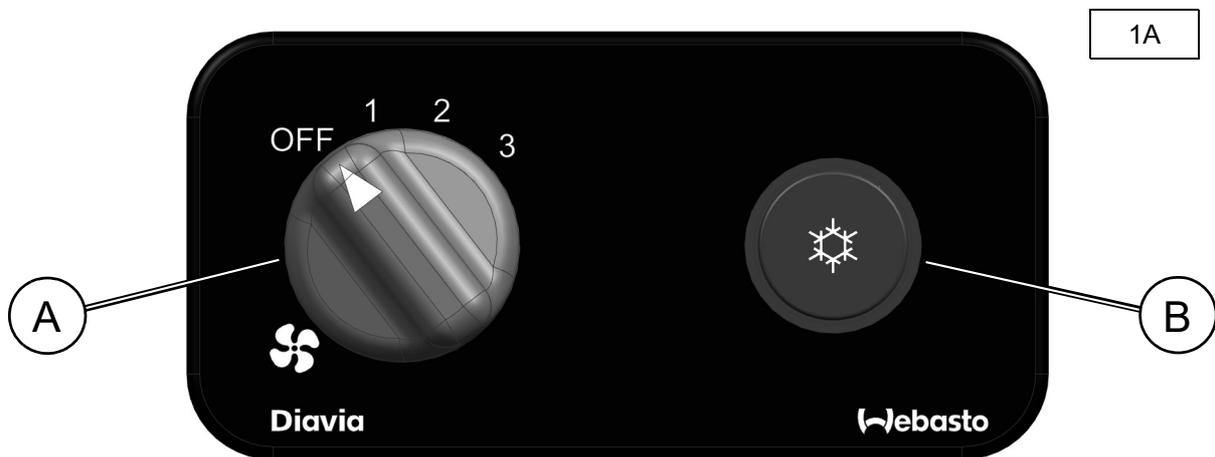


Cool Top RTC 110 - 140

INSTRUCTIONS FOR: ***USE / MAINTENANCE***

DESCRIPTION OF THE CONTROLS



Manual control device

To adjust the fan speed is sufficient to move the **A** knob (marked with the fan icon) into the positions 1, 2 or 3.

To turn on or turn off the compressor, use the **B** button

I/O SIGNAL

Below in the following tables all the digital and analogue electrical interfaces and signals used by the electronic board are summarized.

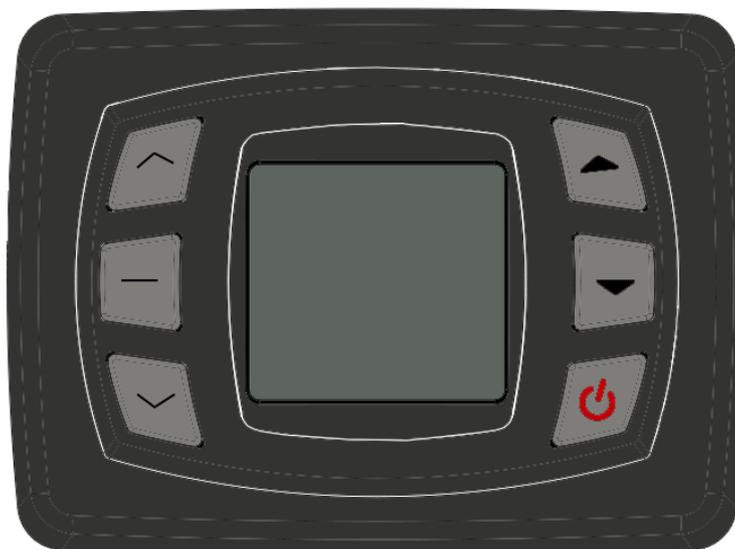


Fig. 1: Display's connection scheme

For more clarity in this paper we use the label TCx for all the six buttons as in the following figure:



Fig. 2: Display's buttons



2A

Automatic control device

KEY	FUNCTION
	- The next function out of the menu shall be moved to the middle
	- Accesses to the menu - ENTER button - Select the mode that is at the middle position of the Display field
	- The next function out of the menu shall be moved to the middle
	- Increases the ventilation speed - increases the values in the Display
	- Decreases the ventilation speed - Decreases the values in the Display
	- To switch the instrument ON and OFF. - Stand bye mode if pressed >3 sec.

DISPLAY SYMBOL

3A

IMAGE	SIGNIFICATION
Blank	Blank
	Fan Speed Blower
	Automatic ON
	Temp. Setting
	Application Air Dry
	Recirc. ON
A/C	A/C ON/OFF
SET	Set-point adjustment/ Visualization
	Errors We will have to implement a image similar to that one.
	Cooling function on
	Cooling function on and compressor on
	Heating function on
	A/C function on, but neither heating nor cooling
	Ventilation is running
	Ventilation in auto speed control
	Ventilation in manual speed control
	Fault alert
	Fresh air closed

IMAGE	SIGNIFICATION
	Fresh air opened
	Windshield, flaps pointing to Windshield
CF	Communication Failure
D	Door open or any single character
	Low voltage alert
	High voltage alert
	Manual defrost
	Temperature defrost
	Timed defrost
	Dripping
°C	Celsius
°F	Fahrenheit
	Return temperature
SP	Set-point
SS	Serpentine temperature
EX	External temperature
TA	Auxiliary temperature
	Errors We will have to implement a image similar to that one.

CUI INTERFACE

Pressing TC6, unit must toggle his OFF/ON Mode according to his previous status.

If CUI is in ON Mode, pressing button, CECU must activate those Mode:

- Pressing TC1, unit must toggle his A/C function request according to his previous status (on-off compressor).
- Pressing TC2, unit must change his functional mode to Auto Mode, with a pressure of the button the unit must toggle the set point temperature regulation and the fan speed regulation.
- Pressing TC3, unit must toggle his Recirculation function according to his previous .
- Pressing TC4 button the set-point temperature must increase up to the MAX_TEMPERATURE value. Each pressure temperature is increased by 1°C. Should set-point temperature be higher than MAX_TEMPERATURE, CUI must display “Hi”.
- Pressing TC5 button the set-point temperature must decrease up to the MIN_TEMPERATURE value. Each pressure temperature is decreased by 1°C. Should set-point temperature be lower than MIN_TEMPERATURE, CUI must display “Lo”.

OFF/ON Mode

If ON, pressing TC6 button HMI will shut down and must save the contest in ECU:



Fig. 1: OFF Mode

Pressing TC6 button CUI must be switched ON and must load the data contest stored in ECU:

In case of first switch ON unit must be in AUTO Mode in Temperature regulation with default value of data contest.

AUTO Mode

In AUTO Mode, pressing TC2 button is possible to toggle to this:

- Set point temperature regulation ;
- Fan Speed Regulation;

Set point temperature regulation

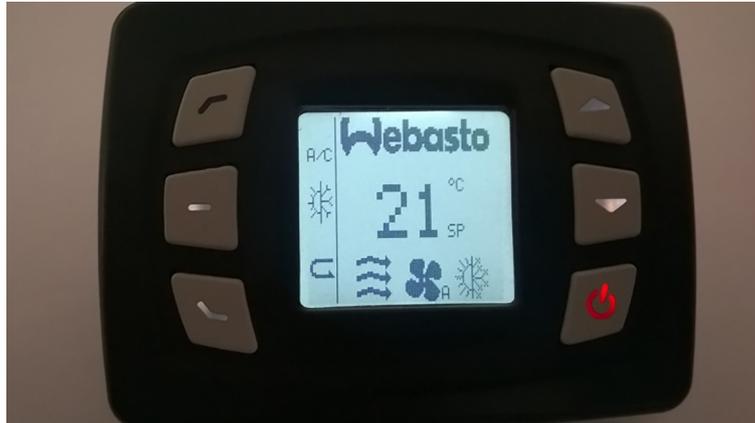


Fig. 3: Auto Mode, Auto Fan Speed

Pressing TC4 (increase) or TC5 (decrease) button, temperature set-point must modified from 18°C to 28°C.

If temperature set is lower than 18°C will be displayed "Lo"

If temperature set is greater than 28°C will be displayed "Hi"

Pressing TC2 unit must switch to "Fan Speed Regulation".

Fan Speed Regulation



Fig. 5: Auto Mode, Manual Fan Speed

Pressing TC4 (increase) or TC5 (decrease) button, fan speed will be modified from OFF to FULL Speed.
Pressing TC2 unit must switch to "Set point temperature regulation".

A/C function

In each functional mode, pressing TC1 button the unit can switch on or switch off the compressor, according to his previous status.

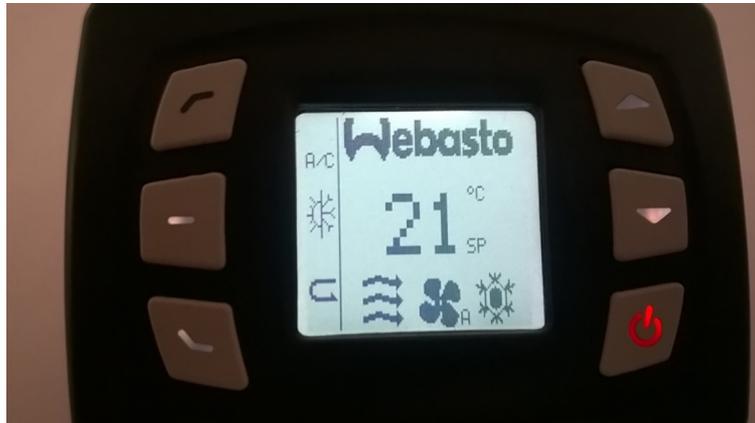


Fig. 5: A/C Mode, Compressor ON

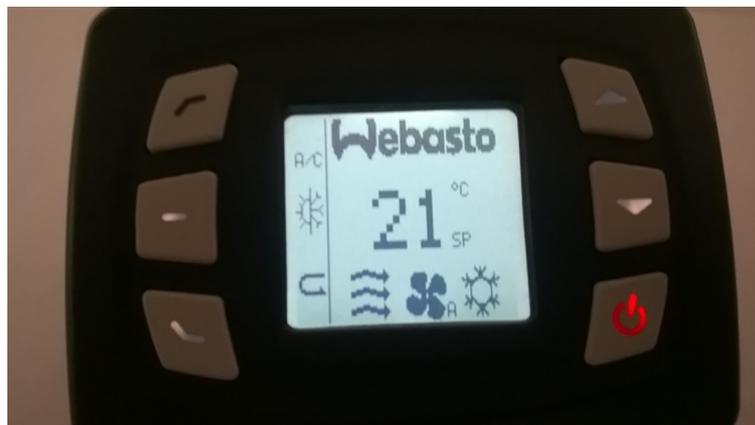


Fig. 5: A/C Mode, Compressor OFF

Recirculation Function

In each functional mode, pressing TC3 button Recirculation mode will be toggled according to his previous status. CUI interface must show always the actual RECIRCULATION function Status in order to let driver informed.

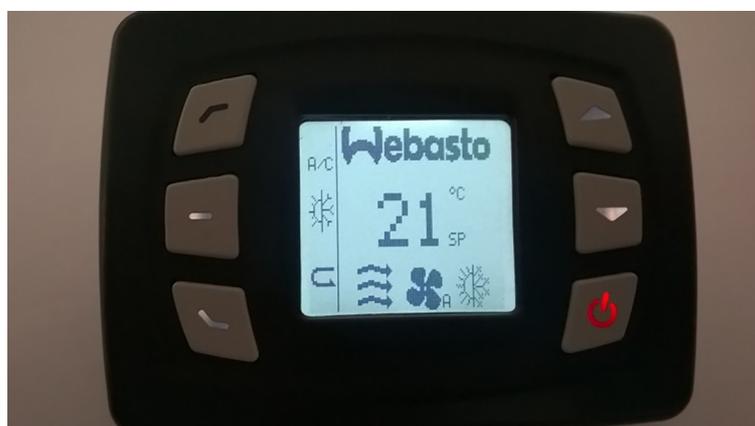


Fig. 8: Recirculation Mode OFF



Fig. 9: Recirculation Mode ON

CUI User Settings

Temperature Scale Selection

Shall be possible to modify temperature Pressing TC1 and TC6 simultaneously for more than 3sec, shall be possible, using TC4 button, toggle between °C and °F measurement system. Pressing TC6 button HMI will shut down

CUI Warning and Alarm

Warning

In case of warning, CUI must display Warning ID according to Warning List

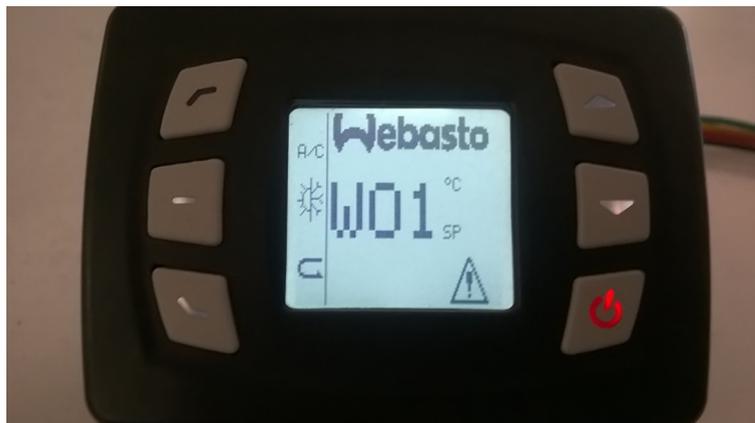


Fig. 1: Warning

Alarm

In case of warning, CUI must display Alarm ID according to Alarm List

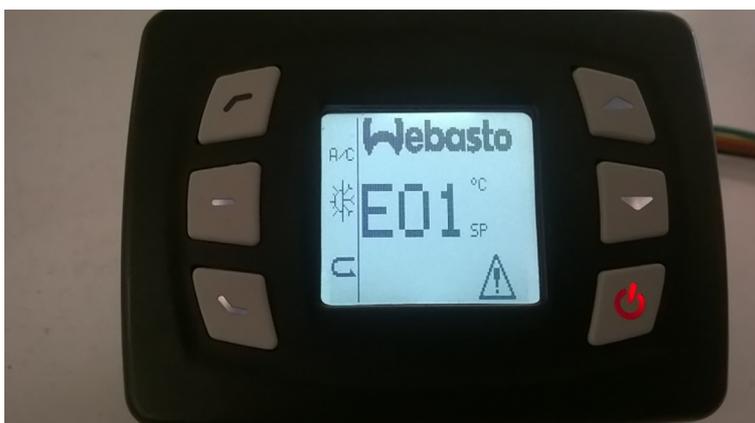
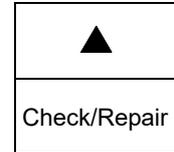


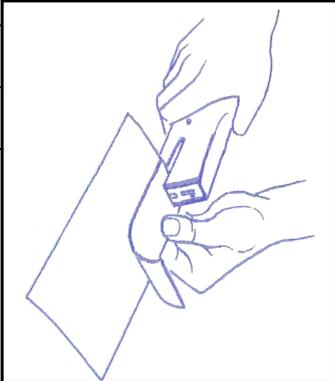
Fig. 2: Error

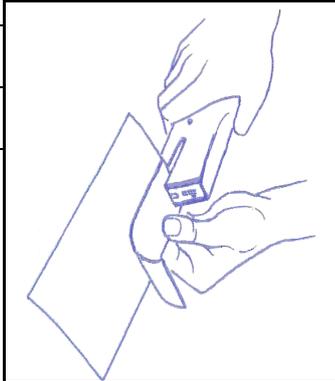
MAINTENANCE

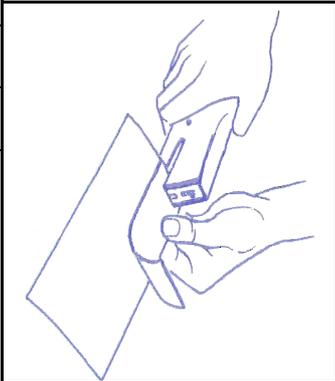
4A

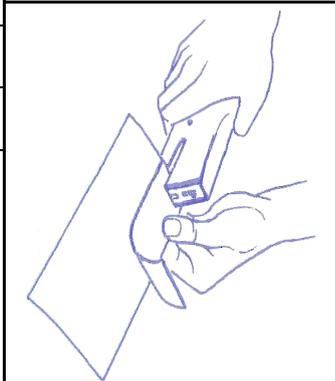
Component	ITEM	Possible reason	PERIOD		
			5.000 Km	35.000 Km	ANNUAL or 100.000 Km
Compressor	Compressor belt	Wear			■
	Belt tension (It is important that the belt is allowed to cool before re- tensioning)	Loose tension	▲	▲	
	Idle pulley	Noise/Blocked		■	
	Automatic belt tightener (if present)	Noise/Blocked		■	
	Tightening bolts	Loose fastening			▲
	Compressor	Noise/Blocked			▲
	Compressor pulley	Clutch engagement			▲
Evaporator and Condenser	Drier filter	Poor efficiency			■
	Condenser fin	Dirty/Leakage			▲
	Evaporator fin	Dirty/Leakage			▲
	Condensation drain water	Water inside vehicle			▲
	Blower	Noise/Blocked			▲
Others	Internal temperature	Poor A/C efficiency			▲
	A/C system pressure test	Poor A/C efficiency			▲
	Check integrity of wiring connections	No work or intermittent functioning			▲
	Check the status of gas pipes and fittings	A/C systems empty Poor A/C efficiency			▲
	Gas R134A charge	A/C systems empty Poor A/C efficiency			●
	Oil compressor	Oil removed during charging of the gas			●
	Tightening control	Blocked			▲



	
MAINTENANCE	
Date:	Plate:
Months/Km of operation:	
Plate:	
Stamp of Webasto Thermo & Comfort	
	
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MAINTENANCE	
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MAINTENANCE	
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Months/Km of operation:	
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