

# Operating Instructions Air Top 3500 / 5000 Heaters



Webasto ThermoSysteme GmbH  
82131 Stockdorf/Kraillingstr. 5 Telefon (089)8 57 94-0  
Telefax (089) 8 57 94-448/Telex 5 23 647 webas d

## Maintenance and Safety Information

1. Within the scope of the StVZO (German Road Licensing Regulations) General Design Certifications have been granted by the Federal Office for Motor Traffic for the Air Top 3500 / 5000 air heaters.
2. The installation of the heaters must be performed in accordance with the Installation Instructions. If available, the approval certification is to be kept in the vehicle.
3. The year of the initial operation must be durably marked on the type plate of the heater by removing the years that are not applicable.
4. **The heaters are not approved for use in the cargo space of vehicles carrying hazardous materials.** When installing the AT 3500 / 5000 D heater in vehicles for the transport of hazardous materials, the requirements laid down in TRS 002 and TRS 003 (Technical Guidelines relating to the ordinance of transporting hazardous materials on the road) must be fulfilled in addition to those of the StVZO.
5. Claims can only be asserted if the claimant can prove that the maintenance and safety notes were adhered to.
6. **Due to the danger of explosion the heater must be switched off at filling stations and tank farms.**
7. **Due to the danger of poisoning or asphyxiation the heater must not be operated in enclosed spaces (e.g. garages) without adequate exhaust extraction. This should be considered when pre-setting heater operating times or using the Telestart remote control.**
8. **The heater must be inspected** by a qualified expert annually, preferably prior to the heating season commencing.
9. In the case of severe smoke development, unusual combustion noises or fuel smell, the heater must be placed out of operation by removing the fuse and may only be restarted after it was inspected by Webasto-trained personnel.
10. **At locations where combustible vapours or dust may accumulate (e.g. in the vicinity of fuel, coal, sawdust and grain depots or the like) the heater must be switched off due to the danger of explosion.**
11. Whenever the heater is removed it is **mandatory that the gasket** located underneath be **replaced**.
12. **The heat exchanger of the air heater is not to be used for longer than 10 years and must thereafter be replaced by the manufacturer or one of the authorised workshops with a genuine replacement part.**  
**If exhaust pipes lead through passenger areas, these pipes must also be replaced with genuine replacement parts after 10 years.**
13. The fuel specified by the vehicle manufacturer is suitable as fuel for the heater. Both leaded and unleaded fuel may be used.
14. The heater should not be exposed to temperatures greater than 85°C (storage temperature). Exposure to such temperatures will cause permanent damage to the electronics.

## Maintenance and Safety Information

15. Webasto will not assume any liability if the installation instructions and the notes contained therein are not observed. The same applies to improperly performed repairs or those where others than genuine replacement parts have been used. In those cases, the heater's General Design Certification and thus the General Operating Permit (homologation) will be invalidated as a consequence.
16. Heating air inlet and outlet openings must be kept clear of dirt and objects. Contaminated or obstructed heating air ducts can result in overheating and thus tripping of the temperature limiter.
17. To prevent mechanical parts from seizing, the heater should be operated every 4 weeks for approx. 10 minutes.

## Heater Control



**!** Any changes in the settings adjusted at the heater control will take effect with some delay

- Rotary dial for:
- turning on/off
  - setting the desired room temperature
  - deactivating any fault lock-out
- Operation indicator/fault code display

## Start-Up

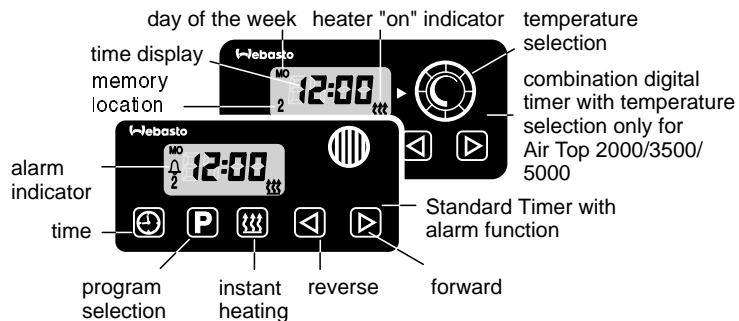
Set the heater control to the desired temperature

- !** **NOTE:**
- To prevent any obstruction or chafing of the heating and combustion air fans make sure that no objects are deposited on the heater nor rest against it, before putting the heater into operation.

## Ventilation option

A separately fitted switch provides you with the possibility to select between the "heating" and "ventilation" operating modes. The fan speed in the ventilation operating mode depends on the heater control position.

# Standard Timer / Combination Timer



<b>General</b>	<p>The standard digital timer/combination timer enables you to preset the start of the heater operation up to 7 days in advance. It is possible to program 3 different starting times, only one of which can be activated.</p> <p>The standard digital timer features a wakeup alarm function. The combination timer has a temperature controller. The combination timer can only be used on Air Top 2000/3500/5000 heaters which allow the temperature to be preselected.</p> <p>When the ignition switched on, the timer displays the current time and the day of the week. When the heater is switched on, the display and the buttons are illuminated.</p> <p>After the power supply has been connected, all symbols on the display will flash. The current time and weekday must be set. No display occurs in TRS vehicles.</p>
<b>Operation</b>	<p>The timer can be operated in that all flashing symbols can be adjusted by means of the <b>◀</b> and <b>▶</b> buttons. If the buttons are not pressed within 5 seconds, the time displayed will be stored. If the <b>◀</b> and <b>▶</b> buttons are pressed for more than 2 seconds, the fast time-setting mode is activated.</p> <p>If the ignition is switched off while the heater is operating in the continuous mode, the remaining operating time of 15 minutes is displayed and the heater continues to operate for this period of time.</p>
<b>Air Top 3500/5000</b>	<p>On heaters equipped with a fault diagnosis system (Air Top 3500/5000), a number, i.e. the error code, may be flashing on the display. In this case, please consult your Webasto dealer.</p>

<b>Switching the heater on</b>	<p>Manually: by pressing the button <b>⏻</b> (continuous heating mode) Automatically: by programming the heater starting time</p>
<b>Switching the heater off</b>	<p>Manually: by pressing the button <b>⏻</b> Automatically: after the programmed operating time has elapsed With the heater running: by programming the remaining operating time</p>
<b>Setting time/day of the week</b>	<p>Press the <b>⌚</b> button for more than 2 seconds - time of the day is flashing - and set the clock using the <b>◀</b> and <b>▶</b> buttons. Day of the week is flashing - adjust the day of the week.</p>
<b>Viewing the time</b>	<p>With the ignition switched off: press the <b>⌚</b> button</p>
<b>Programming heater starting time</b>	<p>Press the <b>P</b> button - the memory location is flashing - using the <b>◀</b> and <b>▶</b> buttons set start of the heater operating time. Day of the week is flashing - set the day of the week. By repeatedly pressing the <b>P</b> button, memory locations 2 and 3 can be programmed or the time display mode can be reached.</p>
<b>Recalling/erasing preset times</b>	<p>Repeatedly press the <b>P</b> button until the desired memory location is displayed. To erase the preset time, press the <b>P</b> button several times until the time of the day is displayed instead of the memory</p>
<b>Programming duration of operating time</b>	<p>The heater must be switched off. Press the <b>◀</b> button for 3 seconds - operating time is flashing - and set the desired operating time (10 to 120 minutes) using the <b>◀</b> and <b>▶</b> buttons.</p>
<b>Setting the remaining operating time</b>	<p>Set the desired remaining operating time (1 to 120 minutes) using the <b>◀</b> and <b>▶</b> buttons. The remaining operating time refers to the time the heater still continues to remain in operation. It can only be changed while the heater is in operation and the ignition switched off.</p>
<b>Setting the wakeup time</b>	<p>A wakeup time can only be programmed on the standard digital timer. The wakeup time is not bound to a specific day of the week. Repeatedly press the <b>P</b> button until the bell symbol <b>🔔</b> appears on the display. Set the desired wakeup time using the <b>◀</b> and <b>▶</b> buttons. The alarm clock turns off after 5 minutes or when one of the buttons is pressed.</p>
<b>Recalling/erasing the wakeup time</b>	<p>Repeatedly press the <b>P</b> button until the bell symbol <b>🔔</b> appears on the display - read off wakeup time. To erase the wakeup time: press the <b>P</b> button until the bell symbol <b>🔔</b> is no longer visible on the display.</p>
<b>Remote control</b>	<p>Possible by means of an optional external "instant heating" button</p>
<b>Vehicles with TRS equipment</b>	<p>On TRS vehicles it is not possible to program a preset starting time. The remaining time is shown on the display while the heater is in operation. The clock can be set. The alarm clock function can be programmed on the standard digital timer.</p>

## Troubleshooting

In the event of a malfunction, fuses and electrical connections should be checked for condition and security.  
If the actions described below do not correct the malfunction, consult your authorized Webasto dealer.

### Heater turns itself off automatically

Cause	Remedy
Combustion was not established during start-up and repeated start-up sequence	Switch heater briefly off and on again <b>one time</b>
Flame extinguishes during operation	Switch heater briefly off and on again <b>one time</b>
Heater overheats Operation indicator is flashing	Check heating air ducts for unobstructed passage, allow heater to cool, switch heater briefly off and on again <b>one time</b>
Vehicle voltage insufficient	Charge battery Switch heater briefly off and on again <b>one time</b>

### Heater emits black smoke

Cause	Remedy
Combustion air and/or exhaust gas ducts obstructed	Check combustion air and exhaust gas ducts for unobstructed passage

#### NOTE for "TRS" mode of operation only:

Following a "TRS" fault lock-out situation or upon applying the operating voltage by turning on the vehicle main switch and moving the heater control to the "ON" position, the control unit is in the "fault lock-out" state.

Before the heater can be restarted, the heater control must be turned to the "OFF" position or the instant heat button on the combination or standard digital timer must be pressed.

### Fault Code Display

If the heater is equipped with a combination or standard digital timer, a fault code is indicated on the display of the digital timer whenever a malfunction has occurred.

The meanings of the fault codes are listed on the last page.

## Fault Codes on the Display of the Combination or Standard Digital Timer

#### NOTE:

If the heater is equipped with a heater control, the fault codes are signalled by a flashing operation indicator/fault code indicator. The coded flashing signals correspond to the numbers in the table below. After every fast pulse sequence, a fault code follows.

F 00	Control unit failure
F 01	No start-up (after 2 start-up attempts)
F 02	Flame extinguished (at least > 5)
F 03	Undervoltage or overvoltage
F 04	Premature flame detection
F 05	Flame detector interruption or flame detector short-circuit
F 06	Temperature sensor interruption or temperature sensor short-circuit
F 07	Metering pump interruption or metering pump short-circuit
F 08	Fan motor interruption or fan motor short-circuit or incorrect fan motor speed
F 09	Pencil-type glow plug interruption or pencil-type glow plug short-circuit
F 10	Overheating
F 11	Temperature limiter interruption or temperature limiter short-circuit
F 12	Setpoint transmitter (interruption / short-circuit)