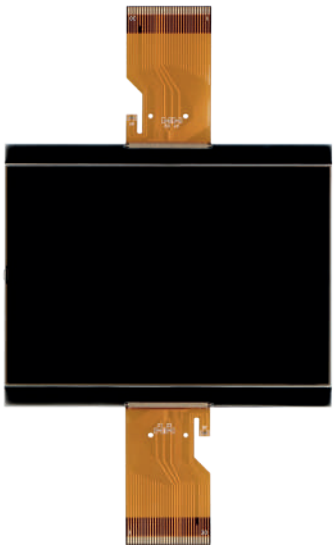
minitools



SEPDISP58

Modification instructions

Ver. 3.0

www.minitools.com

NOTE: *For post-facelift models, go to page 3*

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

THE FOLLOWING MODIFICATION IS NECESSARY FOR THE CORRECT FUNCTIONING OF SEPDISP58 DISPLAY.

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

Picture 1

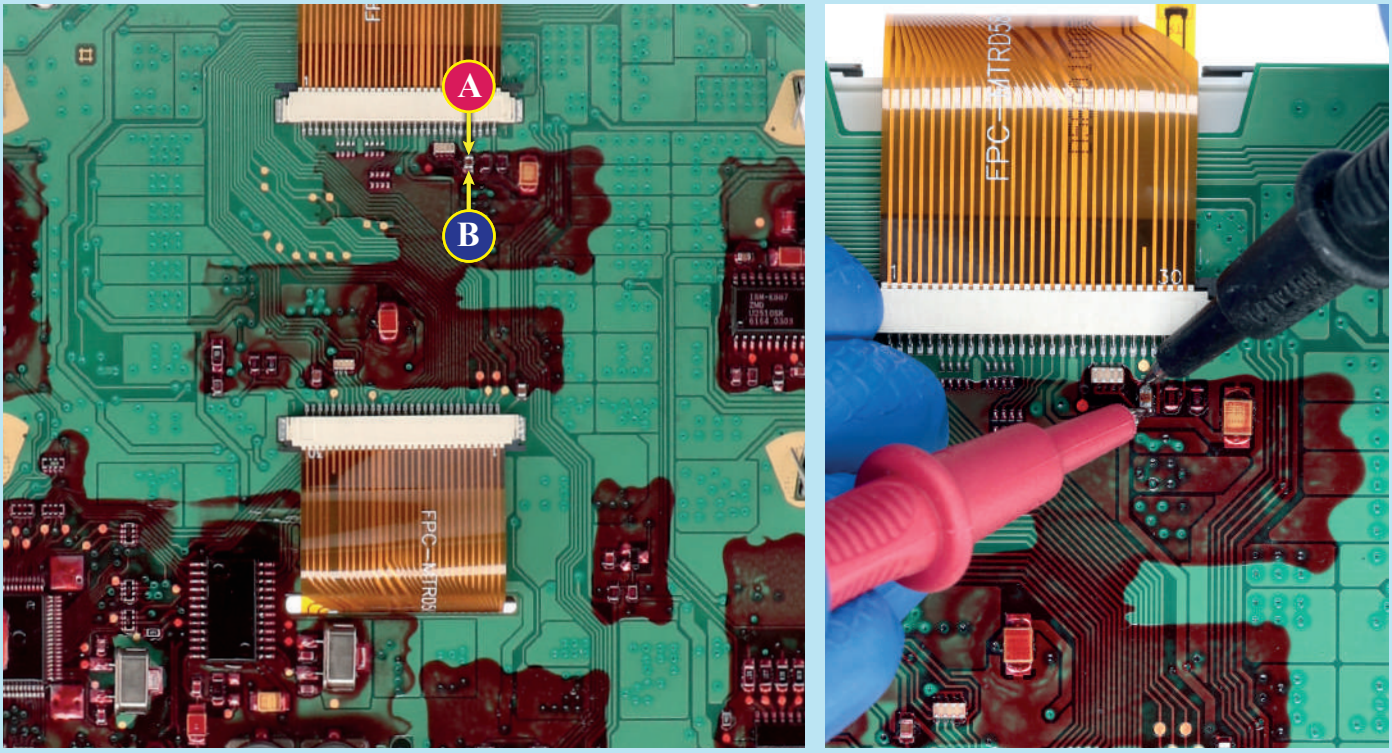
Picture 2

To adjust SEPDISP58 display voltage:

After replacing the LCD, **switch on the cluster with Minitools CAN-BUS generator SEP-AD001** *(pic. 2)*.
Measure the voltage between **A and B points** as in *picture 3*.

- If the voltage measured is between 12.98V and 13.02V, no modification is necessary;
- If the voltage detected is instead lower than 12.98V or higher than 13.02V, it is necessary to do the modification described in the following paragraph "**EEPROM MODIFICATION**".

Measuring display voltage



Picture 3

NOTE: *For post-facelift models, go to page 3*

EEPROM MODIFICATION

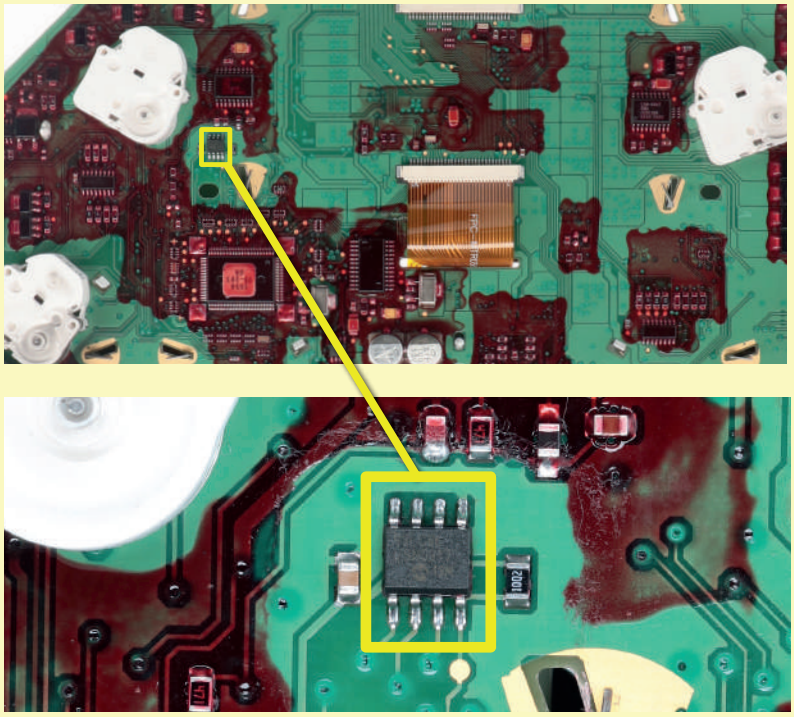
NOTE: *For this modification it is necessary to* ***use an EEPROM programmer.***
We recommend our ***SEP-EECLIP.***

• First, set the programmer reading in **hexa-decimal (HEX);**

• Desolder and make a backup of the **93C86** EEPROM *(shown in picture 4);*

• To reach a voltage close to 13.00V act on **031E location;**

Please note that **decreasing this location by 1 HEX unit,** the **variation will be +0.0189V, or vice versa.**



Picture 4

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

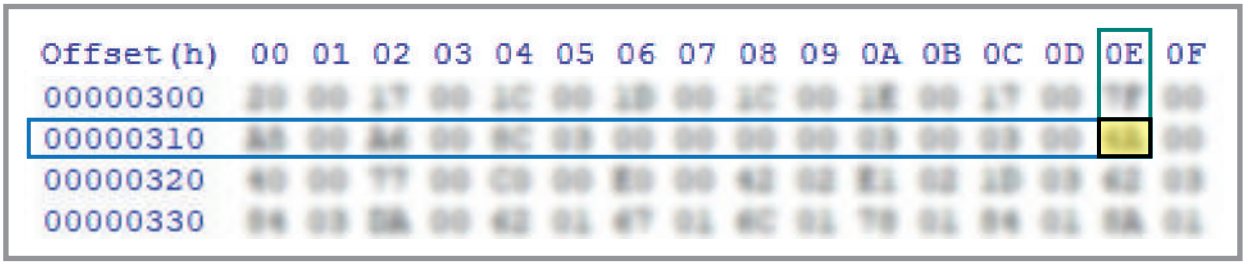
CALCULATION OF THE NEW VALUE OF THE LOCATION

• ***Type in the HEX value of 031E location****

• ***Type in the value of voltage measured between A and B points***
(use a period as decimal separator, e.g. 12.76)

• ***New value to type in 031E location.***

**How to identify 031E location value on the EEPROM programmer*



Offset(h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000300																
00000310																
00000320																
00000330																

Once these modifications have been done, **measure again the voltage** between **A and B points** and check that it actually is **between 12.98V and 13.02V**.
If not, increase or decrease the location until the value is as close as possible to 13.00V.

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

THE FOLLOWING MODIFICATION IS NECESSARY FOR THE CORRECT FUNCTIONING OF SEPDISP58 DISPLAY.

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

Picture 5

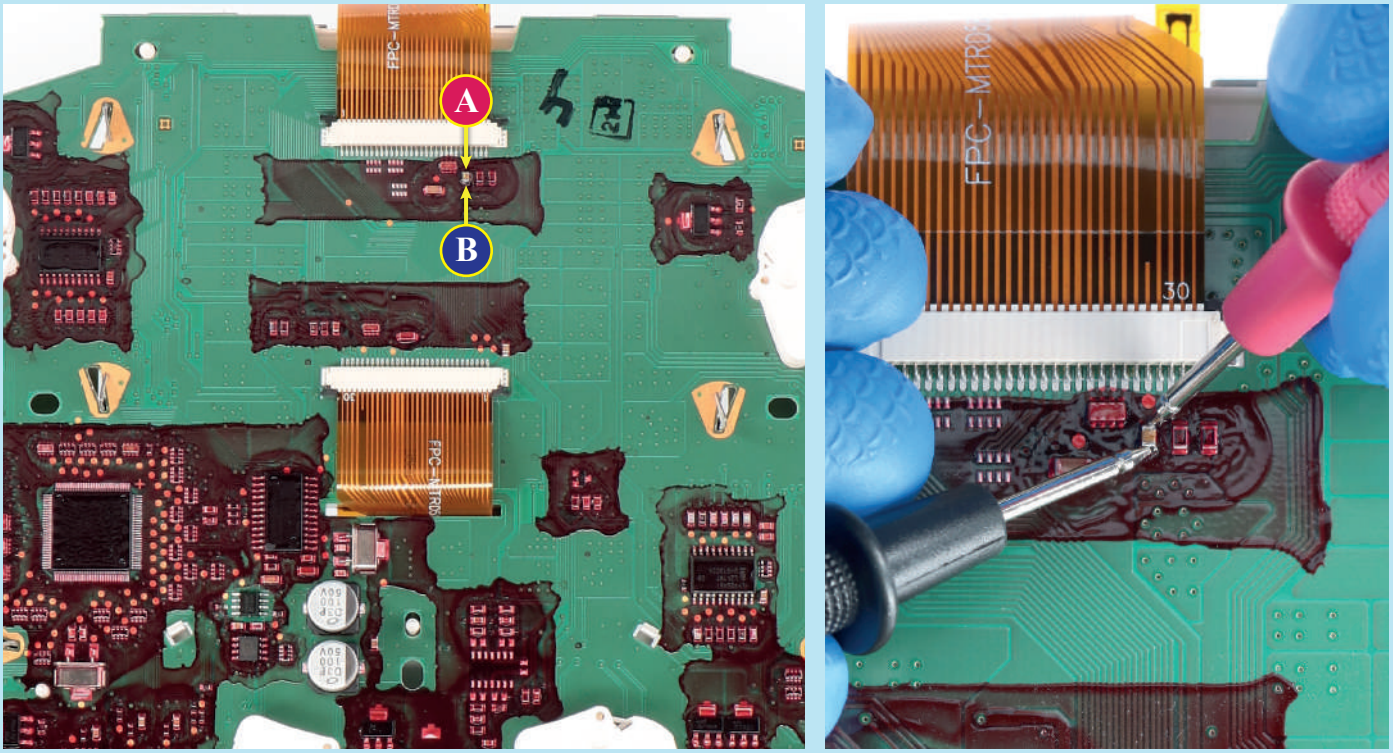
Picture 6

To adjust SEPDISP58 display voltage:

After replacing the LCD, **switch on the cluster with Minitools CAN-BUS generator SEP-AD001** *(pic. 6)*.
Measure the voltage between **A and B points** as in *picture 7*.

- If the voltage measured is between 12.98V and 13.02V, no modification is necessary;
- If the voltage detected is instead lower than 12.98V or higher than 13.02V, it is necessary to do the modification described in the following paragraph "**EEPROM MODIFICATION**".

Measuring display voltage



Picture 7

NOTE: *For pre-facelift models, go to page 1*

EEPROM MODIFICATION

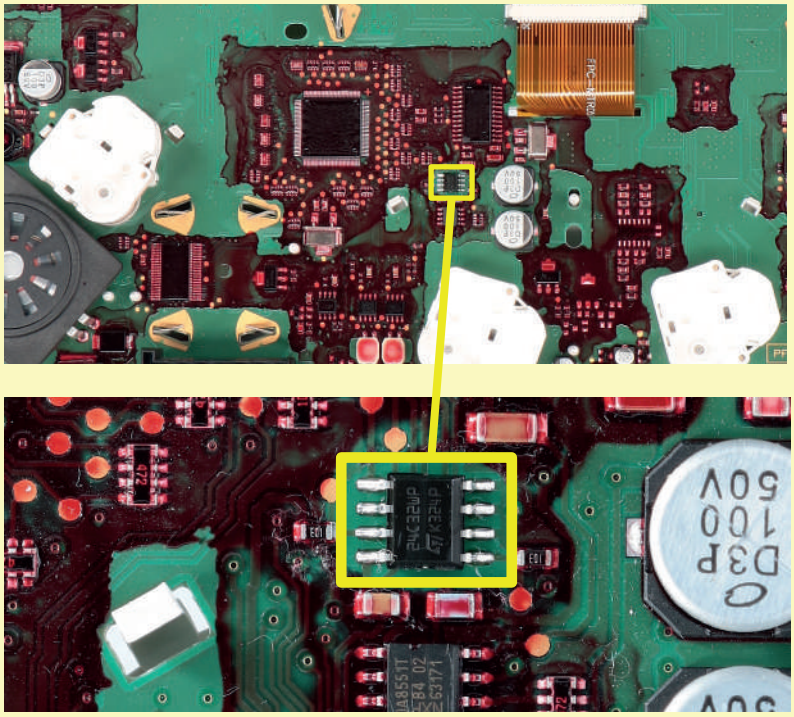
NOTE: *For this modification it is necessary to **use an EEPROM programmer.***
*We recommend our **SEP-EECLIP.***

• First, set the programmer reading in **hexadecimal (HEX);**

• Desolder and make a backup of the **24C32WP** EEPROM *(shown in picture 8);*

• To reach a voltage close to 13.00V act on **031E location;**

Please note that **decreasing this location by 1 HEX unit,** the **variation will be +0.0189V, or vice versa.**



Picture 8

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

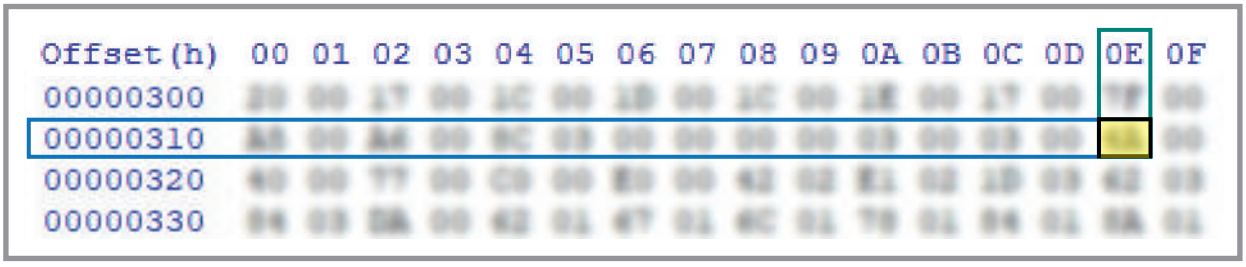
CALCULATION OF THE NEW VALUE OF THE LOCATION

• ***Type in the HEX value of 031E location****

• ***Type in the value of voltage measured between A and B points***
(use a period as decimal separator, e.g. 12.76)

• ***New value to type in 031E location.***

**How to identify 031E location value on the EEPROM programmer*



Once these modifications have been done, **measure again the voltage** between **A and B points** and check that it actually is **between 12.98V and 13.02V**.
If not, increase or decrease the location until the value is as close as possible to 13.00V.