



SEPDISP14

Modification instructions

Ver. 3.0

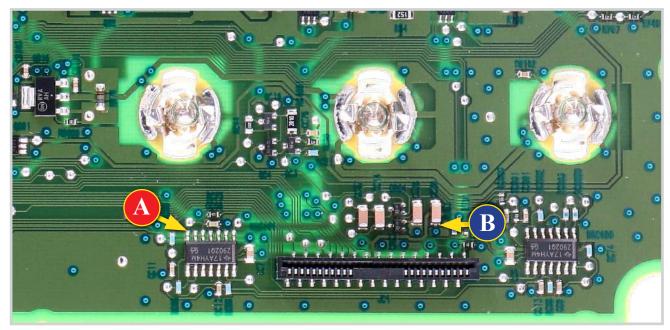




WARNING: THIS PROCESS IS RECOMMENDED ONLY TO EXPERT AND QUALIFIED STAFF.

THE FOLLOWING MODIFICATION IS NECESSARY FOR THE CORRECT FUNCTIONING OF SEPDISP14 LCD DISPLAY.

- Replace the display in an ambient temperature of 25 °C.
- After replacing the LCD, switch on the cluster on a test bench with the CAN-BUS generator SEP-CAN-MODUS to measure the voltage between the points A and B (see picture 1). Alternatively, it is possible to switch on the module directly on the car, but this second option is not recommended.
- If the voltage measured is between 8,10V and 8,30V no modification is needed.
- If the voltage is, instead, lower than 8.10V or higher than 8,30V the modification is necessary. The operations to carry out are explained in the following paragraph "EEPROM MODIFICATION", and distinguished according to the code of EEPROM on the PCB (see picture 2), the 93C66 or the 93C56.



Picture 1





WARNING: THIS PROCESS IS RECOMMENDED ONLY TO EXPERT AND QUALIFIED STAFF.

MODIFICATION FOR EEPROM 93C66

NOTE: For this modification, it is necessary to use an EEPROM programmer.

We recommend our SEP-EECLIP.

- De-solder the EEPROM 93C66 highlighted in picture 2, located on the PCB;
- First, set the programmer reading in hexadecimal (HEX);
- ATTENTION: Make a backup of the EEPROM, before the modification.
- To reach a voltage between 8,10V and 8,30V, identify the locations 001D and 0027 and modify their values: increasing or decreasing the values by 1 HEX unit, the variation will be +/- 0.09V.

If not familiar with hexadecimal calculation, it is possible to use the **calculation tool in the box below**, simply typing in the values.

-VERIFICATION

Once these operations have been done, save the file just modified and upload it on the EEPROM. Solder back the 93C66 EEPROM on the PCB, switch on the instrument cluster and check again the tension between points A and B (see picture 1).

Verify, then, if a **voltage between 8,10V and 8,30V** has actually been reached.

If not, decrease or increase the values of the locations until the voltage is between that range.

CALCULATION OF THE NEW VALUES OF THE LOCATIONS (Tool to use only on computers. For the mobile version click here)

• Type in the value of the voltage measured on the PCB between the points A and B (pic. 1)	
Type in the HEX value of the location 001D New value to type in the location 001D	
Type in the HEX value of the location 0027 New value to type in the location 0027	
*How to identify the locations 001D and 0027 on the EEPROM	
Offset(h) 00 01 02 03 04 05 06 07 08 09 0A 0E	OC OD OE OF

MODIFICATION FOR EEPROM 93C56

NOTE: For this modification, it is necessary to use an EEPROM programmer.

We recommend our SEP-EECLIP.

- De-solder the EEPROM 93C56 highlighted in picture 2, located on the PCB;
- First, set the programmer reading in hexadecimal (HEX);
- ATTENTION: Make a backup of the EEPROM, before the modification.
- To reach a voltage between 8,10V and 8,30V, identify the locations 00F7 and 00FD and modify their values: increasing or decreasing the values by 1 HEX unit, the variation will be +/- 0.09V.

If not familiar with hexadecimal calculation, it is possible to use the **calculation tool in the box below**, simply typing in the values.

-VERIFICATION

Once these operations have been done, save the file just modified and upload it on the EEPROM. Solder back the 93C56 EEPROM on the PCB, switch on the instrument cluster and check again the tension between points A and B (see picture 1).

Verify, then, if a **voltage between 8,10V and 8,30V** has actually been reached.

If not, decrease or increase the values of the locations until the voltage is between that range.

CALCULATION OF THE NEW VALUES OF THE LOCATIONS

(Tool to use only on computers. For the mobile version <u>click here)</u>

• Type in the PCB betw		•					n the	!					
Type in the						0F7							
Type in the						0FD							
*How to identif		02 03							OB	0C	OD	0E	OF
000000D0 000000E0	00 00 37 28 00 00	24 0 26 1	0 29 8 16	00 16	38 I 36	00 4 17 0	A 00 0 02 0 00	88	00	00	00	E5 80 80	2 2 2

00000010