

Luftheizgeräte
Air heaters
Luchtverwarmingsapparaten

Einbau- und Bedienungsanweisung
Installation and Operating Instructions
Montage- en gebruikshandleiding

Air Top Evo 3900 AM
Air Top Evo 5500 AM

Handelsbezeichnungen / Trade names / Handelsnamen:
Air Top Evo 3900 D AM (Diesel/PME) (diesel/PME)
Air Top Evo 5500 D AM (Diesel/PME) (diesel/PME)

03/2009
1314543A

*Ergänzung zur Standard Einbau- und Bedienungsanweisung
Addition to standard Installation and Operating Instructions
Toevoeging aan standard montage- en gebruikshandleiding
Air Top Evo 3900 / Air Top Evo 5500*



Das unsachgemäße Einbauen oder Reparieren von Webasto Heiz- und Kühlsystemen kann Feuer verursachen oder zum Austritt von tödlichem Kohlenmonoxid führen. Dadurch können schwere oder tödliche Verletzungen hervorgerufen werden.

Für den Einbau und die Reparatur von Webasto Heiz- und Kühlsystemen bedarf es eines Webastotrainings, technischer Dokumentation, Spezialwerkzeuge und einer Spezialausrüstung.

Versuchen Sie NIEMALS, Webasto Heiz- oder Kühlsysteme einzubauen oder zu reparieren, wenn Sie das Webastotraining nicht erfolgreich abgeschlossen und dabei die notwendigen technischen Fähigkeiten erworben haben und die für einen sachgerechten Einbau und Reparatur nötigen technischen Dokumentationen, Werkzeuge und Ausrüstungen nicht zur Verfügung stehen.

Befolgen Sie IMMER alle Webasto Einbau- und Reparaturanleitungen, und beachten Sie alle Warnhinweise.

Webasto übernimmt keine Haftung für Mängel und Schäden, die auf einen Einbau durch ungeschultes Personal zurückzuführen sind.



Improper installation or repair of Webasto heating and cooling systems can cause fire or the leakage of deadly carbon monoxide leading to serious injury or death.

To install and repair Webasto heating and cooling systems you need to have completed a Webasto training course and have the appropriate technical documentation, special tools and special equipment.

NEVER try to install or repair Webasto heating or cooling systems if you have not completed a Webasto training course, you do not have the necessary technical skills and you do not have the technical documentation, tools and equipment available to ensure that you can complete the installation and repair work properly.

ALWAYS carefully follow Webasto installation and repair instructions and heed all WARNINGS.

Webasto rejects any liability for problems and damage caused by the system being installed by untrained personnel.

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1 Statutory regulations governing installation

The Air Top Evo 3900 AM and Air Top Evo 5500 AM heaters have been type-tested and approved in accordance with Directives ECE R10 and EC 72/245/EEC (EMC) and ECE R122 and 2001/56/EC (heater) with the following EC permit numbers:

e1*72/245*2006/28*035529

ECE R10*035529

e1*72/245*2006/119*000255

e1*72/245*2006/119*000256

ECE R122*000255

ECE R122*000256

2 Other Applicable Documents

- Installation Instructions for Air Top Evo 3900 / Air Top Evo 5500
- Operating Instructions for Air Top Evo 3900 / Air Top Evo 5500
- Workshop Manual for Air Top Evo

3 Using Air Heater Unit System

The Air Top Evo 3900 AM and Air Top Evo 5500 AM air heaters are designed

- to heat large cabins, lorry bodies, boats, minibuses and tents
- to heat cargo

IMPORTANT

The use of an Air Top Evo 3900 AM or Air Top Evo 5500 AM system is not approved for dangerous goods transports (ADR)!

3.1 System Design

The variants Air Top Evo 3900 AM and Air Top Evo 5500 AM enable up to 4 heater units to be operated in one system.

Here Unit 1 is defined as the master heater unit and others as slave heater units. The heater control and an external temperature sensor (T) are connected to the master heater unit (see wiring diagram in Figure 3, 4, 5). The slave heater unit is connected in accordance with the wiring diagram (see Figure 6). The units communicate with each other via a serial bus system.

This system can therefore be individually adapted to the applications by combining several heater units.

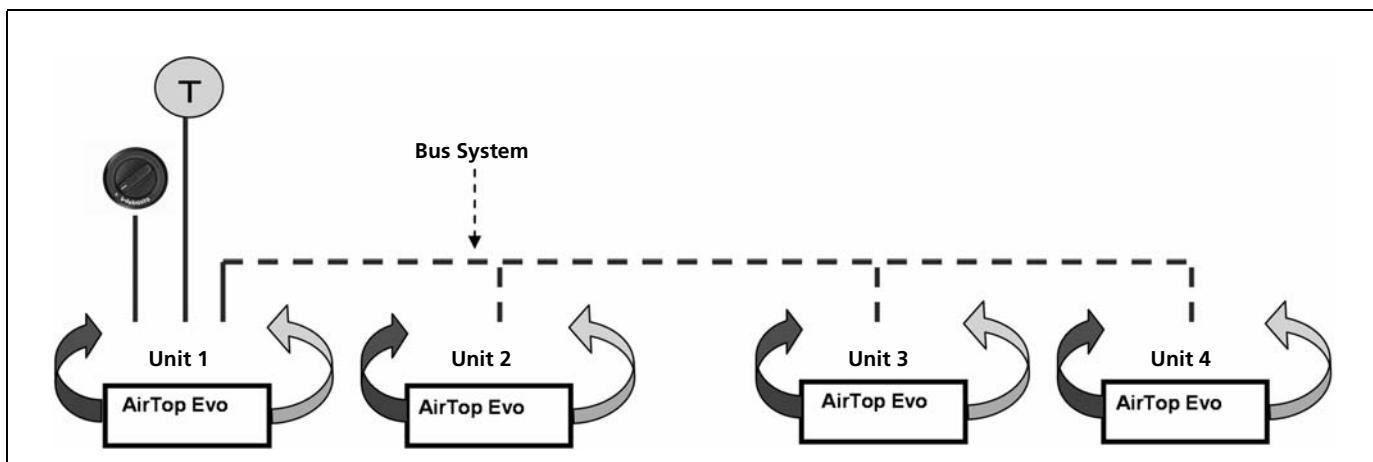


Fig. 1: System design

3.2 Heating Capacity of Entire System

Heating Capacity Range	Heater	Number of Units
1.5 - 3.9 kW	Air Top Evo 3900	1
1.5 - 5.5 kW	Air Top Evo 5500	1
1.5 - 7.8 kW	Air Top Evo 3900	2
1.5 - 11.0 kW	Air Top Evo 5500	2
1.5 - 16.5 kW	Air Top Evo 5500	3
1.5 - 22.0 kW	Air Top Evo 5500	4

NOTE:

It is only permitted to install heating systems with Air Top Evo heater units of the same output type.

4 Connection Diagram / Wiring Diagrams

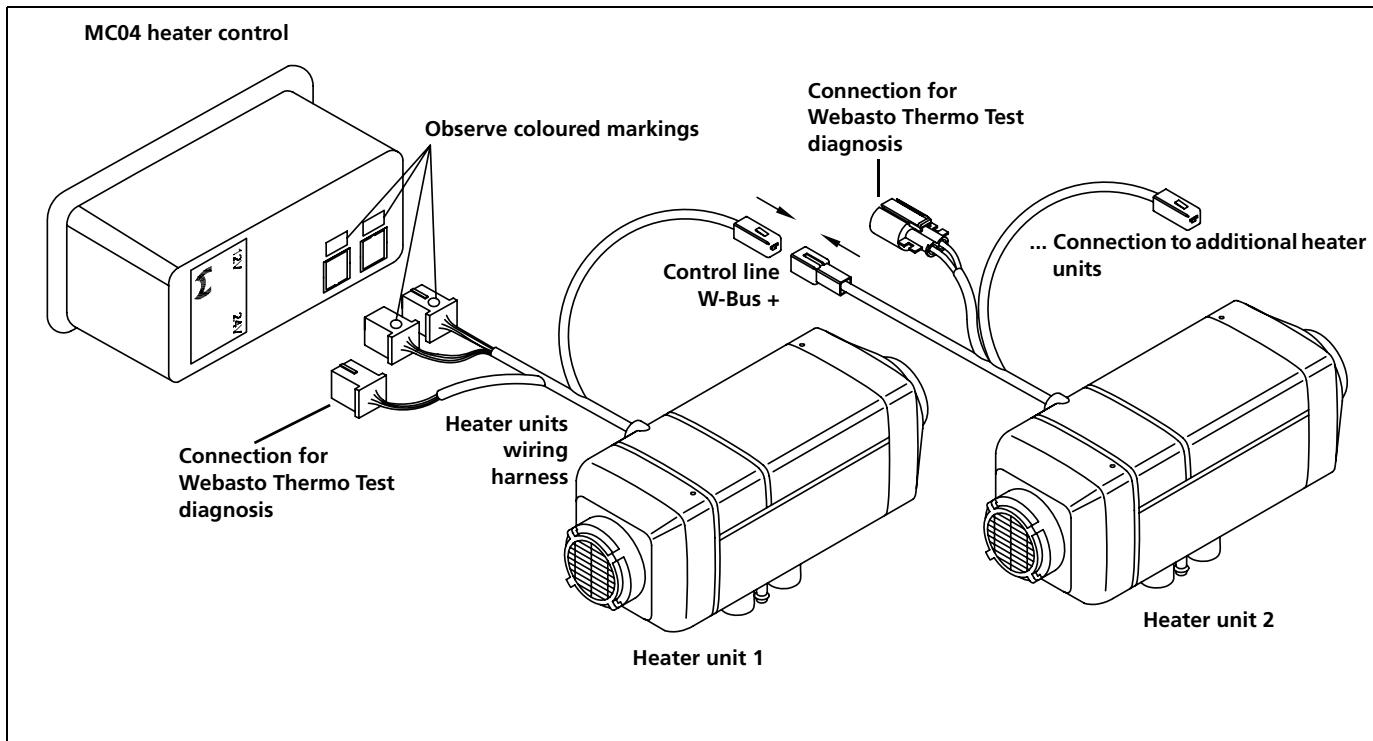


Fig. 2: Connection diagram of Air Top Evo 3900/5500 AM (connection of combination timer 1531 and setpoint generator possible)

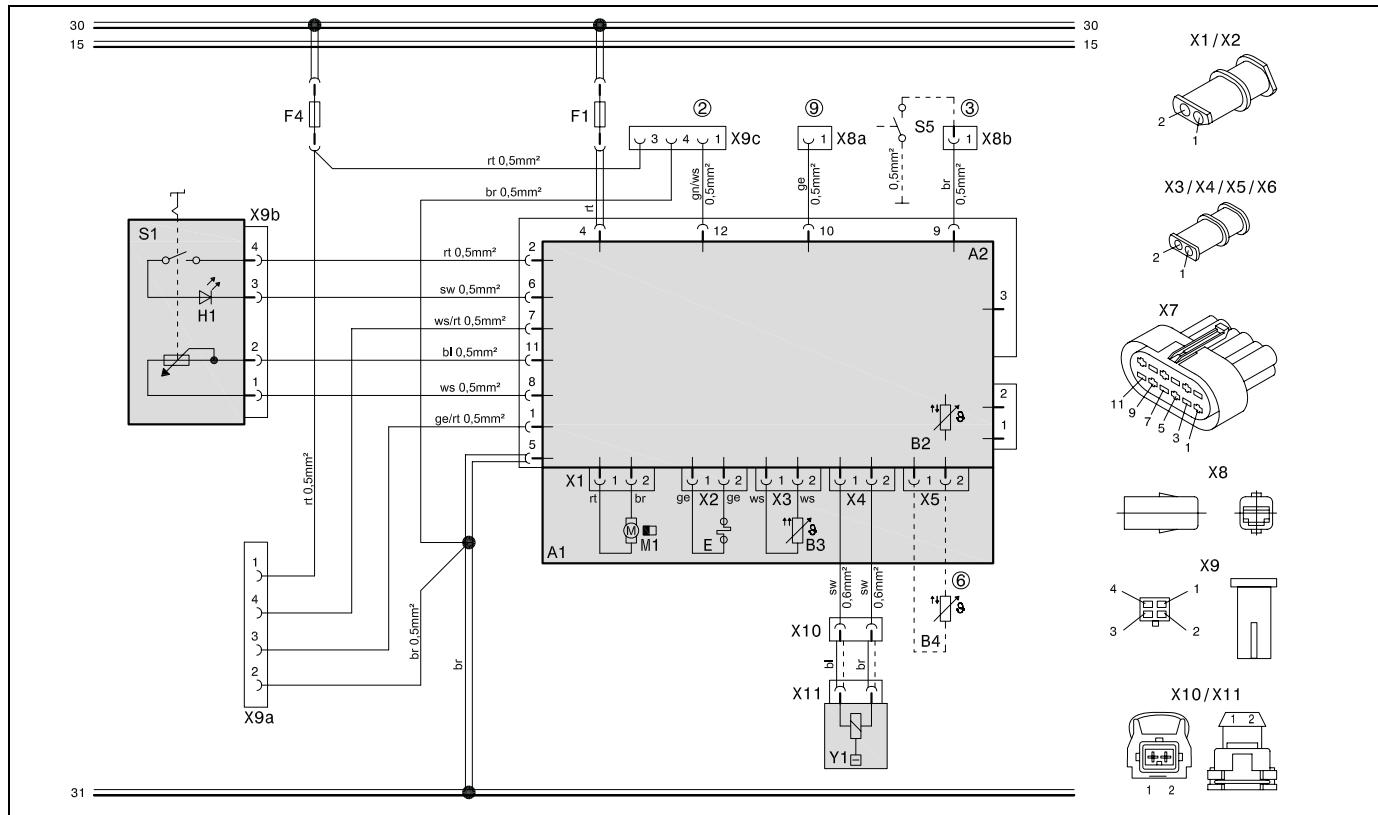


Fig. 3: System wiring diagram for Air Top Evo 3900/5500 AM "Master Heater Unit", 12 V/24 V diesel with heater control, for legend, see Page 27 and 28

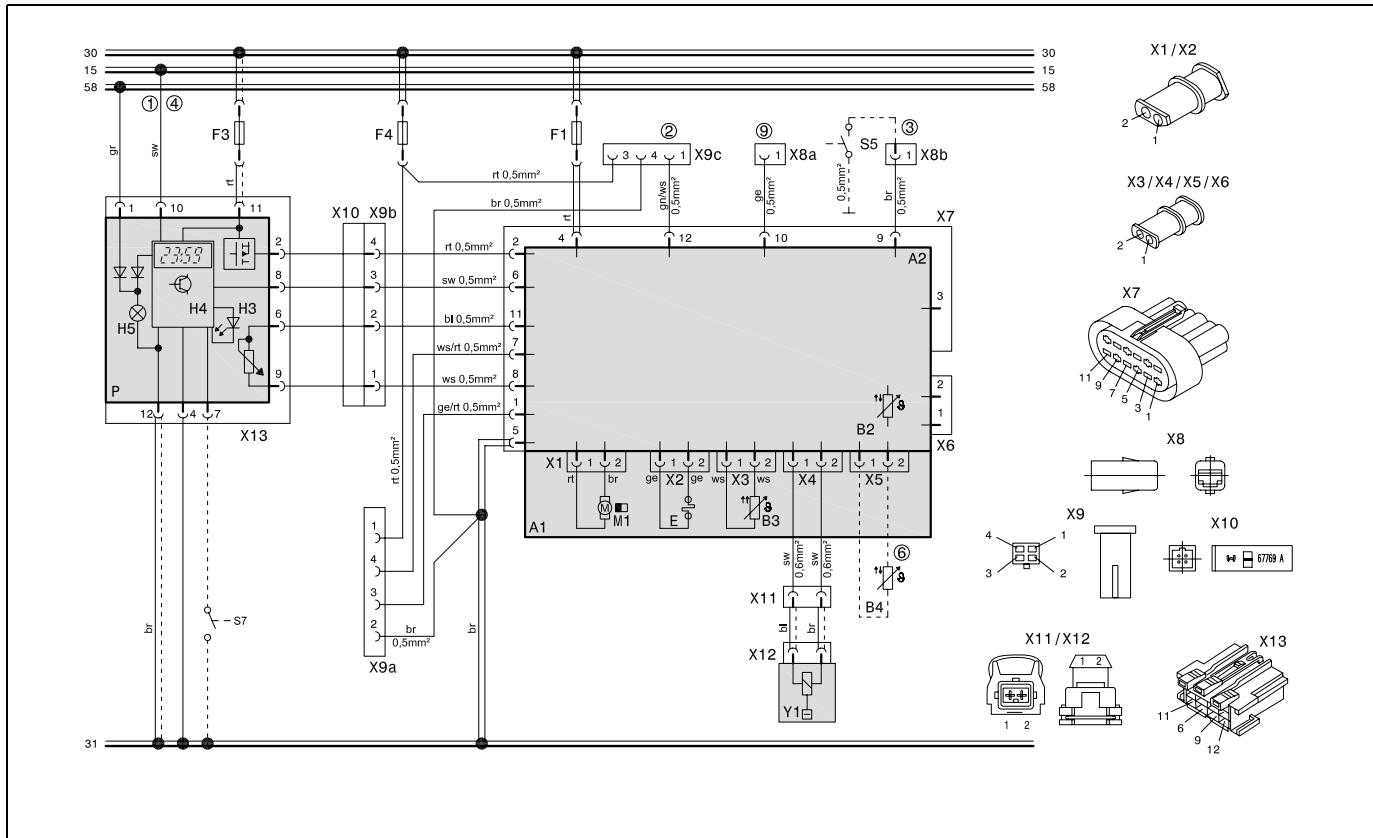


Fig. 4: System wiring diagram for Air Top Evo 3900/5500 AM "Master Heater Unit", 12 V/24 V diesel with combination timer, for legend, see Page 27 and 28

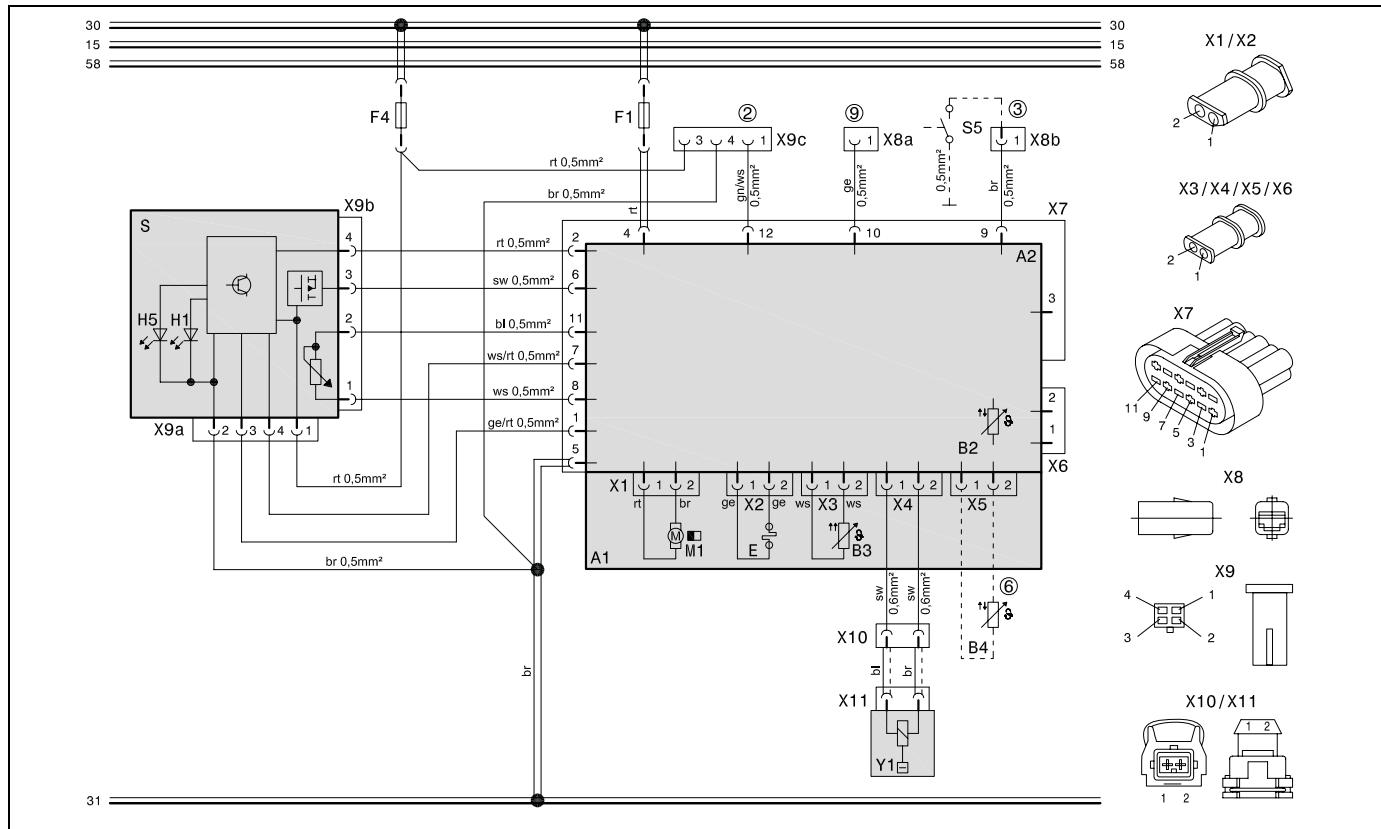


Fig. 5: System wiring diagram for Air Top Evo 3900/5500 AM "Master Heater Unit", 12 V/24 V diesel with MC04 Multi Control, for legend, see Page 27 and 28

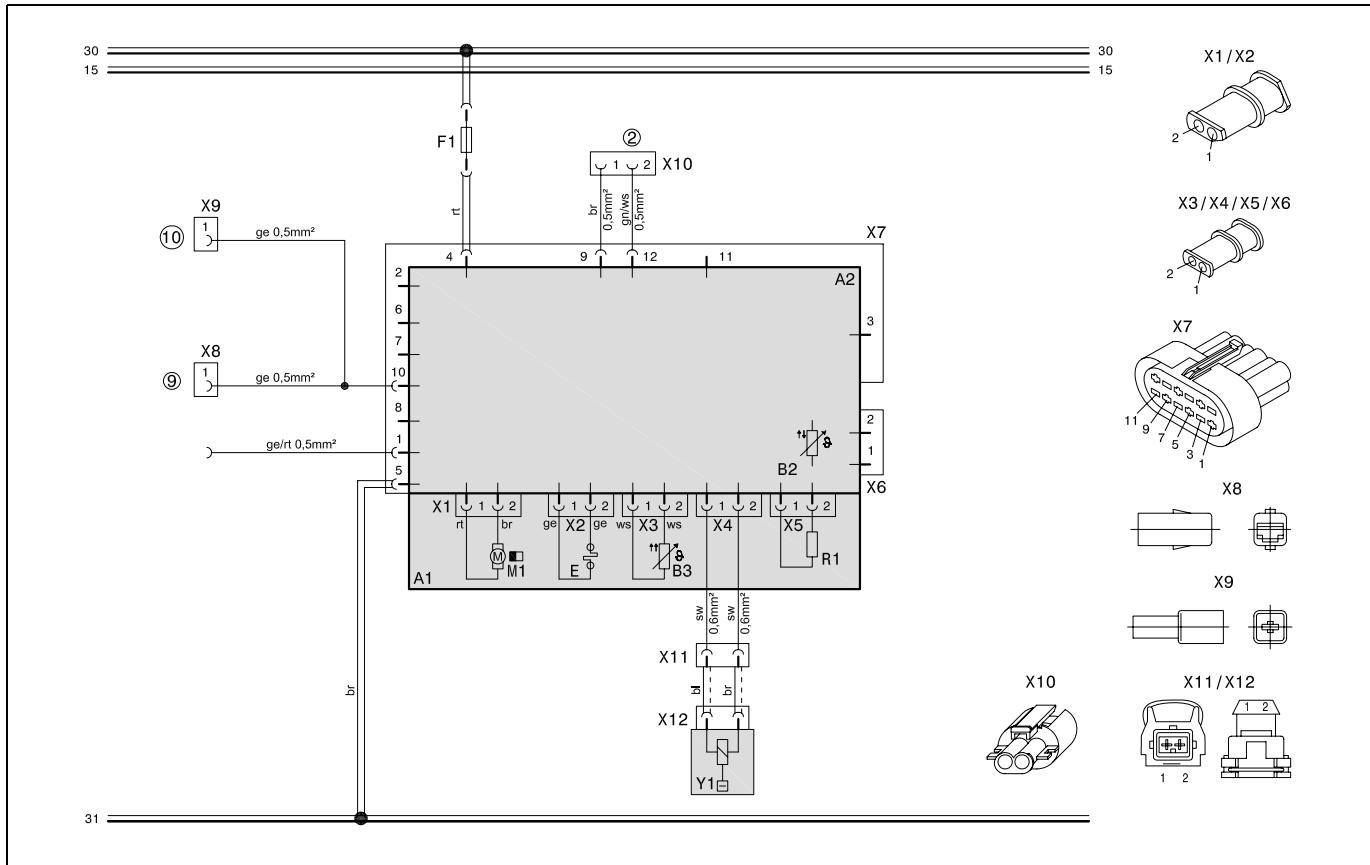


Fig. 6: System wiring diagram for Air Top Evo 3900/5500 AM "Slave Heater Unit", 12 V/24 V diesel, for legend, see Page 27 and 28

5 Legend for circuit diagrams

- 1) With positive from terminal (15/75) to connection 10:
Continuous operation with immediate heating as long as the ignition is switched on.

Without Positive on connection 10:
Heating time is variably programmable (10 min to 120 min), default setting 120 min

- 2) Connection for Telestart*/Thermocall*/W-bus diagnosis (only when using Control Panel MC04)
- 3) CO₂ adjustment (see workshop manual)
- 4) **NOTE:**
If the connection is made to terminal 30, permanent heating is possible when the ignition is switched off!
In this case no connection must be made to terminal 15/75.

- 5) **NOTE:**
ADR operation is not permissible for a system consisting of several heater units!
- 6) External temperature sensor
- 7) Fuse installed in vehicle
- 9) Connection of additional heater units via serial bus interface

Cable cross-sections		
	< 7.5 m	7.5 - 15 m
—	0.75 mm ²	1.0 mm ²
- - -	1.0 mm ²	1.5 mm ²
—	1.5 mm ²	2.5 mm ²
—	2.5 mm ²	4.0 mm ²
—	4.0 mm ²	6.0 mm ²

Cable colours	
bl	blue
br	brown
ge	yellow
gn	green
gr	grey
or	orange
rt	red
sw	black
vi	violet
ws	white

Legend for circuit diagrams

Air Top Evo 3900/5500 AM

Item	Description	Comment
A1	Heater	Air Top Evo 3900/5500
A2	Control module	
B2	Temperature sensor	In control unit
B3	Overheating sensor	Overheating guard
B4	Temperature sensor	External
E	Glow plug / Flame monitor	
F1	Fuse 24 V 15A/12V 20A	Flat fuse SAE J 1284
F3	Fuse max. 5A	Flat fuse SAE J 1284
F4	Fuse 1A	Flat fuse SAE J 1284
H1	Green LED	Indicator
H3	LED red (in item P)	Light in immediate heat button, ready indicator, switch-on indicator
H4	Heating symbol in the display (in item P)	Indicator
H5	Lights	Display or button illumination
M1	Motor	Combustion and hot air fan
P	Combination timer (1531)	Timer and setpoint generator
R1	Resistor 620 Ω	With internal temperature sensor only
S	Control Panel MC04/05	Setpoint generator and selector switch for additional functions
S1	Control element	Setpoint generator switch
S5	Switch	CO ₂ setting
S7	Momentary-contact switch	Immediate heat button remote control
X1	Plug connector, 2-pin	To item A2 (ST B)

Item	Description	Comment
X2	Plug connector, 2-pin	To item A2 (ST V)
X3	Plug connector, 2-pin	To item A2 (ST U)
X4	Plug connector, 2-pin	To item A2 (ST Z)
X5	Plug connector, 2-pin	To item A2 (ST Y)
X6	Plug connector, 2-pin	To item A2 (ST X)
X7	Plug connector, 12-pin	To item A2 (ST 1)
X8	Plug connector, 1-pin	
X9	Plug connector, 4-pin	to item S1
X10	Plug connector, 2-pin	
X11	Plug connector, 2-pin	to item Y1
X12	Plug connector, 12-pin	to item P
Y1	Metering pump	

6 Initial Installation/Initial Operation

Procedure for initial installation/initial operation of a master/slave system:

Installation

1. Installation of the heater units according to installation instructions for Air Top Evo 3900/5500
2. Establishment of electrical contacts according to system wiring diagram (Figure 2 to Figure 6)
3. Installation of heater control and external temperature sensor

NOTE:

Teaching a slave heater unit is only possible for a limited time (120 sec)! If this time is exceeded, teaching is no longer possible and the system must be reset (see Chapter 7, "Resetting Master/Slave System").

Initial start-up

1. Start master heater unit with controls
=> Master heater unit "starts up"
2. Produce connection between Master and Slave 1
(see system wiring diagram)
=> Slave 1 heater unit switches into "Ventilation" state
3. Produce connection from Slave 1 to Slave 2
(see system wiring diagram)
=> Slave 2 heater unit switches into "Ventilation" state
4. Teach additional slave heater units (repeat Point 2 and 3)
5. Switch off master heater unit with controls
=> Initial start-up completed

7 Resetting Master/Slave System

Resetting a master/slave system:

If for some reason (communication error, time expired, etc.) teaching has not functioned, it is possible to reset the system.

Resetting Master/Slave System to Original State

1. Switch master heater unit into "Ventilation"
2. De-energise/pull fuse

NOTE:

All connected heater units must be disconnected from Terminal 30!

3. Connect voltage and repeat teaching process (see Chapter 6, "Initial Installation/Initial Operation").

8 Fault lock-out

The displayed error codes (F00 - F15) for a master/slave system match an error on the master heater unit. If an error occurs on the slave heater unit, only the service code is output (operation indicator flashes with 1 sec. on and 1 sec. off).

NOTE:

For the meaning and information on troubleshooting malfunctions, see Installation and Operating Instructions for Air Top Evo 3900/Air Top Evo 5500.

Im Fall einer mehrsprachigen Version ist Deutsch verbindlich.
In multilingual versions the German language is binding.
Bij een meertalige versie is de Duitse versie bindend.

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