## **Diagnostic Workshop Menu - Fault Code Output**

#### EASYSTART TIMER / REMOTE+ WORKSHOP MENU

The service functions listed in the following can be displayed, read out and / or changed via the vehicle workshop menu.

### PLEASE NOTE!

- A reset (remove 5A fuse) is necessary to activate some functions. To do this, not and follow the relevant note under "Comments" of the "Service functions overview".
- To correct the fault, refer to the heater's repair instructions.

### OPENING THE VEHICLE WORKSHOP MENU

Display ON, the Start display appears.

Use the  $\blacksquare$  or  $\blacksquare$  button to select the  $\checkmark$  symbol in the Menu bar.



Confirm the SETTINGS menu item by pressing the 🔲 button.



Press the LONGPRESS button for longer than 5 sec.; the Workshop menu is displayed.

Press the or button to select the required function, e.g. »2: Select temperature unit, °C or °F« and confirm by pressing the button.

Use the < or 🕨 button to select the temperature units °C or °F.

Press the 🔲 button to confirm the selection.

Press the button to exit the workshop menu.

### SERVICE FUNCTIONS OVERVIEW

Menu item	Service function	Comments
1.1.1:	Heater 1 – display current fault	The heater must be switched on to detect current faults. "no diag" is displayed if no diagnostics cable is connected.
1.1.2:	Heater 2 – display current fault	The heater must be switched on to detect current faults. "no diag" is displayed if no diagnostics cable is connected.
1.2.1:	Heater 1 – read out fault memory F1 – F5	Display fault memory F1 – F5 with error code, e.g.: F1: 12. "no diag" is displayed if no diagnostics cable is connected.
1.2.2:	Heater 2 – read out fault memory F1 – F5	Display fault memory F1 – F5 with error code, e.g.: F1: 12. "no diag" is displayed if no diagnostics cable is connected.
1.3.1:	Heater 1 – delete fault memory F1 – F5	Select the delete → function by pressing the □ button, the DEL display appears, flashing, press the □ button to confirm. "no diag" is displayed if no diagnostics cable is connected.
1.3.2:	Heater 2 – delete fault memory F1 – F5	Select the delete $\rightarrow$ function by pressing the $\square$ button, the DEL display appears, flashing, press the $\square$ button to confirm. "no diag" is displayed if no diagnostics cable is connected.
1.4.1:	Heater 1 – read out operating hours counter	Operating time is displayed in minutes. "no diag" is displayed if no diagnostics cable is connected.
1.4.2:	Heater 2 – read out operating hours counter	Operating time is displayed in minutes. "no diag" is displayed if no diagnostics cable is connected.

# 4 INSTALLATION

Menu item	Service function	Comments
2:	Select temperature unit, °C or °F	Default: °C
3.1:	Set the undervoltage limit (EasyStart Timer only)	Default: 8 volt, Setting range: 8 – 28 volt in 0.1 volt increments.
3.2:	Set the undervoltage limit "offset" (EasyS- tart Timer only)	Default: 0 volt, Setting range: 0 – 6 volt in 0.1 volt increments.
3.3:	Set the "fault detection" debounce time (EasyStart Timer only)	Default: 20 seconds, Setting range: 5 – 255 seconds in 1 second increments.
4.1:	Heater 1 – set max. operating time (EasyStart Timer only)	Default: 120 min. Setting range: 10 – 120 min. in 1 min. increments, from the 120th min. – 720 min. in 5 min. increments. Continuous heating mode is also possible for air heaters. These settings have no effect on the operating time for timer program- ming.
4.2:	Heater 2 – set operating time (EasyStart Timer only)	Default: 120 min. Setting range: 10 – 120 min. in 1 min. increments, from the 120th min. – 720 min. in 5 min. increments. Continuous heating mode is also possible for air heaters. These settings have no effect on the operating time for timer programming.
5:	Reset to as delivered condition	Press the D button to select the function, the default display appears, flashing, press the D button to confirm. All active timers are deleted.
6.1:	Read out control unit hardware version	Function is intended for internal purposes only.
6.2:	Read out control unit software version	Function is intended for internal purposes only.
7:	Check measurement of the range (EasyStart Remote+ only)	<ul> <li>Take a check measurement.</li> <li>Stand with the mobile unit at a distance of 1 m in front of the vehicle and in the workshop menu, press the  or  button to select item 7: If a value between 75 and 100 is displayed for R and S the measurement is ok.</li> <li>Note on the check measurement:</li> <li>With an optimum installation the transmission power can reach a maximum value of 100. If the maximum value is not reached, change the location of the antenna so that a value for R and S is reached between the minimum value 75 and the maximum value 100.</li> </ul>
8:	Select language, DE or EN	Default: EN
9:	Set upgrade box mode, On or Off	Default: Off A reset must be performed to activate the function (remove fuse).
10:	Select start time (On) or departure time (Off )	Default: Off (departure time) The departure time (Off) is absolutely necessary for heating mode with automatic operating time calculation (Item 11.1:). For heating mode without automatic operating time calculation (item 11.1:) it is possible to choose between start time (On) and departure time (Off ). A reset must be performed to activate the function (remove fuse).

# 4 INSTALLATION

Menu item	Service function	Comments
11.1:	Set automatic operating time calculation, On or Off	Default: Off A temperature sensor must be connected to the control unit or stationary unit. Additional settings are required, see Item 11.2: and 11.3: A reset must be performed to activate the function (remove fuse). Automatic operating time calculation is not possible for air heaters.
11.2:	Set the engine size (cubic capacity)	Default: 1800 cm <sup>3</sup> Setting range: 1000 cm <sup>3</sup> – 4000 cm <sup>3</sup> in 100 cm <sup>3</sup> increments. The engine size can only be set if 11.1: is set to On.
11.3:	Set the max. operating time	Default: 60 min, Setting range: 10 min. – 60 min. in 1 min. increments. The max. operating time can only be set if 11.1: is set to 0n.
12.1:	Set add-on unit AD, On or Off	<ul> <li>Default: Off</li> <li>Selection options:</li> <li>1. Via JE diagnosis → display flame and ventilate symbol (if supported by the heater) in the AD menu.</li> <li>2. Via switch-on signal S+2 (deactivated 1.2.2:, 1.3.2:, 1.4.2:, 9:) → S+2 (display only flame symbol and AD heat menu visible).</li> <li>3. Via the switch-on signal of the first heater S+1 (deactivated 1:) → S+1 (display heat menu only). A reset must be performed to activate the function (remove fuse).</li> </ul>
12.2.1:	Room temperature control, On or Off	Default: Off
12.2.2:	Hysteresis (On / Off difference): 0 - 7 °C	Default: 2 °C
12.2.3:	Sampling rate: 0 – 15 seconds	Default: 5 seconds
13.1:	Select KL58 or KL15 mode	Default: KL58. Input KL58 = control background lighting of control unit. A reset must be performed to activate the function (remove fuse).
13.2:	If KL15 mode is active	Default setting: 15 min. Set afterrun time of heater until shutdown. Setting range: 1 – 255 min Value 0 = heater always remains in continuous operation.
14.1:	Show display pixels	Check the individual pixels in test mode. If there are too many defective pixels, replace the control unit if necessary.
14.2:	Show display pixels	Check the individual pixels in test mode. If there are too many defective pixels, replace the control unit if necessary.
14.3:	Show display pixels	Check the individual pixels in test mode. If there are too many defective pixels, replace the control unit if necessary.
14.4:	Show display pixels	Check the individual pixels in test mode. If there are too many defective pixels, replace the control unit if necessary.
14.5:	Show display pixels	Check the individual pixels in test mode. If there are too many defective pixels, replace the control unit if necessary.

## 4 INSTALLATION

Menu item	Service function	Comments
14.6:	Show display contrast	This function can be used to change the contrast of the display.
		PLEASE NOTE! It is also possible to reduce the contrast to such an extent that the screen display is no longer visible. With each PowerOnReset (remove fuse) the contrast is reset to the as-delivered condition.

#### EASYSTART SELECT VEHICLE WORKSHOP MENU

The service functions listed in the following can be displayed, read out and / or changed via the vehicle workshop menu.

### PLEASE NOTE!

To correct the fault, refer to the heater's repair instructions.

### OPENING THE VEHICLE WORKSHOP MENU

Display ON, the Start display appears.

<u> 14</u> 55	<u>™</u> # 1 °C
Start display	Start display
water heater	air heater

Press button < and 🚬 at the same time for longer than 5 sec.

The workshop menu is displayed.

Press the or button to select the required item, e.g. »Item 2: Select temperature unit, °C or °F« and confirm by pressing the OK/O button.

Use the < or 🕨 button to select the temperature units °C or °F.

Press the OK/O button to confirm the selection.

Exit the workshop menu via Timeout.

### SERVICE FUNCTIONS OVERVIEW

Menu item	Service function	Comments
1.1:	Display current fault	Heater must be switched on. The AF display and the digits of the current fault are displayed alternately. The current fault is always written in fault memory F1. "ndi" is displayed if no diagnostics cable is connected.
1.2:	Read out fault memory F1 – F5	Heater must be switched on. The F1 display and the digits of the error code are displayed alternately. Select fault memory F2 – F5 display with the red or button. "ndi" is displayed if no diagnostics cable is connected.