

# AIR CONDITIONING AND CLIMATE CONTROL USER INSTRUCTIONS AND SERVICE HISTORY





## Introduction

Thank you for purchasing an Eberspächer Air Conditioning system. To guide you with your purchase, we have written some simple explanations and answers to some of the frequently asked questions. We hope you find this useful and if you have any further questions about this or any other Eberspächer supplied products, please contact us at the address at the bottom of this leaflet.

### How do I operate my Air Conditioning System?

As a general guide, keep all vehicle windows and external vents closed, particularly re-circulation controls which allow fresh air through the ventilation system as this will allow warm moist air to enter the vehicle making the air conditioning less efficient.

Depending upon the design, Eberspächer systems can be controlled either by a simple on/off switch, an additional thermostat or a digital controller.

The simplest in-dash system is operated by an on/off switch usually situated on the dashboard of the vehicle. To operate the system you must first put the fan speed controller to the 1st speed. The air conditioning switch will often have either a frost symbol or AC marked on as a legend and in some instances it will be the original vehicle manufacturers switch. The system will then operate automatically and the temperature to the dashboard vents is adjusted by use of the vehicle heater controls.

For vehicles fitted with a system independent of the dashboard the controls will consist of a fan speed control switch and a combined on/off thermostat switch. The blower may be operated without the use of the Air Conditioning. To operate the Air Conditioning you must adjust the thermostat.

The next option is a digital controller. This combines the fan speed and temperature control functions together. The temperature is controlled by the up and down arrows and the display indicates required temperature. Fan speed control is also controlled by the up and down arrows and indicated as Lo, Med or Hi.

Eberspächer Climate Control systems utilise a digital controller. The fan speed is controlled by use of the right hand up and down arrows with the temperature required adjusted by the left hand up and down arrows. For maximum cooling the unit should be adjusted to read Lo and for maximum heating it should be set to Hi. The climate system is best operated by pressing the Auto mode this system will then automatically adjust the air conditioning and heater outputs to maintain the desired temperature. Fan speed is also automatically selected when in Auto mode.

In all cases, it is recommended to run your system each week throughout the year for 5 minutes, however it is essential to run the system each month for a minimum of 10 minutes.

The system should be run under the following conditions:

1. Engine idle speed greater than 1000 rpm.
2. The outside temperature above 0 °C.
3. The cab interior temperature above 20 °C.
4. The engine is at normal running temperature.

If you have any questions regarding the operating of your Eberspächer Air Conditioning or Climate Control System, please contact the Air Conditioning Division on 01425 480151.



# Eberspächer 'Dual Air' Temperature Control System User Instructions

This vehicle is equipped with a fully automatic temperature control system that maintains the user selected interior temperature using a digital keypad. The system controls both the heating and air conditioning functions of this vehicle.



## ***Switching the Auto System ON***

The AUTO system is turned on by pressing the **AUTO** key. In automatic mode the system will monitor the temperature inside the vehicle and select either air conditioning (cooling) or heating to maintain the pre-selected temperature. In cooling mode the blower speed is automatically adjusted by the controller.

## ***Changing the Selected Temperature***

The temperature can be adjusted by depressing the  (Red) or  (Blue) keys on the left side of the panel. The temperature is selectable between 17°C and 31°C or can provide maximum heating (displays **HI**) or maximum cooling (displays **LO**).

## ***Adjusting the Blower Speeds***


The air conditioning blowers have three speeds and are normally controlled by the temperature controller. They can be adjusted manually by depressing the right hand  (Large) or  (Small) keys. The current blower speed is displayed on the control panel and is indicated by a BAR GRAPH.

Note: The air conditioning blowers do not work when in heating mode.


## ***Manual Control***

Pressing the HEAT or COOL keys will manually set the system into heating or cooling. There is no automatic blower speed control in manual cooling mode.

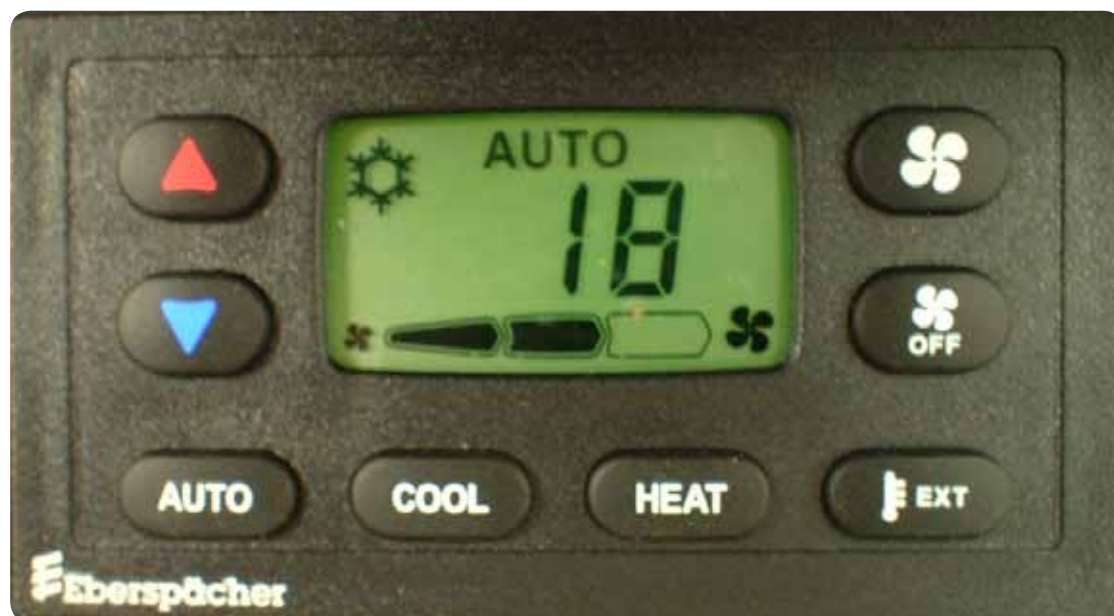
### ***Checking the Outside Temperature***

The outside temperature can be displayed for six seconds by momentarily pressing the  EXT key.

### ***Switching the System OFF***

Pressing the  (Small) key below minimum fan speed turns the system OFF. The 'OFF' symbol will appear on the display.

### ***Control Panel Overview***



Eberspächer

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# Eberspächer Climate Control System

## User Instructions

This vehicle is equipped with a fully automatic climate controller that maintains the user selected interior temperature using a digital keypad. This system controls both the independent water heating and air conditioning functions of this vehicle.



### *Economy Mode*

By pressing the **A/C** button the status of the compressor is changed (on to off or off to on). When 'A/C' symbol is lit, compressor is on, when 'ECON' symbol is lit, compressor is off. In this mode the controller maintains the temperature by controlling the hot water circuit only, no cooling is provided. Fuel savings and a possible increase in available engine power are possible in this mode.



### *Switching the Auto System ON*


The AUTO system is turned on by pressing the **AUTO** key. In automatic mode the system will monitor the temperature inside the vehicle, adjusting it as required to maintain the pre-selected temperature. The blower speed is also automatically adjusted by the controller.

### *Changing the Selected Temperature*


The temperature can be adjusted by depressing the  (Red) or  (Blue) keys on the left side of the panel. The temperature is selectable between 18 and 28°C or can provide maximum heating (displays **HI**) or maximum cooling (displays **LO**).

## ***Adjusting the Blower Speeds***

The blowers have three speeds and are normally controlled by the climate controller. They can be adjusted manually by depressing the right hand  (Large) or  (Small) keys. The current blower speed is displayed on the control panel and is indicated by a BAR GRAPH.

Pressing the  (Small) button below minimum fan speed turns the system OFF. The 'OFF' symbol will appear on the display.

## ***Checking the Outside Air Temperature***

The outside air temperature can be displayed for six seconds by momentarily pressing the  **EXT** key.

## ***Switching the System Off***

The climate control system can be switched off by depressing the OFF key.

## ***Control Panel Overview***

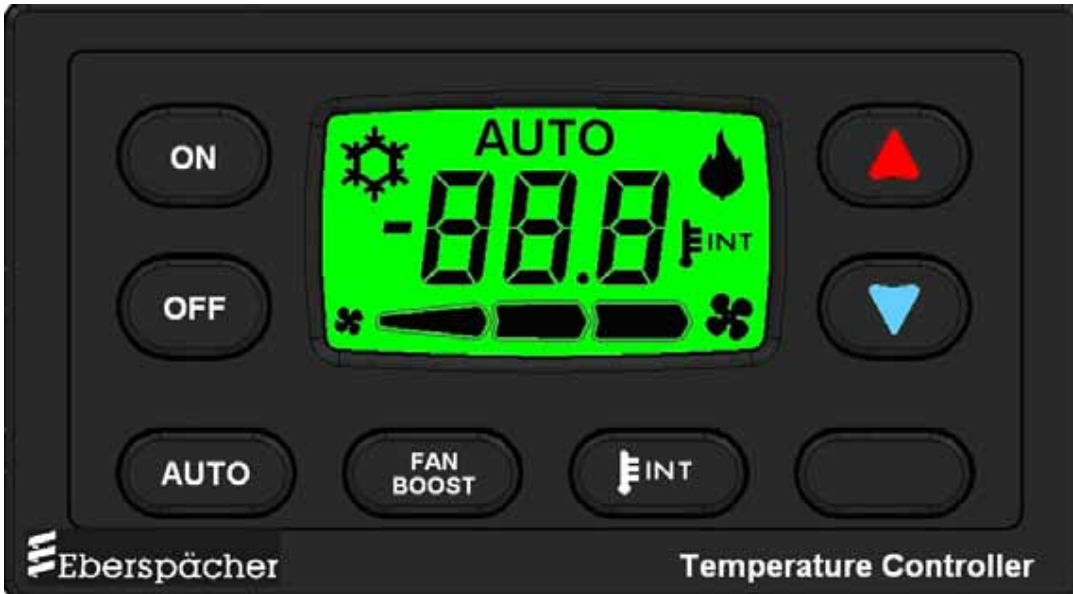


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## System and Control Panel Overview




This vehicle is equipped with a fully automatic temperature control system that uses internal temperature sensors to monitor and maintain the pre-selected temperature inside the vehicle. The system controls both the heating and air conditioning (cooling) functions of the vehicle via the user controlled digital keypad.





### Switching the system ON

Press the  key.

### Switching the Auto System ON

Automatic temperature control is turned on by pressing the  key. If  is displayed then air conditioning is enabled and if  is displayed then heating is enabled.

### Changing the Selected Temperature



The temperature can be adjusted by depressing the  or  keys on the right side of the panel. The temperature is selectable between 16°C and 25°C.

## ***Air Conditioning Mode***

The overhead air conditioning blowers have three speeds and are automatically controlled by the temperature controller. Depending on the vehicle internal temperature and the desired set point, the fan speed will vary between low, medium and high. This will be displayed on the control panel thus:



, one bar indicating low speed, two bars for medium speed and three bars indicating high speed.

They can be adjusted manually into high speed by depressing the  key and returned to automatic control by depressing the  key.

When the vehicle internal temperature is close to the desired set temperature, neither air conditioning nor heating may operate, but low fan speed will be operating to ensure even temperature distribution throughout the vehicle.

The blowers will not operate in heating mode when the vehicle ignition is off.


## ***Heating Mode***

In this mode the heater will automatically vary its output depending on the vehicles internal temperature. This hot air will be distributed from low level ducting outlets.

## ***Checking the Inside Temperature***

The inside temperature can be displayed for five seconds by momentarily pressing the  key.

## ***Switching the System OFF***

Pressing the  key turns the system off although the heater may continue to run for a further 4 minutes to cool down.

## Other Frequently Asked Questions

### Is there anything I can do to keep the Air Conditioning and Climate control system working?

On vehicles, the best advice is to run the system continuously. Eberspächer systems are efficient and will not add greatly to the fuel consumption. Continuous running ensures that the refrigerant and oil are circulated throughout the system, keeping the seals lubricated and preventing refrigerant leakage. It will also help with the operation of fans and on Climate controlled systems ensure that the heater is running cleanly and efficiently. *Note:* On Hi setting with Climate system the air conditioning will not be in operation, it is advised that your system is not left in Hi setting permanently.

Please ensure the tension of any compressor drive belt is inspected and, if necessary, adjusted within 1,500 miles.

### Should my system fail to operate what should I do?

Eberspächer have a network of approved service agents throughout the UK and also for Diavia products there is a network of European dealers.

To gain warranty assistance please have the following details to hand:

- Vehicle supplier;
- Vehicle type and registration details;
- The serial number of the system;
- The part number of the system.

The serial number should be found on the vehicle as a silver self adhesive label attached under the bonnet of the vehicle, or in the passenger footwell. The serial number is also on the warranty control card and commissioning paperwork in the wallet supplied with the vehicle.

If you wish you may either contact your local Eberspächer Agent direct or contact Eberspächer on the Total Life Care helpline on 01425 482110 who will give you the details of your local agent. The agent will then carry out any repairs as necessary within the warranty terms and conditions.

### How long is my warranty period?

The standard warranty is 12 months or 50,000 km (32,000 miles) per annum, with a second year cover for parts only. The second year maybe extended to parts and labour upon proof of servicing to the schedule approved by Eberspächer UK Ltd up to a maximum of 64,000 miles . This maybe further extended to a third year upto a maximum of 96,000 miles upon proof of servicing to the schedule approved by Eberspächer UK Ltd. Warranty does not cover fair wear and tear items or scheduled service items.

### How often should my vehicle air conditioning system be serviced?

Eberspächer recommend that the Air Conditioning or Climate system be checked annually as part of a vehicle's service routine. This annual check should include a check of refrigerant quantity, refrigerant pressure, system temperatures, refrigerant hoses, wiring harnesses, and operation. Replacement of drive belts and EBUK supplied roller/tensioner pulleys and drier.

Note: Belt tension should be checked after the initial 1,500 miles.

## Other Frequently Asked Questions

### What happens if a system is not regularly serviced?

If an Air Conditioning system is not serviced, a build-up of moisture can occur within the refrigerant circuit. The built-in filter drier is designed to store any moisture and contamination present in the system. If the filter is not changed then its element will eventually become saturated and cause potentially damaging and expensive failures. Failure to replace the drive belt and the idler/tensioner devices may result in engine damage.

### Who can service my Air conditioning system?

Eberspächer's network of approved Agent's throughout the UK have access to the genuine spare parts and technical information required to maintain your system to its full potential. You may either contact your local Eberspächer Agent direct, or contact Eberspächer on 01425 480151 who can give you the details of your local agent. Note, service is required to maintain the warranty.

A genuine service kit is supplied with an Eberspächer service certificate.

<b>Eberspächer</b>		Number MN00001
<b>Service Certificate</b>		
Vehicle Manufacturer	VAUXHALL VIVARO	
Vehicle Registration	YG07 JCX	
Vehicle Mileage	15749	
Vehicle System Serial Number	s55043067	
Eberspacher Service Kit Part Number	98306	
Date of Service	19/6/08	
Eberspacher Service Dealer	The Cold Consortium	

This vehicle has been serviced according to the published service requirements available at [www.eberspacher.com](http://www.eberspacher.com) and qualifies for full 24 month warranty from date of commissioning as recorded by Eberspächer (UK) Ltd at date of fitment

*This section to be retained by the vehicle operator and produced in the event of a warranty claim*

### Why can I smell a 'musty' smell inside the vehicle when I turn on the Air Conditioning or Climate Control system?

This is due to the build-up of mould and microbes on the evaporator. It can be cured with a microbiological treatment of the evaporator unit during the service.

If you have any further questions regarding the operating or servicing of your Eberspächer Air Conditioning or Climate Control System, please contact the Air Conditioning Division on 01425 480151.

# Approved Annual Service Schedule

## Air Conditioning



Vehicle Details	Manufacturer	System Serial Number	
	Registration No.		

TASK	ACTION		
1. Fit refrigerant gauges.			
2. Replace belt.	Renew belt	Part No.	Size
3. Replace any EBUK supplied idler / tensioner pulley.	Service kit number		
4. Check compressor.	Mount kit Tension device Clutch bearing Bolts	Yes / No Yes / No Yes / No Yes / No	
5. Check hoses.	Fittings Security Chafing	Yes / No Yes / No Yes / No	
6. Check condenser.	Security Clear of debris Fans operating	Yes / No Yes / No Yes / No	
7. Check evaporator.	Security Clear of debris Blower operating	Yes / No Yes / No Yes / No	
8. Pressure switch.	LP MP HP		bar bar bar
9. Electrics.	Fuses <b>Connections:</b> battery ignition earth		
10. Controller settings.	Comes Hi Lo Fan speeds Manual thermostat Correct operation Re-circulation controls Operating	Yes / No Yes / No Yes / No Yes / No Yes / No Yes / No	
11. Check for leaks.	Dye added	Yes / No	
12. Reclaim refrigerant.	Amount recovered		kg
13. Replace filter drier.	Part number		
14. Leak / pressure test system.	20 minutes		bar
15. Evacuate system.			
16. Recharge system.	Refrigerant type Refrigerant charge Oil type Oil added		kg g g
17. Run and test unit.	Pull down to set-point?		
18. Any additional work.			
19. Complete service certificate.	Certificate number		

# Approved Annual Service Schedule

## Climate Control



Vehicle Details	Manufacturer	System Serial Number
	Registration No.	

TASK	ACTION		
1. Heater diagnostic.	Carry out diagnostic investigation, call up fault codes and rectify if necessary. Clear memory.	Code	
2. Heater glow pin	Remove glow pin, inspect for carbon build-up and clean. Replace if faulty.	Part No. 25 2069 01 13 00 25 2070 01 11 00	12V 24V
3. Heater fuel screen	Replace fuel screen in glow pin port with special tool supplied with new screen	Part No. 25 2069 10 01 02	
4. Heater ducting	Check for blocked or damaged ducting and rectify or replace as required (if applicable).		
5. Heater intake / outlet	Inspect intake and outlet grilles for blockages; also inspect intake fan blades for any restriction (e.g. dirt, fluff, etc.). Clean as necessary.		
6. Heater electrical	Check electrical connections, including fuse holders, for corrosion. Spray exposed connections with a water dispersant spray.		
7. Heater exhaust	Check for blocked or damaged exhaust pipe.		
8. Heater combustion air	Check for blocked or damaged combustion air intake.		
9. Heater test run	Test fire heater and check for correct operation.		
10. Heater exhaust colour	Check exhaust colour as a guide for carbon build-up.		
11. Heater shutdown	Check heater delayed shutdown time (approximately 240 seconds after switching off).		
12. Heater fuel lines	Check all fuel lines and connections for security and abutments; also ensure there are no fuel leaks.		
13. Heater fuel pump	Remove fuel metering pump filter and replace.	Part No. 20 1312 00 00 06	
14. Heater fuel pump	Remove all dirt and corrosion from fuel metering pump.		
15. Fit refrigerant gauges.			
16. Replace belt.	Renew belt	Part No.	Size
17. Replace any EBUK supplied idler / tensioner pulley.	Service kit number		

Part numbers refer to D2 / D4.

# Climate Control



18. Check compressor.	Mount kit Tension device Clutch bearing Bolts	Yes / No Yes / No Yes / No Yes / No	
19. Check hoses (check water hoses on hydro climate).	Fittings Security Chafing	Yes / No Yes / No Yes / No	
20. Check condenser.	Security Clear of debris Fans operating	Yes / No Yes / No Yes / No	
21. Check evaporator.	Security Clear of debris Blower operating	Yes / No Yes / No Yes / No	
22. Pressure switch.	LP MP HP		bar bar bar
23. Electrics.	Fuses <b>Connections:</b> battery ignition earth		
24. Controller settings.	Comes Hi Lo Fan speeds Manual thermostat Correct operation Re-circulation operating	Yes / No Yes / No Yes / No  Yes / No Yes / No	
25. Check for leaks (water and refrigerant).	Dye added	Yes / No	
26. Reclaim refrigerant.	Amount recovered		kg
27. Replace filter drier.	Part number		
28. Leak / pressure test system.	20 minutes		bar
29. Evacuate system.			
30. Recharge system.	Refrigerant type Refrigerant charge Oil type Oil added		kg g g
31. Run and test unit.	Pull down to set-point?		
32. Any additional work.			
33. Complete service certificate.	Certificate number		

# Air Conditioning Service Record

Vehicle Make/Model ..... Vehicle Reg. ....

Body Builder. .... Body N°. ....

Date Into Service. .... Fleet N°. ....

Date	Job Number	Repair or Service History	Air Conditioning 6 mth / 12 mth	Name of Dealer

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This publication was correct at the time of going to print however, Eberspächer (UK) Ltd have a policy of continuous improvement and reserve the right to amend any specifications without prior notice.

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