

INTRODUCTION (UWE Standard Display)

About this document

Purpose of the document

The purpose of this document is to give you the information and instructions that will enable you to check the control system and the climate system components before the bus is delivered. This function control is a static test with all the components installed in the bus and the engine is not running.

This document is also intended for use when troubleshooting, so that any faults can be localised in a systematic way.

In the static test, checks are performed to ensure that the components can be controlled manually from the Viper MK1 and that there is a correct response when given commands are issued. For example, to check that the polarity of the electrical installation is not reversed.

Limitations in the use of the document

This document is only intended to test climate systems in which the Viper MK1 is installed and controls all climate components. The document describes the maximum scope of a climate system.

Before you start testing

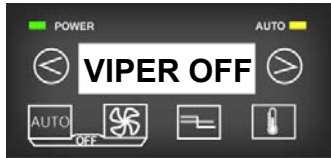









Run mode/Test mode










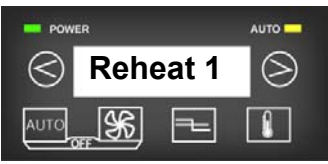




The first setting, or “mode”, that appears when the Viper MK1 starts is **run mode** (default setting). In this mode the climate system is controlled by the Viper, even though it is possible for the driver to control certain parameters manually.












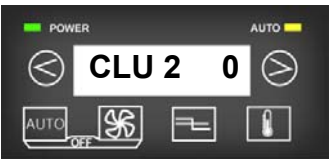




In the function test, however, we will go down one more step in the system and, by pressing a few buttons, come into test mode. In this mode automatic control is switched off and it is the tester who controls the individual components. When you are in the test mode all components are set to OFF, that is, pumps and fans are switched off, flaps are reset to zero, and valves are closed.







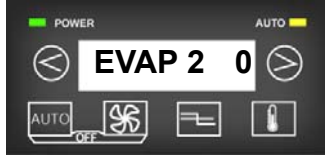
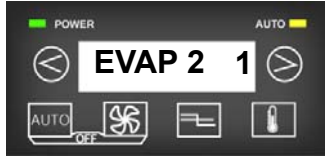



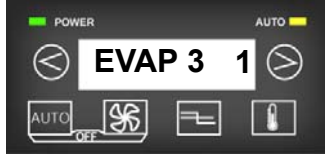




At the beginning of the test we recommend that the engine is switched off, as it is then easier to hear/feel that the valves and flaps are working.



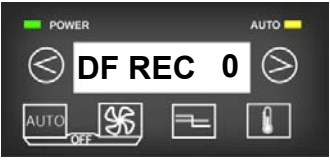
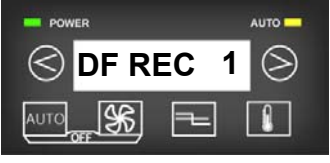













Function Test of Viper Mk.1 UWE Standard Display

Step	Action	Indication	This is checked
1	<p>Switch on the Viper, but leave the engine turned off.</p> <p>If there is no indication, check the power supply.</p>	 <p>Check that both LEDs are lit, Power and Auto.</p>	That the Viper is ready, in auto mode, and starts working when power is supplied to plug 19 On/Off (Gen+).
2	<p>Press the two step arrows simultaneously, release</p>  <p>Shortly thereafter, press AUTO and the flap button simultaneously.</p> 	 <p>If there is no indication, then check the cables between the Viper system and the Display.</p>	That the Viper is in test mode and the roof valve is selected.
3	<p>Change ROF VA 1 to ROF AV 0 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 <p>Check that the roof valve is working. If nothing works, check the wiring. If the load is too high on the output, 0 V is generated.</p>	That the roof valve is working.
4	<p>Select the next function by pressing the right arrow one time</p>  <p>Change CNV VA 1 to CNV VA 0 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 	That the valve for the convector circuit is working/or selected.

<p>5</p>	<p>Select the next function by pressing the right arrow one time.</p>  <p>Change CIRC 0 to CIRC 1 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 	<p>That the shunt pump starts.</p>
<p>6</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change BLW 1 to BLW 0 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 	<p>That the recirculated air heating works</p>
<p>7</p>	<p>Select the next function by pressing the right arrow one time</p> 		<p>No test, go to next step.</p>
<p>8</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change Aux 2 1 to Aux 2 0 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	  <p>If an error code appears, see the manual entitled "Workshop instructions"</p>	<p>Auxiliary equipment is connected and working.</p>

<p>9</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change Gas Ch 1 to Gas Ch 0 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	  <p>If an error code appears, see the manual entitled "Workshop instructions"</p>	<p>That the compressor, condenser fan, and roof fans are working. If any unit is not working, perform the function test, page 2.</p> <p>Note: See also gas charge instructions.</p>
<p>10</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change CLU 1 0 to CLU 1 1 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	  <p>If an error code appears, see the manual entitled "Workshop instructions"</p>	<p>Clutch functionality</p>
<p>11</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change CLU 2 1 to CLU 2 0 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	  <p>If an error is displayed, check the digital signals. See the manual entitled "Workshop instructions"</p>	<p>Note: Test for systems that have two clutches.</p> <p>Note: For systems with one clutch, CLU 1 applies</p>
<p>12</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change COND 0 to COND 1 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 	<p>Condenser functionality</p>

<p>13</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change EVAP1 0 to EVAP1 1 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 	<p>That the roof fans are running at speed 1</p>
<p>14</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change EVAP2 0 to EVAP2 1 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 	<p>That the roof fans are running at speed 2</p>
<p>15</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change EVAP 3 0 to EVAP 3 1 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 	<p>That the roof fans are running at speed 3.</p>
<p>16</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change RF FSH 0 to RF FSH 1 by pressing the flap button</p>  <p>1 = 24V out 0 = 0V out</p>	 	<p>That fresh and recirculated air works.</p>

<p>17</p>	<p>Select the next function by pressing the right arrow one time</p>  <p>Change DF REC 0 to DF REC 1 by pressing the flap button</p>  <p>1=24V out 0=0V out</p>	 	<p>That the defroster flap works.</p>
<p>18</p>	<p>Press the button to read the sensor (temperature)</p>  <p>Note: All temperatures in the document are only examples.</p>	 <p>If an error code appears, Note: see the manual entitled “Workshop instructions</p>	<p>That the internal temperature setting is +19°C and mode is 0/ or what has been set during installation, Note: see Installation information.</p>
<p>19</p>	<p>Press the button to read the sensor (temperature)</p> 		<p>That the external sensor is fitted and is displaying the correct temperature. If -39.9 is shown then the sensor is defective.</p>
<p>20</p>	<p>Press the button to read the sensor (temperature)</p> 		<p>That the compartment sensor is fitted and is displaying the correct temperature.</p>
<p>21</p>	<p>Press the button to read the sensor (temperature)</p> 		<p>That the sensor for incoming air is fitted and is displaying the correct temperature.</p>
<p>22</p>	<p>Press the button to read from the sensor (temperature)</p>  <p>until the water temperature (CNV) appears in the display.</p>	 <p>If the temperature does not rise in the convector circuit, check whether any other sensor temperature is increasing. If no sensor value is increasing, check that no manual tap is closed. If this is not the case, bleed the heating system. Repeat steps 13-17.</p>	<p>That the right valve opens and that the water sensor is connected properly.</p> <p>Note: If the wrong sensor becomes warmer, the sensors or the valves have been switched.</p>
<p>23</p>	<p>Press the button to read the sensor (temperature)</p> 	 <p>Error Codes: r=reheat; i=ice; o=On/Off; h=HP/LP</p>	<p>That the digital signals are correct.</p>
<p>24</p>	<p>Press the AUTO button to leave test mode. Start the engine.</p>		<p>That the Viper starts working.</p>