can be configured as desired. To do this, press the name of the signal.
In the next menu you can set the signal and the scaling.

To trigger the recording function, press the "Record " symbol. The updating of the values freezes and the status "Wait" is displayed. This waits for an accelerator pedal position of at least 90%. As soon as this condition is met, the status changes from "Wait" to "Rec" and the recording is started. The recording stops automatically after 25 seconds. After that, the recording can be viewed in peace. The recording can be stopped at any time by pressing the symbol again.

Operating concept Display

1. screen maximum

In this menu, the maximum values are automatically set while driving.

of the individual signals. Resetting is done with "RESET

Press
on the surface to
see the
environmental data.

Operating concept Display

1. Screen Functions

Info: Click here to go to the Info screen. In this area you can read all version information as well as the serial number.

Control of the exhaust flap with "+" or "-". If the status is "Auto", the engine control unit takes over the control.

Eng Check: Reading and deleting the error memory

Setup: Call up the setup menu which is described on the next page. Pressing the logo

takes you to the water injection settings.

Operating concept Display

1. Screen Functions -> Engine Check

Number of errors in the engine control
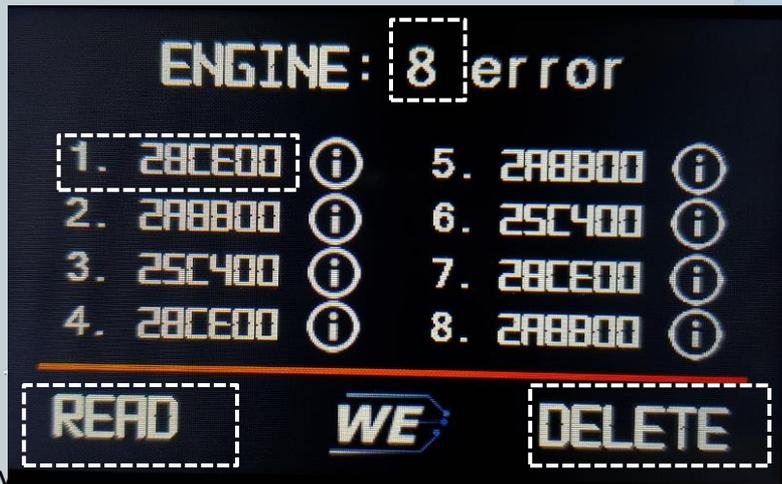
Error status

Error code

1. error currently not present, but has been saved
2. Error was entered in this drive cycle and is peresent.

Read fault memory

Operating concept Display

1. Screen Functions -> Setup General

Design: You can decide on the design
1. Always white
2. White during the day and orange at night (lower the combi-light a little if there is no switching at night!).
3. Always orange

IMPORTANT:
For the release of the diagnostic interface for the workshop, please set the
"Car Service -> On"
Otherwise, no communication to the engine control unit is possible via an external tester!
For F/G models it is recommended after When activating the Car Service, switch off the ignition and wait until the instrument cluster goes out completely.
Optionally, you can switch off the display via the Car Service.
With Car Service "Off", the normal
Display operation.

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Operating concept Display

Screen Functions -> Setup Screen

Visible Temperature: Whether the gearbox temperature or water temperature should be displayed in the Dash. (Only with automatic)

Start Screen:
Here you can set which menu should be started automatically.

Save:
Settings only take effect after they have been saved.

Operating concept Display

1. Screen Setup -> Adjustment

In this setup menu it is possible to correct the displayed power and speed.

Adjust Power:

The correction of the displayed power is usually necessary after a map optimisation. Most tuners do not adjust the torque map after optimisation, which is why the display does not show the correct power.

Furthermore, the vehicle speed can also be adjusted to the GPS speed. This is necessary to make a 0-100 or 100-200Km/h measurement more accurate.

A correction is made on a percentage basis and in 0.5% steps.

Example: Indicated speed = 100Km/h, V GPS = 102Km/h. A correction of +2% is therefore necessary.

Operating concept Display

1. Screen Setup -> Ext. sensor

Settings for external pressure or temperature sensors can be made here.

1. Select pressure or temperature sensor
2. Select the type of sensor
3. Select as which signal you want to use the sensor If signal = custom: for pressure sensor = Press. ext, for temperature = NTC-1
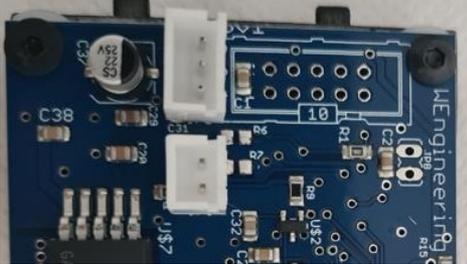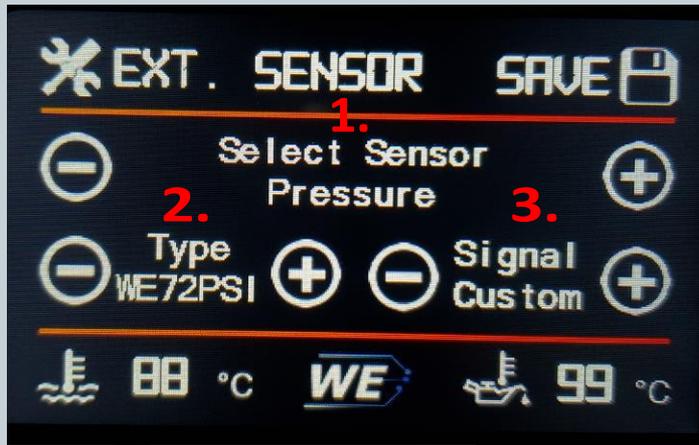
On the back of the display you will find a 3-pin connection for the pressure sensor and a 2-pin connection for the temperature sensor.

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Operating concept Display

1. Screen Setup -> Units

Speed:
km/h or mph

Pressure:
bar or PSI

Temp:
°C or °F

Operating concept Display

1. Operating the display via multifunction steering wheel buttons (F/G models only)

2. To access a desired menu more quickly, press the rocker switch all the way up or all the way down. The main menu appears. Repeat this function until the selection is in the desired position. You can access the submenu by pressing the rocker lightly or waiting 5 seconds.

The rocker switches on the MFL can be used to switch quickly between the individual screens. To do this, push the rocker switch slightly upwards or downwards.

Top = forward , bottom = back

Operating concept Display

2. Operating the display via multifunction steering wheel buttons (F/G models only)

By pressing the rockers for 2 seconds, a function can be triggered in **the corresponding menu.**

2 sec up = read error memory
2 sec up = Reset maximum values 2 sec up = Trigger a recording in the graph

2 sec down = clear error memory

Operating concept Display

3. Exhaust flap control via MFL (F/G models only)

If an exhaust flap was installed at the factory, it can be controlled by pressing the "Res" button. There are 3 modes (Auto, On and Off).

On N55/S55/B58 engines, the thrust cut-off can be deactivated by pressing the RES button for 3 seconds.
Deactivation is signalled by this symbol:

Signal list

The following signals are available with Custom Dash/Graph

Signal	Description
Ignition	Ignition angle
Outside	Outside temperature
Intake	Charge air/intake air temperature
Battery	Battery voltage (from 2007)
MAF	Air mass
Gearbox	Gearbox temperature (automatic only)
Oil	Oil pressure (N13/N55/S55/B48/B58 engine)
Exhaust	Exhaust gas temperature before catalytic converter
NTC-1	External temperature sensor
NTC-2	Not available on the data display
Type-K 1/2	Not available on the data display
Water	Water temperature

Signal	Description
Boost	Boost pressure
Pres.Ext	External pressure sensor
Rail	Rail printing/printing
Speed	Vehicle speed
Torque	Torque
Power	Vehicle performance
ENG-RPM	Engine speed
G-Force	G-force (acceleration X direction)
Main LCD	Illumination main screen
Exhaust (bar)	Pressure before DPF (diesel)
Exh.diff	DPF differential pressure (diesel)

Troubleshooting: Display does not switch to orange

The display brightness is controlled centrally via the ambient lighting. For perfect display brightness, we recommend the following setting. In absolute darkness, turn the rotary control for the central lighting/combined lighting back until the value for
"MAIN LCD" is between **25 and 35.** With this setting, the display automatically switches to orange in the dark.
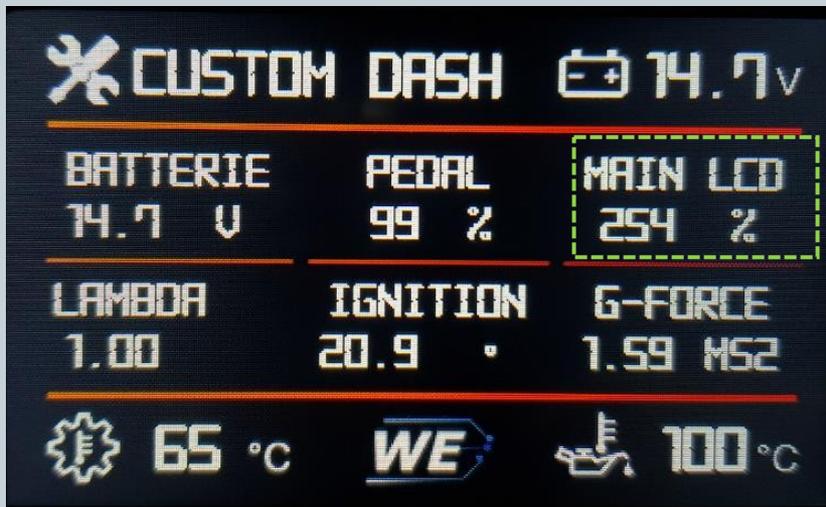
Troubleshooting: no communication to engine control unit

After installation of the data display, the diagnostic interface is permanently blocked. The means that communication via OBD to the engine control unit is not possible. Programmes such as EDIABAS, ISTA, INPA report an error when establishing a connection. **To enable the diagnostic interface again, simply set "Car service" to "On" in the setup menu before starting the engine.** To retain the setting even after a restart, the memory function must be carried out. It is recommended to do this before a workshop visit.

As soon as you set Car service to On, you will be asked if you also want to switch off the display. We recommend that you press YES. This ensures that the display is inactive.
If communication with the MSG is not possible despite activated Car service, switch off the ignition until the instrument cluster goes out completely and then switch it on again. Affected only F/G models.

Troubleshooting: how do I turn off the display?

To do this, go to the Setup menu and activate Car service. You will then be asked if you want to switch off the display, press YES. To switch the display back on, simply press on the display.

Troubleshooting: why does the power/torque not match.

Only vehicles with modified engine software are affected. This indicates a bad tuning, because with the change of the various maps, the map for the torque must also be adjusted accordingly. Many tuners save themselves this work. The display only shows the values supplied by the engine control unit.
It can also happen that important temperature values such as exhaust gas temperature/charge air are fixed in order to get more power out. This does not limit your engine's performance, but it loses the important protective function.