minitools

SEPDISP71

Modification instructions

Ver. 3.0

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WARNING: This process is recommended only to expert and qualified staff.

THE FOLLOWING MODIFICATION IS NECESSARY FOR THE CORRECT FUNCTIONING OF SEPDISP71 DISPLAY.
SEPDISP71 **CAN REPLACE BOTH SCREENS** OF THE INSTRUMENT CLUSTER (*see picture 1*).

· Replace the display in an ambient **temperature of 25 °C.**

· After replacing the LCD, **switch on the cluster** *(pin no. 1 negative, pin no. 5 and pin no. 6 positive).*

Left-hand side display

Right-hand side display

Picture 1

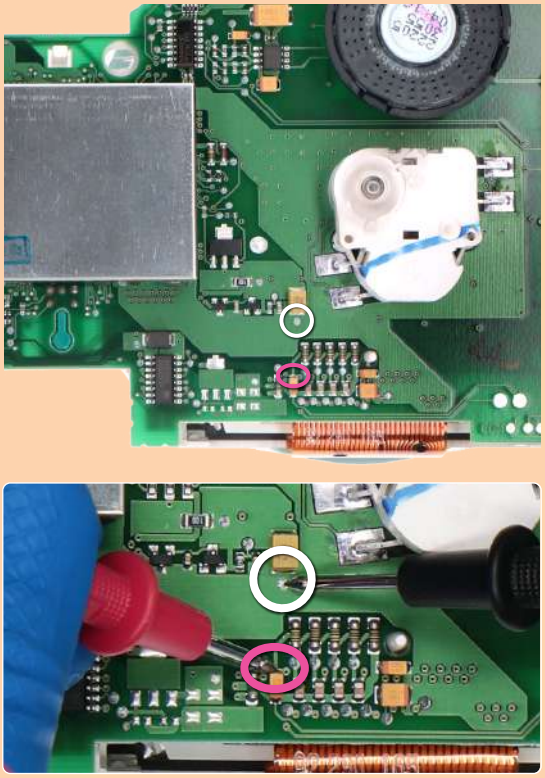
To adjust SEPDISP71 screen / screens voltage:

For the left-hand side display, measure the voltage between the points indicated in picture 2; for the right-hand side display measure between those indicated in picture 3.

▸ If the **voltage** measured is **between 7.25V and 7.35V, no modification is necessary;**

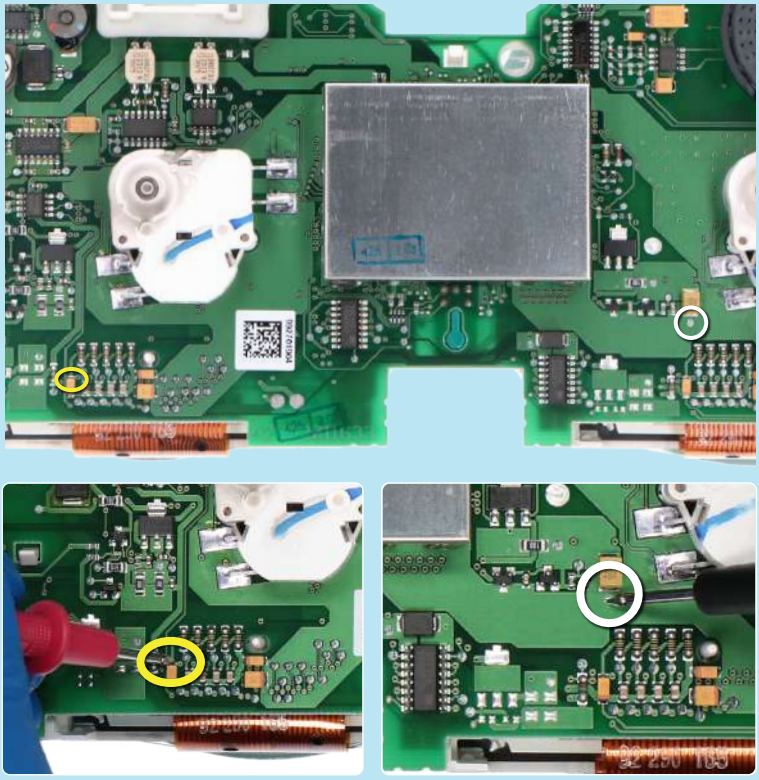
▸ If the **voltage** detected is instead **lower than 7.25V or higher than 7.35V, it is necessary to do the modification** described in the following paragraph "**EEPROM MODIFICATION**"

*Measuring Voltage on **left-hand side** display*



Picture 2

*Measuring Voltage on **right-hand side** display*



Picture 3

EEPROM MODIFICATION

NOTE: *For this modification on the instrument clusters, it is necessary to use an EEPROM programmer.*
We recommend our ***SEP-EECLIP.***

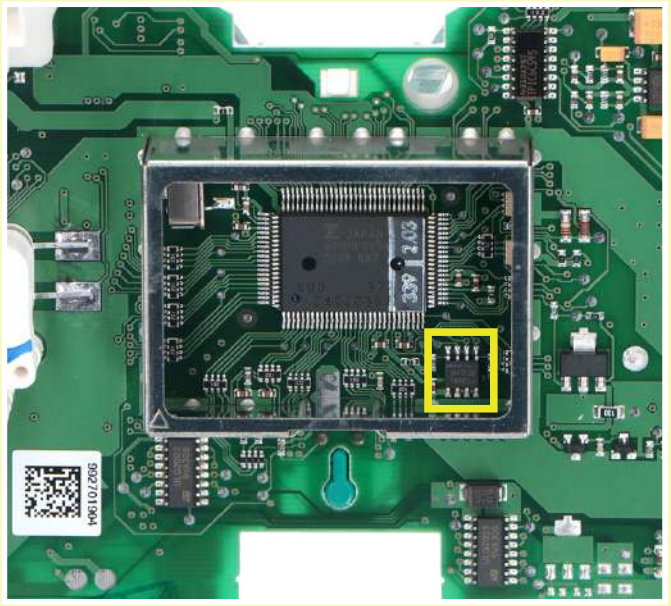
- First, set the programmer **reading in hexadecimal (HEX)**.

- **Desolder** and **make a backup of the 93C86 EEPROM** *(shown in picture 3)*, which is located inside the metal enclosure on the back of the cluster.

- **To reach a voltage close to 7.30V:**
  - act on **03AE location** for the **left-hand side display**
  - act on **03C6 location** for the **right-hand side display**

Please note that **increasing or decreasing** these locations **by 1 HEX unit, the variation will be +/- 0.07V.**

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



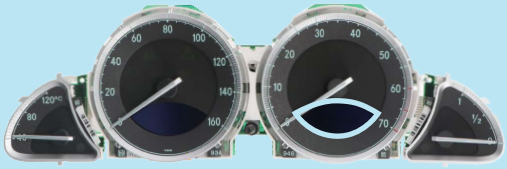
Picture 4

CALCULATION OF THE NEW VALUES OF THE LOCATIONS

Left-hand side display

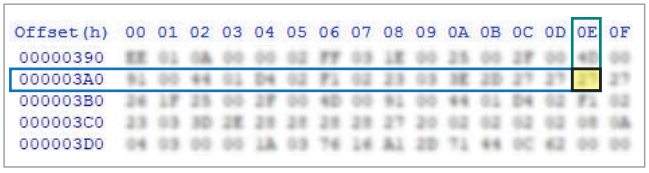
- *Type in the value of voltage measured between the 2 points indicated in picture 2 for the left-hand side display (use a period as decimal separator, e.g 7.61)*
- *Type in the HEX value of 03AE location **
- ***new value** to type in 03AE location*

Right-hand side display

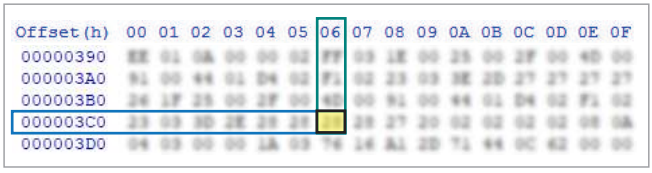


- *Type in the value of voltage measured between the 2 points indicated in picture 3 for the right-hand side display (use a period as decimal separator, e.g 7.02)*
- *Type in the HEX value of 03C6 location **
- ***new value** to type in 03C6 location*

** How to identify **03AE location** and **03C6 location** values on the EEPROM programmer*



Offset(h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000390	EE	01	0A	00	00	02	FF	03	1E	00	25	00	2F	00	4D	00
000003A0	91	00	44	01	D4	02	F1	02	23	03	3E	2D	27	27	27	27
000003B0	24	1F	25	00	2F	00	4D	00	91	00	44	01	D4	02	F1	02
000003C0	23	03	3D	2E	29	29	29	29	27	20	02	02	02	02	08	0A
000003D0	04	03	00	00	1A	03	76	14	A1	2D	71	44	0C	62	00	00



Offset(h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000390	EE	01	0A	00	00	02	FF	03	1E	00	25	00	2F	00	4D	00
000003A0	91	00	44	01	D4	02	F1	02	23	03	3E	2D	27	27	27	27
000003B0	24	1F	25	00	2F	00	4D	00	91	00	44	01	D4	02	F1	02
000003C0	23	03	3D	2E	29	29	29	29	27	20	02	02	02	02	08	0A
000003D0	04	03	00	00	1A	03	76	14	A1	2D	71	44	0C	62	00	00

Once these modifications have been done, **measure again the voltage between the points indicated in picture 2 and 3** and **check** the it actually is ***between 7.25V and 7.35V***, if not, increase or decrease the locations until the value is as close as possible to 7.30V.