minitools

SEPDISP27

Modification instructions

Ver. 3.0

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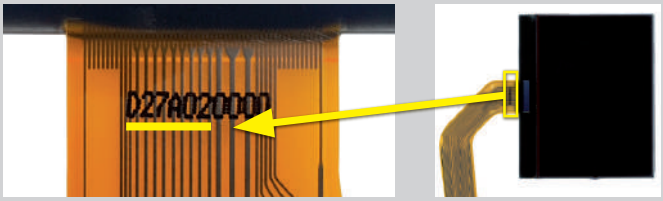
WARNING: This process is recommended only to expert and qualified staff.

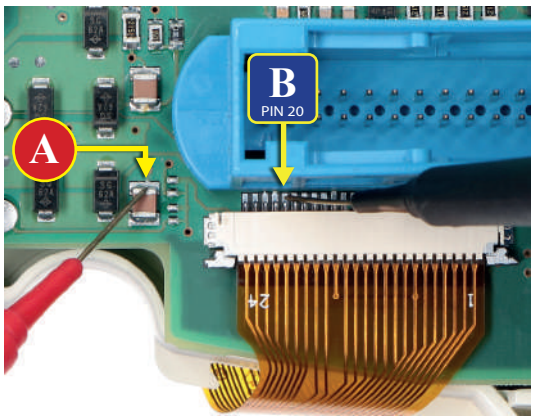
NOTE:
The following instructions are for **SEPDISP27 displays marked with D27A02**XXXX serial numbers on the FPC *(see picture beside)*.



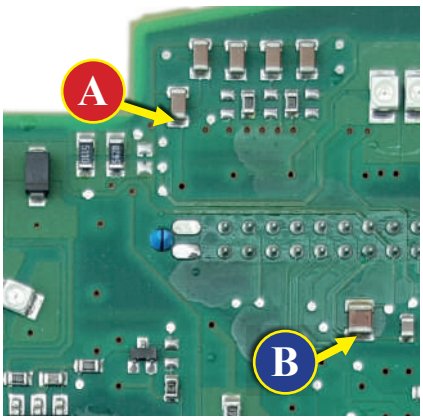
· Replace the display in an ambient **temperature of 25 °C**.

· After replacing the LCD, **switch on the cluster** *(pin no. 1 positive, pin no. 24 negative)*.

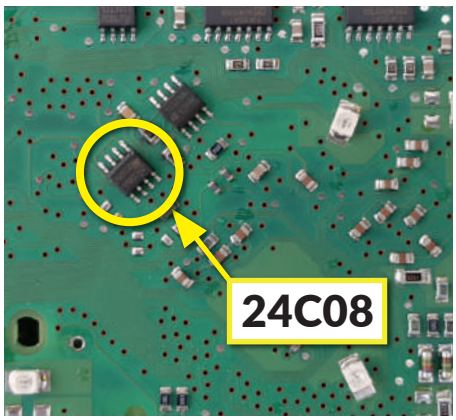
· If you have a multimeter with needle probes, **measure the voltage between A and B points on the rear of the board** *(see picture 1)*, **OTHERWISE** remove the pointers and the front panel and **measure the voltage between A and B points on the front part of the board** *(see picture 2)*.



Picture 1



Picture 2



Picture 3

▸ If the **voltage** measured is **between 7,0V and 7,2V, no modification is necessary**;
▸ If the **voltage** detected is instead **lower than 7,0V or higher than 7,2V, it is necessary to do the modification** described in the following paragraph "**EEPROM MODIFICATION**"

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).

· Make a **backup of the 24C08 EEPROM**, which is on the cluster *(picture 3)*.

To reach a voltage between 7,0V and 7,2V, it is necessary to **modify the value of 0320 location OR the one of 0343 location; to identify which location to act on, locate the group of 3 consecutive values: "14, 28, 78". The value to be modified is always the one before the group just mentioned.**

*Please note that increasing or decreasing these locations by 1 HEX unit, the **variation will be +/- 0.1V**.*

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

CALCULATION OF THE NEW VALUES OF THE LOCATIONS

· *Type in the HEX value of the location identified**

· *Type in the value of voltage measured between A and B points*
(use a period as decimal separator, e.g 7.6)

· ***New value** to type in the location identified.*

How to **identify 0320 location or 0343 location values on the EEPROM programmer*

Offset (h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000310																
00000320		14	28	78												
00000330																

Offset (h)	00	01	02	03	04	05	06	07	08	09	0A	0B	0C	0D	0E	0F
00000330																
00000340					14	28	78									
00000350																

Once these modifications have been done, **measure again the voltage between A and B points** and **check that it actually is *between 7,0V and 7.2V***.
If not, increase or decrease the location until the value is as close as possible to the right range.