

# Operating Instructions

Air Top Series Heaters



## Introduction

Dear Webasto Customer,

Thank you for choosing a Webasto Air Top Series Heater.

Air Top Series Heaters are used

- to heat cabins, boats, trucks, minibuses, vans and motor-homes and
- to defrost vehicle windows.

We presume that the principle and mode of operation of your new heater has been explained to your complete satisfaction by the workshop or service center which installed the heater. In these operating instructions we would like to once again provide you with an overview of the safe use of your new heater.

Repair work should only be carried out by an authorized Webasto dealer.



## Servicing and Safety Instructions

1. When the heater is in use, the surface of the hot air outlet will become hot to the touch. Contact with skin may cause burns.
2. **Webasto heaters must be switched "off" when re-fueling at gas stations and/or while loading or unloading flammable materials for transport, to prevent the risk of explosion.**
3. The year in which the heater was used for the first time must be permanently displayed on the factory plate by deleting the inapplicable years from the plate.
4. **The heaters are not designed for heating hazardous substance transport compartments.**
5. Claims can only be made if it can be verified that the claimant has complied with the servicing and safety instructions.
6. **The heater may not be operated in enclosed spaces (such as garages) as a result of the risk of poisoning and asphyxiation, even if a timer is used.**
7. In the event of long-lasting heavy smoke development, unusual combustion noises or a smell of fuel or if the heater suffers continuous fault cut-outs with error messages (flashing code), it must be shut down by removing the fuse and must not be used until it has been inspected by Webasto-trained personnel.
8. **Wherever flammable vapors or dust may form, the heater must be switched off as a result of the risk of explosion.**
9. **The heat transfer unit on air heaters is exposed to very high thermal stress and must be replaced by a genuine Webasto spare part after a ten year life cycle. If exhaust lines pass through areas used by personnel, they must also be replaced by genuine spare parts after ten years.**

10. The fuel specified by the vehicle manufacturer is suitable for use in an Air Top Series Heater B (gasoline).

The diesel fuel specified by the vehicle manufacturer is suitable for use in an Air Top Series Heater D (diesel).

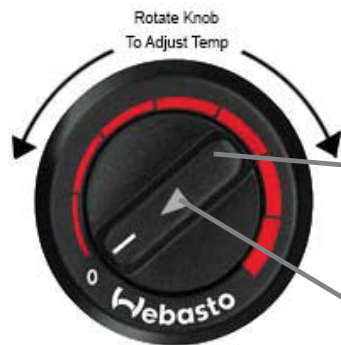
There are no known negative influences due to fuel additives when used appropriately.

If fuel is extracted from the vehicle's tank, follow the additive instructions issued by the vehicle manufacturer.

If you change to low-temperature fuel, the heater must be operated for approx. 15 minutes so that the fuel system is filled with the new fuel.

11. The temperature in the area around the heater must not exceed 85 °C / 185° F (storage temperature). If the temperature exceeds this level there is a risk of permanent damage to the electronics systems.
12. Non-compliance with the installation instructions and the warnings contained therein will lead to the exclusion of all liability by Webasto. The same applies if repairs are carried out incorrectly or by untrained technicians or with the use of parts other than genuine spare parts. This will result in the invalidation of the type approval for the heater unit.
13. Keep the hot air inlet and hot air outlet free of dirt and foreign bodies. Soiled or blocked hot air lines may cause overheating.
14. To prevent mechanical parts seizing, the heater should be operated for approx. 20 minutes once a month.
15. Do not stand on the heater, do not place any items of clothing, textiles or similar materials over the heater or in front of the hot air inlet and the hot air outlet.
16. The flow of hot air through the heater must not be restricted or blocked by highly flammable substances or materials such as rags, cleaning wool, etc.
17. The heater must not be cleaned with a high pressure cleaner.

## Control Element



**!** Changes to the settings on the control element will be carried out with a short time delay

Rotary knob for:

- Switching on and off
- Setting the room temperature
- Resetting after a fault cut-out

Indicator / error code display

## Switch On

Set the rotary knob on the control element to the desired temperature.



**NOTE:**

To prevent the combustion air fan from scraping, ensure that there are no objects on or against the heater before you turn it on.

## Ventilation Option

A separate switch (optional) allows the user to choose between heating and ventilation mode. In ventilation mode the fan speed depends on the position of the control element knob.

## SmarTemp Control



\* The micro USB Service Port is used for Webasto heater diagnostic purposes only. This port cannot be used to charge cell phones or other electronic devices.

### Heater ON Example

Press the Webasto button to turn heater on.

### Set Temperature Output & Heater Runtime Example

Using the rotary dial and the selection button, follow these steps to set your cab temperature to 70°F with a runtime of 4 hours.

1. Press the Selection button. Using the rotary dial, select: Options > Duration > Timed > Adjust runtime to 4 hours. Confirm the adjustment by pushing the selection button.
2. From the main screen use the rotary dial to adjust the set temperature to 70°F; confirm the adjustment by pushing the selection button.

**NOTE:** The set temperature can be adjusted quickly even when the heater is running using the same method as above.

### Set Timer Example

Set timer to turn on Friday at 6:30AM with a runtime of 60 minutes.

1. Press the Selection button. Using the rotary dial, select Timer.
2. Highlight the timer feature, press the Selection button. Select "edit" from the sub-menu.
3. Adjust and select day for Friday.
4. Adjust and select time for 6:30AM.
5. Adjust and select runtime for 60 minutes.
6. Settings are saved each time the selection button is pressed.

### Menu Description

Refer to Menu Descriptions Table for a detailed description of each menu item and its default setting. Depending on the SmarTemp version, menu order may vary from order below.

	Definitions	Default
<b>Mode</b>	Mode changes the operation of the heater between heat mode and ventilation mode. Status indicator lights will illuminate red for heat mode and blue for ventilation mode when the selected mode is active. <b>Note:</b> Refer to Status Indicator Light description on page 6 for additional Status Indicator explanation.	Heat Mode
<b>Language</b>	Language changes between English, Spanish, and French.	English
<b>Temp Unit</b>	Temp Unit changes between Fahrenheit and Celsius units of measure.	Fahrenheit
<b>Options</b>	Advanced level adjustments; see below.	

Duration	<p>Duration allows for the selection of <u>continuous</u> heater operation or <u>timed</u> operation (30 minutes – 14 hours in 30 minute increments).</p> <p><b>IMPORTANT:</b> <u>Timed</u> duration is not to be mistaken for Timer functionality. The duration times above are used when turning the heater on manually. I.e. set the heater duration for 8 hours before heading to bed.</p> <p><b>Note:</b> If <u>timed</u> operation is selected 10 hours is default.</p>	Continuous
LVD	<p>LVD “Low Voltage Disconnect” allows the user to set the battery voltage level at which the Webasto SmarTemp Control 2.0 will shut down the heater.</p> <p>If battery voltage is equal to or less than the threshold selected +0.1v, the heater will not start. I.e. if an 11.5v threshold is selected the heater cannot be started until B+ has reached 11.7v.</p> <p>12 volt - Range between 11v – 12.5v 24 volt - Range between 21v – 25.5v</p>	<p>11.4v 24.2v</p>
Password	<p>A password can be set to prevent access to the advanced “Options” menu. Enter a 4 digit code passcode to begin securing the “Options” menu.</p> <p><b>Note:</b> This is typically used in fleet vehicle applications.</p>	OFF
PM Reminder	<p>If the heater has not run 30 days, the preventive maintenance (PM) reminder will alert the operator with a message to run the heater for 20 minutes. The indicator lights will flash red as a visual reminder.</p> <p>The operator will have the ability to Start the 20 minute maintenance cycle or delay it via a “Snooze” option. When Snooze is selected the PM reminder will postpone until 12:00PM the following day.</p>	ON
Time & Date	<p>Set time and date using the rotary knob and selection button. 12 (AM / PM) or 24 hour available.</p> <p>The Webasto button can be used to go back to the previous field if additional changes are needed.</p>	12 hour

Offset	Depending on the installation location, the temperature reading may vary slightly. The Offset feature allows a temperature adjustment of +/- 9°F (+/- 5°C). Adjust this as necessary to obtain the most accurate ambient temperature reading.	0°
Default	Default allows the user to perform a factory reset of the control settings. <b>Note:</b> Heater information will NOT be affected.	N/A

Use the following link to obtain version specific controller operation instructions.

<http://www.techwebasto.com/documentation/heater/recreational.html>

## Actions in event of faults

If an error occurs, first check the fuse and plug connections to ensure that they are in proper condition and connected correctly.

If the actions described below do not rectify the error, have the heater checked by Webasto-trained personnel.

### Heater unit cuts out automatically

#### Cause

No combustion after start and repeat start

Flame extinguishes during operation

Heater unit overheats and indicator flashes

Vehicle voltage too low

#### Remedy

Switch heater unit off (for at least 2 seconds) and then on again

Switch heater unit off (for at least 2 seconds) and then on again

Make sure that hot air can flow freely, allow heater unit to cool down, Switch heater unit off (for at least 2 seconds) and then turn on again

Charge battery  
Switch heater unit off (for at least 2 seconds) and then turn on again

### Heater unit emits black smoke

#### Cause

Combustion air and/or exhaust system blocked

#### Remedy

Check combustion air and exhaust system for blockage

## Error code output on combination timer or control element

If the system is fitted with a combination timer, when an error occurs an error code is displayed on the timer's screen until the heater has been properly repaired.

The error code is output if the heater is fitted with a control element after an error has occurred by the switch-on indicator/error code indicator flashing. After a burst of fast flashes the error code will be displayed by a sequence of long flashes, the number of which is shown in the table below.

<b>Error code</b>	<b>Meaning</b>
F 00	Control unit error
F 01	No start (after 2 starting attempts)
F 02	Flame failure (at least > 3)
F 03	Undervoltage or overvoltage
F 04	Premature flame recognition
F 05	Flame monitor (petrol heater) interrupt or short circuit
F 06	Temperature sensor interrupt or temperature sensor short circuit
F 07	Metering pump interrupt or metering pump short circuit
F 08	Fan motor interrupt or fan motor short circuit or fan motor overload or blocked
F 09	Glow plug interrupt or glow plug short circuit
F 10	Overheating
F 11	Overheating sensor interrupt or overheating sensor short circuit
F 12	Heater unit lock-out
F 14	Overheating sensor installed incorrectly
F 15	Defective controller / open or short circuit
F 16	Exhaust temperature exceeded
F 17	Exhaust gas temperature sensor defective
F 18	Low Voltage (SmarTemp error code display only) See proceeding row for heater error code F 18.
F 18	Defective controller / open or short circuit
F 19	Plausibility of sensors incorrect (exhaust / overheat sensor)

If serious malfunctions such as overheating or failure occur, the heater will go into a locked state (F 12). This state can be reset by using the following heater lockout reset procedure.



## Heater Lock-out Reset Procedure

1. Using switch or standard timer control, turn heater on
2. Remove the main power connection to heater from battery or pull fuse for a minimum of 20 seconds.
3. Using switch or standard timer control, turn the heater off.
4. Reinstall main heater power connection where previously disconnected.
5. Rectify the cause of the fault.

**IMPORTANT:** Heater fault codes can be read using PC Diagnostics, however, the heater lock-out reset must be manually performed using the procedure stated above.

## Limited Non-Transferable Warranty

Webasto Thermo & Comfort North America, Inc. (hereinafter referred to as Webasto) warrants their heaters and heater kits against defects in material and workmanship for two (2) years effective at the time of installation or vehicle registration date for original equipment installation (OEM). This warranty period may not exceed three (3) years from the original date of sale by Webasto. This warranty period may be superseded by written contractual agreements.

All models are limited to 2,000 maximum operating hours.

Replacement parts are covered for six (6) months or the remainder of the original warranty period, whichever is longer.

The intent of the Webasto warranty is to protect the original end-user of the heater from defects and provide free repair and replacement of defective parts in the manner provided herein. During the warranty period, the exclusive remedy will be for Webasto, at their discretion, to repair or replace those parts which are demonstrated to be defective in material or workmanship.

While warranty is provided to the "original end-user", it is to be administered and serviced through an authorized Webasto dealer in accordance with the Webasto warranty policy or contractual agreement between Webasto and a second party.

To locate the nearest Webasto authorized dealer for warranty service:

visit <http://www.techwebasto.com> or call (800) 860-7866 in USA, (800) 667-8900 in Canada.

## Notes



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[www.webasto.us](http://www.webasto.us)  
[www.techwebasto.com](http://www.techwebasto.com)

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