

Programmable Control Panel

Operating Instructions

Dual Top Evo 6



GB Content

| | | | | |
|----------|----------------------------------------------------------------|-----------|--|--|
| 1 | Introduction | 3 | | |
| 1.1 | Additional documentation to be used | 3 | | |
| 2 | Function description | 4 | | |
| 2.1 | Summer mode (hot water only) | 4 | | |
| 2.2 | Winter mode (heating without hot water production) | 4 | | |
| 2.3 | Winter mode (heating with hot water production) | 5 | | |
| 2.4 | Advanced functions | 5 | | |
| 3 | Operating Instructions | 6 | | |
| 3.1 | General information | 6 | | |
| 3.1.1 | Control Panel..... | 6 | | |
| 3.2 | Before you start | 8 | | |
| 3.3 | Normal operation | 8 | | |
| 3.3.1 | Appliance is switched off | 8 | | |
| 3.3.2 | Switching on the heater..... | 8 | | |
| 3.3.3 | Switching off the heater | 9 | | |
| 3.3.4 | Setting desired interior temperature..... | 9 | | |
| 3.3.5 | Summer mode (hot water only) | 10 | | |
| 3.3.6 | Winter mode (heating without hot water production)..... | 11 | | |
| 3.3.7 | Winter mode (heating with hot water production) | 11 | | |
| 3.3.8 | Heating while driving..... | 12 | | |
| 3.4 | Settings setup | 13 | | |
| 3.4.1 | Day, date, time | 13 | | |
| 3.4.2 | Language, temperature unit, hour format, display contrast..... | 13 | | |
| 3.5 | Programming timer | 14 | | |
| 3.5.1 | Program setting | 14 | | |
| 3.5.2 | Heating by timer..... | 16 | | |
| 3.6 | Remote control | 17 | | |
| 3.6.1 | Show actual mode..... | 17 | | |
| 3.6.2 | Enabling and setting Telestart and Thermo Call | 17 | | |
| 3.6.3 | Disabling Telestart and Thermo Call..... | 18 | | |
| 3.6.4 | Start and stop heater operation using Telestart..... | 18 | | |
| 3.7 | Frost | 19 | | |
| 3.7.1 | Draining the boiler manually..... | 19 | | |
| 3.7.2 | How to stop draining the boiler | 20 | | |
| 3.7.3 | Draining the boiler automatically | 20 | | |
| 3.7.4 | Frost protection mode | 21 | | |
| 4 | Fault Message Output | 22 | | |
| 4.1 | Fuses | 25 | | |
| 5 | Worldwide warranty | 26 | | |

1 Introduction

Dear Customer,

Thank you for choosing this programmable Webasto Control Panel for the Integrated Dual Top Evo Heater.

This product has been especially designed as a control panel for a Dual Top Evo heater installed in motor homes. Please note that this control panel and the Dual Top Evo heaters are intended exclusively for use in motor homes or similar vehicles.

An explanation of the mode of operation and function of your Webasto Dual Top Evo unit is generally provided via the workshop or the Service Centre at which the installation was carried out.

These operating instructions provides you with an overview of additional information on using the programmable control panel. If you do not understand any information in the manuals or if you misplace any of them, please contact your authorised Webasto dealer immediately.

Please take the time to read this manual carefully. This enables you to use all features and makes you feel comfortable and safe.

To ensure safe use of the Dual Top Evo heater, ALWAYS read and follow all instructions in this manual.

It is very important that an authorised Webasto dealer carries out any repair or maintenance not described in this manual.

1.1 Additional documentation to be used

These operating instructions contain the basic information and instructions generally required for operating Integrated heaters of the type Dual Top Evo 6 using programmable control panels.

in addition, the information in additional documentation materials must be observed. The operating instructions for the Integrated Dual Top Evo 6 heater must also be observed. These operating instructions are included in the delivery scope of the Integrated heater, however can also be downloaded at the Internet address <http://dealers.webasto.com>.

Then download the respective instructions as a PDF file in the desired language.

2 Function description

The **Dual Top Evo 6** integrated heater from **Webasto** combines the benefits of an interior heater with a water boiler and contributes to a gas-free motor home.

Depending on which function you wish to have, hot water **in summer mode**, just heat or heat and hot water **in winter mode**, several options are available.

2.1 Summer mode (hot water only)

The heater is used for providing hot drinking water. The water is heated up to and kept at 40 °C or 70 °C.



The device automatically selects the burner setting.

A water temperature sensor controls the water temperature. Due to variable operating and environmental influences, small water temperature deviations are possible.

The hot air fan for heating the interior is not activated.

2.2 Winter mode (heating without hot water production)

The heater is used for providing hot air.

The desired interior temperature may be adjusted by pushing button (1)  or button (2)  (5 to 35 °C).

The device automatically selects the burner setting modulating between 1,500 W and 6,000 W depending on the output requirement (calculated from difference between selected temperature and current interior temperature).

The amount of heat is regulated to reach the pre-selected interior temperature quickly. Then only a limited amount of power is needed to hold the interior temperature.

Heating the interior is always possible with or without water in the boiler.

2.3 Winter mode (heating with hot water production)

The heater is used for heating the interior and production of hot water.

The heat is generated using a diesel powered burner.

The desired interior temperature may be adjusted by pushing button (1) ▲ or button (2) ▼ (5 to 35 °C).

The water is heated up to 70 °C.

The device automatically selects the burner setting modulating between 1,500 W and 6,000 W depending on the output requirement (calculated from difference between selected temperature and current interior temperature).

The amount of heat is regulated to reach the pre-selected interior temperature quickly. Then only a limited amount of power is needed to hold the interior temperature.

A water temperature sensor controls the water temperature, while an interior temperature sensor controls the interior temperature.

Due to variable operating and environmental influences, small water temperature deviations are possible.

2.4 Advanced functions

- Menu driven user guidance in 6 languages.
- Programmable timer: The device offers two free programmable 7 days, 24 hours heating programs.
See paragraph 3.5: "Programming timer".
- Remote control by Webasto Telestart and Thermo Call (optional controls).
See paragraph 3.6: "Remote control".
- Boiler drainage: possibility to drain the boiler manually with the control panel or automatically as frost protection.
See paragraph 3.7: "Frost".
- Frost protection mode: protects the boiler against frost.
See paragraph 3.7.4: "Frost protection mode".
- Textual fault information: when a fault occurs, a fault message is displayed on the control panel. A number and a brief description inform the user about the kind of fault. See chapter 4: "Fault Message Output".

3 Operating Instructions

3.1 General information

Before starting the heater, observe the information in the operating instructions for the integrated Dual Top Evo 6 heater (included in the delivery scope of the integrated heater or available for downloading at the Internet address <http://dealers.webasto.com>) and for the programmable control panel. Pay particular attention to the sections "Maintenance and Safety Instructions" and "Maintenance".

The vehicle owner is responsible for the correct operation of the appliance.

3.1.1 Control Panel

Changes to the settings on the control panel are implemented after a short delay!

See Fig. 1.



Fig. 1 Control Panel

- 1 = Up - button ▲
- 2 = Down - button ▼
- 3 = START/STOP/OK - button
- 4 = MENU/BACK/CANCEL - button
- 5 = On/off - button ⏻
- 6 = Power indicator/fault indicator (green / red).

During normal operation you will see the status display. See Fig. 2.

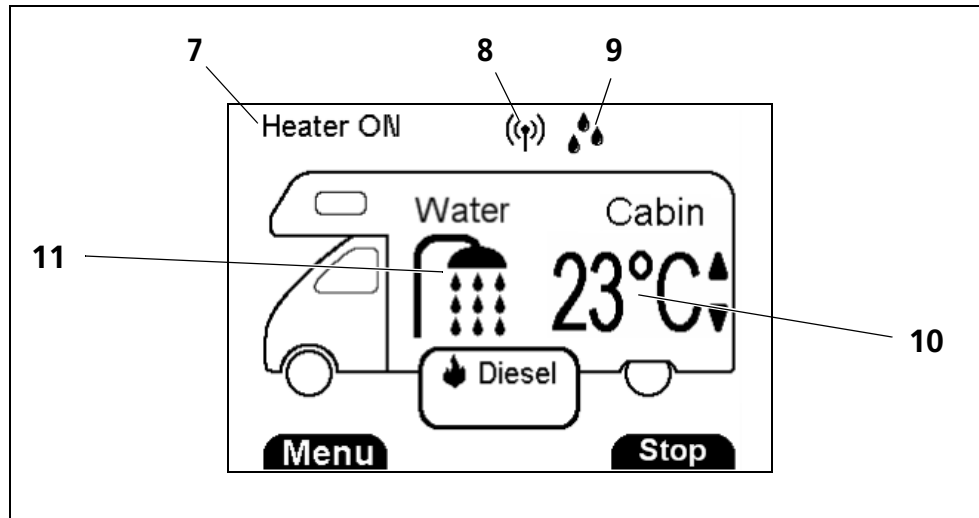


Fig. 2 Status display

- 7 = Indicator Heater ON/Heater OFF
- 8 = Remote indicator (P)
- 9 = Drainage indicator
- 10 = Interior heating/temperature indicator
- 11 = Water heating/temperature indicator

ad 1 and 2: Press up button (1) ▲ to increase and down button (2) ▼ to decrease desired temperature, set correct time and date, etc., move blinking cursor and to scroll through menu.

ad 6: The power indicator lights up **GREEN** when the Dual Top Evo is switched on and START (3) is pressed. Also Heater ON on display (7). The heater is operating or in the standby mode.

Power indicator is off when STOP (3) is pressed or when Dual Top Evo is switched off. Also Heater OFF on display (7). The heater is not operating or is not in the standby mode.

The indicator flashing pulses **RED** if a fault has occurred.

- ad 7: The heater is ON when the Dual Top Evo is switched on and START (3) is pressed. The heater is operating or in the standby mode. The heater is OFF when STOP (3) is pressed or Dual Top Evo is switched off. The heater is not operating or is not in the standby mode.
- ad 8: Symbol "(P)" appears when device is ready to accept signals of remote control.
- ad 9: The "☼" symbol is shown when the electrical safety/drainage valve is opened.
- ad 10: Desired interior temperature is displayed, not actual temperature.
- ad 11: Desired water temperature is displayed, not actual temperature.

Background lighting

The background lighting of the display lights up when the Dual Top Evo equipment is switched on, no matter if there is heater operation or not. It will fade out after some minutes if no button is pressed. Backlight will light up again after pressing ▲ or ▼.

NOTE

The display may become darker when the temperature of the control panel becomes very high or when it is placed in direct sunlight. Avoid that the control panel is exposed to high temperatures or direct sunlight. In case aforementioned conditions could not be avoided, adjust display contrast in " Setup" (see paragraph 3.4.2: "Language, temperature unit, hour format, display contrast").

3.2 Before you start

After connecting the appliance to the 12 V DC power supply, language, day, date and time have to be set.

- 1 Press ▲ and ▼ to select your preferred language:
"Deutsch", "English", "Español", "Français", "Italiano", or "Svenska".
- 2 Press OK.
- 3 Press ▲ and ▼ to select the correct day and date.
- 4 Press OK.
- 5 Press ▲ and ▼ to set the time.
- 6 Press OK.

Standard settings:

- Hour format: 24 h
- Temperature unit: °C
- Interior temperature: 21 °C
- Remote control: Disabled
- Timer programs: OFF for all 7 days
lower interior temperature T1 = 15 °C,
higher interior temperature T2 = 21 °C

3.3 Normal operation

3.3.1 Appliance is switched off

When the appliance is switched off, display shows "**Webasto Dual Top**" as well as actual time, day and date.

1 hour after switching off and touching buttons for the last time, display will go into "sleep" mode and will become dark. When any button is touched, display described above appears again for at least 1 hour.


3.3.2 Switching on the heater

- 1 Press the On/Off button ⓘ to switch on the Dual Top Evo.
Display shows the last used heating mode.*
- 2 Press START.
Then the heater starts up in the indicated operating mode.
Power indicator (6) lights green and "**Heater ON**" (7) on display.

* Exception: in case the last used heating mode was initiated by remote control (Telestart or Thermo Call), the last non-remote control heating mode is shown.

3.3.3 Switching off the heater

Proceed as follows to completely switch off the Dual Top Evo:

- 1 Press the On/Off button  to switch off the device.
Now the heater will stop heating.
- 2 The fan can continue to run after switching off in order to cool down the heater.
"Shutting down..." on display.
- 3 After the cooling phase the fan switches off.
For 1 hour the display shows text "Webasto Dual Top" as well as actual time, day and date.

Always drain the boiler if there is a risk of frost!
See paragraph 3.7: "Frost".

Stopping heating operation to select another mode:

- 1 Press STOP.
Now the heater will stop heating.
- 2 The fan can continue to run after switching off in order to cool down the heater.
Display shows stopped heating mode.*
Power indicator (6) goes off and "Heater OFF" (7) on display.
- 3 Use menu to select another mode.
After the cooling phase the fan switches off.
When after some minutes no button is touched, the display shows text "Webasto Dual Top" as well as actual time, day and date.

* Exception: in case the last used heating mode was initiated by remote control (Telestart or Thermo Call), the last non-remote control heating mode is shown.

3.3.4 Setting desired interior temperature

When the appliance is switched on (see paragraph 3.3.2) and the status display is visible, you can set the desired interior temperature.**
The status display shows the motor home and the current heating program. See Fig. 2.

Press  to increase or  to decrease the temperature.

NOTE

Desired temperature is displayed, not actual interior temperature.
Selected interior temperature can be changed, no matter if heater is ON or OFF. As soon as heater is switched on (manually, by remote control or timer) in a cabin heating mode, appliance will heat interior and keep it at this temperature.

** If actual heating mode is initiated by remote control, desired interior temperature cannot be adjusted. Dual Top will heat up interior and keep the temperature at preset value, selected when setting Thermo Call or Telestart.

3.3.5 Summer mode (hot water only)

Make sure that the boiler is filled with water.

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press **▲** and **▼** to select "🚿 hot water".
- 3 Press OK.
- 4 Press **▲** and **▼** select "🚿 Eco 40°C" or "🚿 Comfort 70°C".
- 5 Press OK.
- 6 "Selection completed" on display.

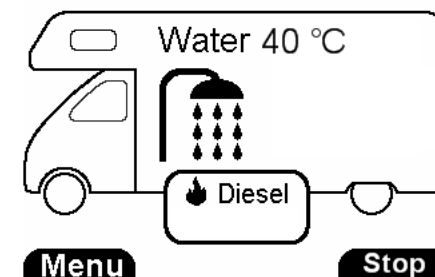
NOTE

When heater is already "ON", text "Selection completed, press OK to change operation mode" appears.

Press OK.

- 7 After 3 seconds power indicator (6) lights green and display changes to:

Heater ON



- "Heater ON"
- "🚿 water 40°C" or "🚿 water 70°C" (depending on selected water temperature)
- "🔥 Diesel"

The power indicator (6) lights green as long as there is a demand for hot water. To end this press STOP.

3.3.6 Winter mode (heating without hot water production)

Make sure the device is switched on.

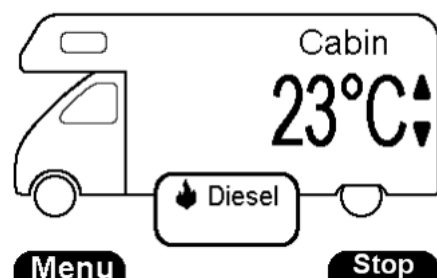
- 1 Press MENU.
- 2 Press ▲ and ▼ to select "🚐 Heating Cabin".
- 3 Press OK.
- 4 "Selection completed" on display.

NOTE

When heater is already "ON", text "Selection completed, press OK to change operation mode" appears.
Press OK.

- 5 After 3 seconds power indicator (6) lights green and display changes to:

Heater ON



- "Heater ON"
- "Cabin", "... °C"
(value depends on latest selected interior temperature; °C or °F depends on setting)
- "🔥 Diesel"

- 6 Press ▲ or ▼ to adjust desired interior temperature.

NOTE

Please note that, in case the boiler has been filled, the water is automatically heated as well. The water temperature may reach up to 80 °C depending on the power and the duration of the heating.

3.3.7 Winter mode (heating with hot water production)

Make sure the device is switched on.

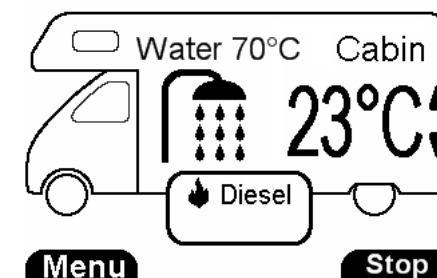
- 1 Press MENU.
- 2 Press ▲ and ▼ to select "🚐 Heating Cabin + Hot Water".
- 3 Press OK.
- 4 "Selection completed" on display.

NOTE

When heater is already "ON", text "Selection completed, press OK to change operation mode" appears.
Press OK.

- 5 After 3 seconds power indicator (6) lights green and display changes to:

Heater ON



- "Heater ON"
- "Water 70°C"
- "Cabin", "... °C"
(value depends on latest selected interior temperature; °C or °F depends on setting)
- "🔥 Diesel"

- 6 Press ▲ or ▼ to adjust desired interior temperature.

The heater gradually reduces the power until the selected interior temperature is reached. If the interior temperature has been reached, but the water temperature is still too low, the blown air circulation fan switches off and the water continues to be heated to a temperature of 70 °C.

The water temperature may reach up to 80 °C depending on the heating power that is required to achieve the interior temperature.

NO WATER control

When winter mode (heating **with** hot water production) is selected, but the boiler is without water, there will be a warning on the control panel.

Text "**Mode changed Low level sanitary water!**" blinks in a pop-up display.

The device automatically changes to winter mode, heating **without** hot water production.

Choose one of the following options:

- A. Press STOP to end current mode and select winter mode, heating **without** hot water production. See paragraph 3.3.6.
- B. Fill the boiler with water after changing to winter mode, heating **with** hot water production.

3.3.8 Heating while driving

Heating the cabin and/or water while driving the vehicle is possible and allowed.

Attention when driving in cold conditions:








Run the Dual Top Evo in winter mode (heating **with** hot water production) to protect the water pipes outside the vehicle against frost.

3.4 Settings setup

This chapter describes how to setup your favourite Dual Top Evo system settings of day, date, time, language, temperature unit, hour format and display contrast correctly.

3.4.1 Day, date, time

Make sure the device is switched on.








- 1 Press MENU.
- 2 Press  and  to select "  Setup".
- 3 Press OK.
- 4 Press  and  to choose "Set Date + Day" or "Set Time".
- 5 Press OK.
- 6 Day and date or time (depends on selection) on display.
Active field blinks.
- 7 Press  or  to adjust the value of the flashing field.
- 8 Press OK.
- 9 Now, the next field blinks. Repeat steps 7 and 8 until setting is correct.
- 10 Press BACK to return to main menu,
or continue with another setting as described from step 4 to 9.

3.4.2 Language, temperature unit, hour format, display contrast

Choose your favourite settings:

- Language: Deutsch/English/Español/Français/Italiano/Svenska
- Temperature unit: °C/°F
- Hour format: 12 h/24 h
- Display contrast: ... %

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press  and  to select "  Setup".
- 3 Press OK.
- 4 Press  and  to select "Set Language", "Set Temperature Unit", "Hour Format" or "Set Contrast".
- 5 Press OK.
- 6 Press  or  to select the desired language, temperature unit, hour format or display contrast.
- 7 Press OK.
- 8 Press BACK to return to main menu,
or continue with another setting as described from step 4 to 7.











3.5 Programming timer

This allows you to operate the system using a 24 hour 7 day programmable timer. Within this there are 2 programs you can set for each day, hour by hour, whether the interior has to be heated or not (off, lower temperature, higher temperature) and if hot water (70 °C) has to be available or not.

3.5.1 Program setting

Temperature setting

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press  and  to select "⌚ Programming Timer".
- 3 Press OK.
- 4 Press  and  to select "🕒 Timer Program 1" or "🕒 Timer Program 2" (values T1 and T2 depend on program settings).
- 5 Press OK.
- 6 Press  and  to select "🌡️ Set Cabin Temperatures".
- 7 Press OK.
- 8 Press  or  to set desired T1 (low interior temperature).
- 9 Press OK.
- 10 Press  or  to set desired T2 (high interior temperature).
Note: T2 has to be higher than T1.
- 11 Press OK.
- 12 Press BACK to return to main menu or continue with **Day setting**, step 6.







NOTE

Temperatures T1 and T2 may be programmed to different values in Timer Program 1 and Timer Program 2.

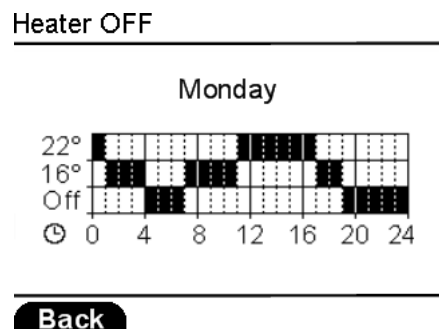
Day setting

In case you want to set the days after setting temperatures T1 and T2, continue with step 6.

Make sure the device is switched on.

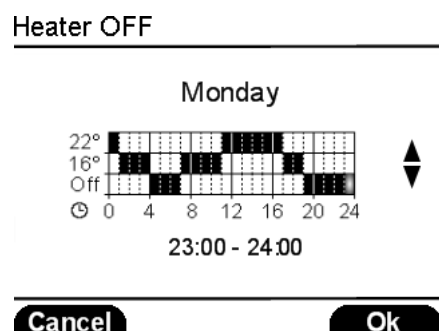
- 1 Press MENU.
- 2 Press  and  to select "⌚ Programming Timer".
- 3 Press OK.
- 4 Press  and  to select "🕒 Timer Program 1" or "🕒 Timer Program 2" (values T1 and T2 depend on program settings).
- 5 Press OK.
- 6 Press  and  to select "📅 Set Monday", "📅 Set Tuesday", "📅 Set Wednesday" etc..
- 7 Press OK.

- 8 Press **▲** and **▼** to:
- select **"Show 24 h Program"**.
Matrix with day, programmed hours and interior temperatures T1 and T2 appears.



Press BACK to return to main menu.

- or select **"Modify 24 h Program"**.
- 9 Press OK.
- 10 Selected day and hour appear on display.
Matrix with programmable hours and interior temperatures T1 and T2 appears.
Field of actual time and temperature blinks.



- 11 Press **▲** or **▼** to adjust desired temperature for selected day and hour: **OFF**, **T1** or **T2**.
- 12 Press OK.

- 13 Repeat step 11 and 12 until all 24 hours are programmed.
(You will see the hour period displayed at the bottom of the screen.)
- 14 **"Programming 24 h successful"** on display.
After 3 seconds, select another day as described in step 6 and continue to program remaining days.
It's also possible to copy programmed values from one day to another. See **Day copying**, step 6.
When all days have been programmed, press BACK to return to main menu.

Day copying

Instead of programming each day individually, it's also possible to copy programmed values from one day to another.
After copying you can leave the values identical, but it's also possible to make adjustments (see **Day setting**, step 6).

In case you copy days after setting temperatures T1 and T2 or programming and setting a day, continue with step 6.

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press **▲** and **▼** to select **"⌚ Programming Timer"**.
- 3 Press OK.
- 4 Press **▲** and **▼** to select **"⌚ Timer Program 1"** or **"⌚ Timer Program 2"** (values T1 and T2 depend on program settings).
- 5 Press OK.
- 6 Press **▲** and **▼** to select **"Set Monday"**, **"Set Tuesday"**, **"Set Wednesday"** etc..
- 7 Press OK.
- 8 Press **▲** and **▼** to select **"Copy Tuesday"**, **"Copy Wednesday"** etc.
- 9 Press OK.

- 10 "Copy of 24 h program successful" on display.
After 3 seconds, select another day as described in step 6 and continue to program remaining days.

When all days have been programmed, press BACK to return to main menu.







3.5.2 Heating by timer

This paragraph describes how to select a program to heat the interior and to provide hot water.

You can choose from 2 programs that define 7 days, 24 hours interior and water heating.

To change the programs see paragraph 3.5.1: "Program setting".

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press  and  to select "🕒 Heating by Timer".
- 3 Press OK.
- 4 Press  and  to select "⌚ Timer Program 1" or "⌚ Timer Program 2" (values T1 and T2 depend on program settings).
- 5 Press OK.
- 6 Press  and  to select "🚐 Heating Cabin" or "🚐 Heating Cabin + Hot Water".
- 7 Press OK.
- 8 "Selection completed" on display.

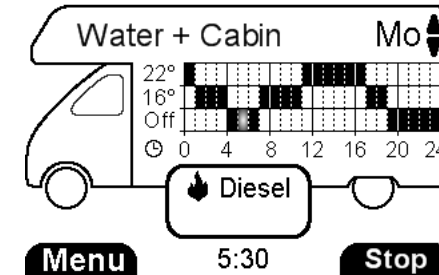
NOTE

When heater is already "ON", text "Selection completed, press OK to change operation mode" appears.

Press OK.

- 9 After 3 seconds power indicator (6) lights green and display changes to:

Heater OFF



- "Heater ON" or "Heater OFF"
- "Water" (if "Hot Water" selected)
- "Cabin"
- "🔥 Diesel"
- Day
- Time
- Matrix with programmed hours and interior temperatures.
- Field of actual time and temperature blinks.

NOTE

Press  and  to view program settings of another day.

3.6 Remote control

Heater can be operated by remote control devices: Webasto Telestart and Thermo Call. These controls are optional. Signal of remote control over-rides commands of control panel, as long as remote control is enabled.

3.6.1 Show actual mode

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press ▲ and ▼ to select "⚙️ **Setting ThermoCall/Telestart**".
- 3 Press OK.
- 4 Press ▲ and ▼ to select "**Show actual Mode**".
- 5 Press OK.
- 6 On display appears following message, depending on disabled or enabled remote control function:
 - Disabled: **"ThermoCall/Telestart disabled"**
 - Enabled: **"ThermoCall/Telestart enabled Receiving a signal from ThermoCall/Telestart system heats up cabin to ... °C and provides hot water"**.

NOTE

... °C or ... °F: value and unit depend on setting and set interior temperature.

NOTE

"and provides hot water" only appears when function "Heating Cabin + Hot Water" is selected.

- 7 Press BACK to return to main menu.

3.6.2 Enabling and setting Telestart and Thermo Call

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press ▲ and ▼ to select "⚙️ **Setting ThermoCall/Telestart**".
- 3 Press OK.
- 4 Press ▲ and ▼ to select "**ThermoCall/Telestart enabling and setting**".







NOTE

If text "**ThermoCall/Telestart not connected Visit www.webasto-dualtop.com**" appears, remote control device is not connected. Press BACK to return to main menu.


- 5 Press OK.
- 6 Press ▲ and ▼ to select "**Heating Cabin**" or "**Heating Cabin + Hot Water**".
- 7 Press OK.
- 8 Press ▲ and ▼ to set the desired interior temperature.
- 9 Press OK.
- 10 "**Enabling ThermoCall/Telestart successful**" on display. After 3 seconds display changes to status of appliance at actual time. "⚙️" (8) on display.

3.6.3 Disabling Telestart and Thermo Call

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press  and  to select " **Setting ThermoCall/Telestart**".
- 3 Press OK.
- 4 Press  and  to select "**ThermoCall/Telestart disabling**".
- 5 Press OK.
- 6 "**Disabling ThermoCall/Telestart**" on display.
After 3 seconds display changes to status of appliance at actual time.
 (8) disappears from display.

3.6.4 Start and stop heater operation using Telestart

To do this, Telestart must be available and activated. This can be recognised from an indicated symbol " (8)".

Starting heater operation:

- 1 Press ON button of Telestart.
LED of Telestart lights green, showing that signal was transferred successfully.
- 2 The heater starts running in the (in paragraph 3.6.2: "Enabling and setting Telestart and Thermo Call") selected mode, independent from the actual heater status (heater off, heater on, drainage, ...).

Stopping heating operation:

- 1 Press OFF button of Telestart.
LED of Telestart lights red, showing that signal was transferred successfully.
- 2 The heater stops any heating operation and switches off, independent from the actual heater status.
Exception: running drainage will be continued.

NOTE

If LED of Telestart blinks red after pressing ON or OFF button of Telestart, the signal was not transferred successfully.





3.7 Frost

There are several features that protect the water supply system against frost.

- Drain water contents manually when there is risk of frost and when storing the vehicle for a longer period.
See paragraph 3.7.1: "Draining the boiler manually".
- The boiler is drained automatically in case you forgot to drain manually.
See paragraph 3.7.3: "Draining the boiler automatically".
- In case you don't want to drain the water supply system and you don't heat the interior of the vehicle, you can select the frost protection mode.
See paragraph 3.7.4: "Frost protection mode".

3.7.1 Draining the boiler manually

Drain water contents manually when there is risk of frost and when storing the vehicle for a longer period.

- 1 Interrupt power for vehicle system water pump (main switch or pump switch, depending on instructions of the vehicle manufacturer).
- 2 Open hot water taps in kitchen, bathroom, shower, etc. (set pre-selecting mixing taps or single-lever valves to "hot").
- 3 Make sure the device is switched on.
- 4 Press MENU.
- 5 Press  and  to select " **Draining Boiler**".
- 6 Press OK.
- 7 "**Press OK to confirm boiler drainage**" on display.
- 8 Press OK.
- 9 "**Draining... Press MENU to select heating operation**" and "**Press STOP to abort drainage**" on display.
" (9) on display.

NOTE

Any kind of heater operation will be stopped when manually starting boiler drainage.

NOTE

To stop drainage, see paragraph 3.7.2: "How to stop draining the boiler".

The boiler content is now discharged to the outside through the electrical safety/drainage valve.

Place a container beneath the outlet to check whether the water in the boiler has completely drained away (approx. 10 litres!).

After approx. 90 min, text "**Drainage completed**" appears.

- 10 Press OK to end manual drainage.

NOTE

Any kind of water from the vehicle has to be discharged at a proper disposal facility.

NOTE





Be aware of drainage behaviour when starting a heating operation (by menu guidance) without aborting or completing drainage procedure:

- a) Drainage aborted when one of the following modes is selected:
 - Summer mode (hot water only)
 - Winter mode (heating **with** hot water production)
 - Frost protection mode;
- b) Drainage continued in case of
 - Winter mode (heating **without** hot water production).

3.7.2 How to stop draining the boiler

Boiler drainage can be stopped, if circumstances require this.

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press  and  to select “ **Draining Boiler**”.
- 3 Press OK.
- 4 “**Press OK to confirm boiler drainage**” on display.
- 5 Press OK.
- 6 “**Drainage... Press MENU to select heating operation**” and “**Press STOP to abort drainage**” appears on the display.
“ (9)” on display.
- 7 Press STOP.
“**Drainage aborted**” on display.
- 8 Press OK.

3.7.3 Draining the boiler automatically

The electrical safety/drainage valve is opened electrically.


If the water temperature at the electrical safety/drainage valve is less than 6 °C, the boiler water contents may discharge automatically.

This function is active when:

- the appliance is switched "OFF";
- in winter mode (heating **without** hot water production) during a period when there is no heating action in the heater (e.g.: selected interior temperature is reached, low outside temperature);
- if battery power is too low;
- there is a failure!

NOTE

Note that it only works when a 12 V power supply is available!

During drainage, “ (9)” appears on display.

After approx. 90 min, the electrical safety/drainage valve will be closed again.

The drainage outlet of the electrical safety/drainage valve must always be kept clear (free from dirt, ice, leaves etc.)!

To avoid water loss and to protect the heater and boiler against frost, select the frost protection mode (see paragraph 3.7.4: "Frost protection mode").

NOTE

Automatic drainage can not be stopped.

However, when you switch mode to manual drainage, it can be aborted.
(See paragraph 3.7.2: "How to stop draining the boiler").

NOTE

Draining the boiler as well as the frost protection mode protect the heater and boiler against frost. Not all water lines in the vehicle can be protected against freezing due to installation variations.

When storing the vehicle, either choose a place that is well protected against low temperatures or drain the whole water system, including all lines and tubes.

There shall be no warranty claims for damage caused by frost!

3.7.4 Frost protection mode

This mode is a safety feature for the heater only. It does not prevent the water circuits inside and outside the vehicle from freezing.

Store the vehicle at a place that is well protected against frost or drain water contents if there is a risk of frost!

Make sure the device is switched on.

- 1 Press MENU.
- 2 Press ▲ and ▼ to select "**Frost Protection**".
- 3 Press OK.
- 4 "**Selection completed**" on display.

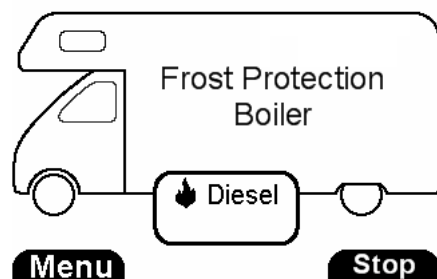
NOTE

When heater is already "ON", text "**Selection completed, press OK to change operation mode**" appears.

Press OK.

- 5 After 3 seconds power indicator (6) lights green and display changes to:

Heater ON



- "Heater ON"
- "Frost Protection Boiler"
- "🔥 Diesel"

The heater functions as in the winter mode (heating **with** hot water production), but with lower values for air and water temperatures.

NOTE

When the frost protection mode is selected, diesel and electrical power are used. Make sure that there's enough diesel in the tank and the battery is charged. Check this frequently.

NOTE

Make sure that the boiler is filled with water when choosing frost protection mode.

NOTE

The frost protection mode enables the user to park the vehicle for a short time without being observed and without having to worry about frost and frost damage.

During winter storage or when parking the unused vehicle for a longer time, the entire water system should be drained and the heater disconnected from the battery to avoid unnecessary battery discharging or possible frost damage.

4 Fault Message Output

When a fault occurs, power indicator/fault indicator (6) blinks **RED**.


Next to that, a fault message is shown on the display of the control panel.

The meaning of the messages is shown in the following table.

Depending on the type of fault, you may need to visit a Webasto Service Centre.

If serious malfunctions such as overheating or failure to start reoccur, the heater is locked and can be put back into service by deleting the failures.

Do this by disconnecting the power supply:

- 1 Ensure that the heater/fan is not running (to be established by the sound of the heater operating).
If necessary wait until fans stop running.
- 2 Switch off the Dual Top Evo by pressing the On/Off button .
- 3 Remove the 15 A fuse (red cable). Wait at least 5 seconds and insert the fuse again.

Now the heater is reset.

NOTE

Please note that different fault messages (fault message numbers) occur in each case for the various control panel types.

Fault message output on control panel

| Message | Meaning | Remedy |
|-----------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Message 01 No data connection | No communication between control panel and heater, or error control panel. | First, remove fuses 15 A (red cable) and 5 A. Then put in fuse 15A (red cable), followed by fuse 5 A. Check connections of control panel. Check fuse 15 A (red cable). Contact a Webasto Service Centre. |
| Message 02 No start of combustion | No start (after 2 attempts to start) | Check fuel supply (enough fuel, at least 8 ltr.), reset heater (by pressing OK or switching off for at least 30 sec.) |
| Message 03 Combustion interrupted | Flame failure Restart not successful | See message 02. |
| Message 04 High battery voltage | Operation voltage is above permitted value | Reset heater (by pressing OK or switching off for at least 5 sec.) |
| Message 05 Low battery voltage | Operation voltage is below permitted value | Charge battery, reset heater (by pressing OK or switching off for at least 5 sec.) |
| Message 06 Fuel pump disconnected or system overheated | Fuel pump interruption/one of the three overheating switches has been tripped due to an excessively high temperature | Check fuel pump cable and connectors, check for overheating (see messages 10, 11, 12, 13 and 14), reset heater (by pressing OK or switching off for at least 5 sec.) |
| Message 07 Fuel pump short circuit | Short circuit of fuel pump to earth | Check fuel pump cable and connectors. |
| Message 08 Failure hot air fan | Hot air motor fault: disconnection/short circuit/fan speed out of range/fan blocked | Ensure that hot air fan can rotate freely, remove possible blocking objects, reset heater (by pressing OK or switching off for at least 5 sec.) |
| Message 09 Failure fan amplifier | No communication between amplifier of hot air fan and heater control unit | Contact a Webasto Service Centre. |
| Message 10 High temperature sanitary water | Overheating water temperature sensor | Check water level, reset heater (by pressing OK or switching off for at least 5 sec.) or select winter mode, heating without hot water production |
| Message 11 High temperature sanitary water | Exceeding gradient water temperature sensor | Check water level, reset heater (by pressing OK or switching off for at least 5 sec.) or select winter mode, heating without hot water production |
| Message 12 High temperature heating air | Overheating hot air temperature sensor | Ensure that hot air can flow freely, air intake and outlets are not blocked. Reset heater (by pressing OK or switching off for at least 5 sec.) |
| Message 13 High temperature heating air | Exceeding gradient hot air temperature sensor | Ensure that hot air can flow freely, air intake and outlets are not blocked. Reset heater (by pressing OK or switching off for at least 5 sec.) |
| Message 14 Failure cooling air ventilation | Overheating of heaters' control unit | Ensure that cooling air can flow freely, reset heater (by pressing OK or switching off for at least 5 sec.) |
| Message 15 Failure combustion air motor | Combustion air motor interrupted | Ensure that cooling fan can freely rotate, remove possible blocking objects. Check fuse 15 A (red cable). |

Fault message output on control panel

| Message | Meaning | Remedy |
|---------------------------------------------------------------|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Message 16 Failure combustion air motor | Combustion air motor fault: disconnection/short circuit/overload/blocked | See message 15. |
| Message 17 Failure control unit | Control unit (heater) fault/heater locked | Put heater back into service (see above this table) and restart heater. Contact a Webasto Service Centre. |
| Message 18 Failure cabin temperature sensor | Interior temperature sensor disconnection/short circuit | Check routing of cable, avoid that it is pinched or crushed, check the connector behind the control panel. Reset heater (by pressing OK or switching off for at least 5 sec.) |
| Message 19 | n/a | n/a |
| Message 20 Failure heating air temperature sensor | Hot air temperature sensor disconnection | Reset heater (by pressing OK or switching off for at least 5 sec.) Contact a Webasto Service Centre. |
| Message 21 Failure heating air temperature sensor | Hot air temperature sensor short circuit | See message 20. |
| Message 22 Failure sanitary water temperature sensor | Water temperature sensor disconnection | See message 20. |
| Message 23 Failure sanitary water temperature sensor | Water temperature sensor short circuit | See message 20. |
| Message 24 Failure glow plug | Glow plug/Flame monitor disconnection | See message 20. |
| Message 25 Failure glow plug | Glow plug/Flame monitor short circuit | See message 20. |
| Message 26 Failure flame detection | Premature flame detection | See message 20. |
| Message 27 | n/a | n/a |
| Message 28 Failure drain valve | Electrical safety/drainage valve disconnection | See message 20. |
| Message 29 Failure drain valve | Electrical safety/drainage valve short circuit | See message 20. |
| Message 30, 31, 32, 33 | n/a | n/a |
| Message 34 System overheated or relay circuit disconnected | One of the three overheating switches tripped due to excessively high temperature | Check for overheating (see messages 10, 11, 12, 13 and 14). Reset heater (by pressing OK or switching off for at least 5 sec.) Contact a Webasto Service Centre. |

NOTE

n/a = not available

NOTE

All messages except message 28 and 29: heater shuts off automatically.
Failure of electrical safety/drainage valve (message 28 and 29) will not abort heater operation and will not be shown during heater operation.

4.1 Fuses

The Dual Top Evo is equipped with 3 fuses: 5 A, 15 A and 15 A.
Each fuse must be connected to the corresponding cable (observe colour).

5 A: red-and-blue cable

15 A: red-and-black cable

15 A: red cable

When you replace a fuse, make sure that the Dual Top Evo is switched off.

WARNING

In case of electrical deviations a fuse other than specified may cause fire.

5 Worldwide warranty

The following worldwide warranty is extended to cover the integrated Dual Top Evo air and water heater, manufactured or supplied by Webasto and is subject to qualifications indicated. Webasto warrants for the period set forth below that products be free from defects in workmanship and material, provided such products are installed, operated, and maintained in accordance with Webasto Dual Top Evo written instructions. The warranty is for the end-customer whereby it is administered and processed inside the Webasto network of authorized dealers.

Terms and conditions

- 1 Please note that the Dual Top Evo is only specified for applications in motor homes or similar vehicles.
- 2 The quality and good operation of Webasto Dual Top Evo products are guaranteed by Webasto for a period of two (2) years, starting from the date of installation. OE installed equipment warranties begin with the purchase of the (recreational) vehicle, not from the date of installation.
In order to extend the parts warranty period to three (3) years, please contact your Webasto Service Centre.
- 3 Webasto will compensate the costs for the replacement/repair of the defective part or component at the smallest sub-assembly level by using only but genuine components. In the case of labour, installation or other allowances, where accepted these cannot exceed the standard repair times. Any excess of such allowances for example due to poor accessibility or equipment will not be compensated.
- 4 This warranty is limited to repair & replacement only. It does not cover:
 - Damage resulting from defects in the Webasto Dual Top Evo equipment
 - Failure of the Dual Top Evo equipment due to frost, normal wear, accident, misuse, abuse, negligence or improper installation, lack of reasonable and necessary maintenance, unauthorized installation or repair, alterations, civil disturbance or act of God.
- 5 All Dual Top Evo products have to be installed by authorized installers or this installation has to be reviewed and approved by an authorized installer.
- 6 The Dual Top Evo should be demonstrated to the Webasto Service Centre for repair/warranty claims. Travelling/transport costs shall be borne by the owner.
- 7 Proof of original purchase with date of installation is required to receive warranty service. Worldwide warranty can only be supported if purchase and installation is centrally registered in the Webasto Warranty System.

In multilingual versions the German language is binding.

The telephone number of each country can be found in the Webasto service center leaflet or the website of the respective Webasto representative of your country.

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