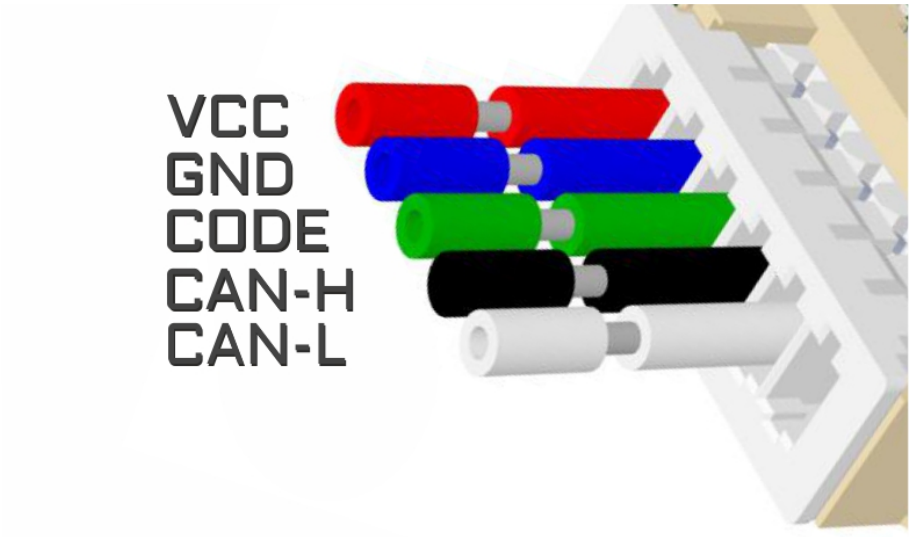
# Julie - Universal Car Emulator Programs:



| Program | Use |
|---|---|
| Mercedes CR1 with CAN WSP | • Vito 2.2 Cdi 5-socket ECU<br>• A-class 1.7 Cdi 5-socket ECU<br>• EDC 1-socket ECU GO TO VIDEO<br>• Bosch ME1.0 ECU GO TO VIDEO<br>• Bosch ME2.0 ECU with HC11E9 GO TO VIDEO<br>• E-class Lucas 4-socket ECU<br>• A-class VDO MSM ECU 1.4 1.6 1.9 gasoline |

**Wiring colour codes**




**The LED behavior**

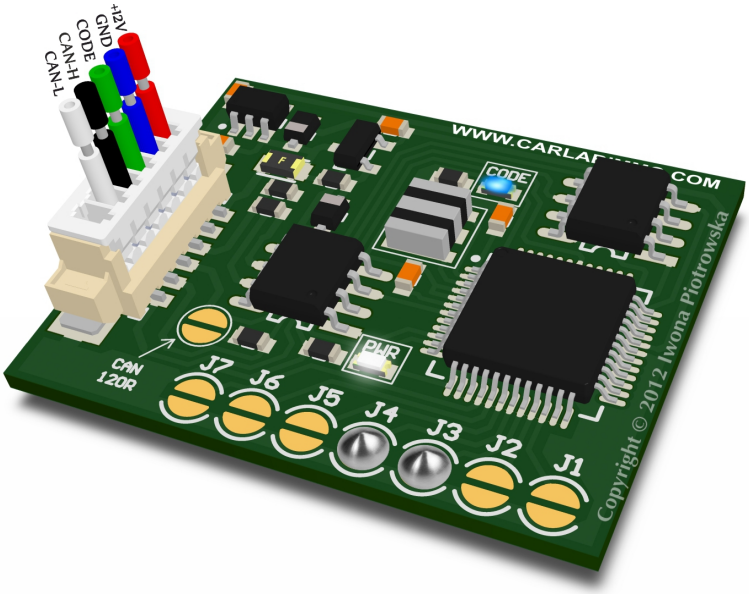
- no jumpers – diagnostic mode - it flashes every second

- adjusting to the ECU – flashing 0,1 sec

- after adjusting it lights constantly and blinks every other second

# Mercedes CR1 with CAN WSP

**In Universal Julie Emulator solder jumpers J3 and J4**




**USE**

**Vito 2.2 CDi**
**5-socket ECU**

**A-class 1.7 CDi**
**5-socket ECU**

**EDC 1-socket ECU**
**2.5TD 2.9TD 3.0TD** GO TO VIDEO
**with mechanical and electronic ignition switch**

**Bosch ME1.0 ECU with HC11E9** GO TO VIDEO

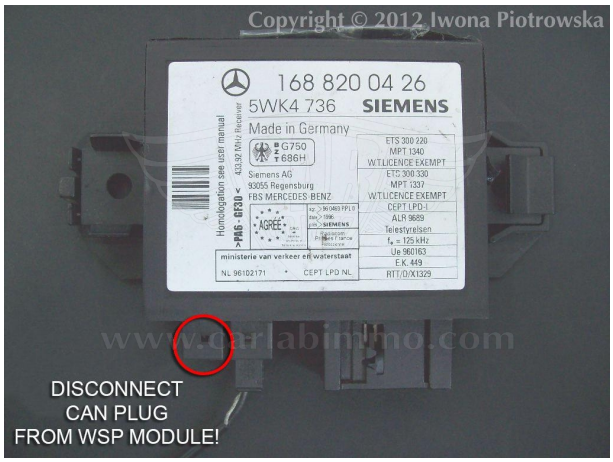
**Bosch ME2.0 ECU with HC11E9** GO TO VIDEO

**E-class Lucas 4-socket ECU**
**with mechanical and electronic ignition switch**

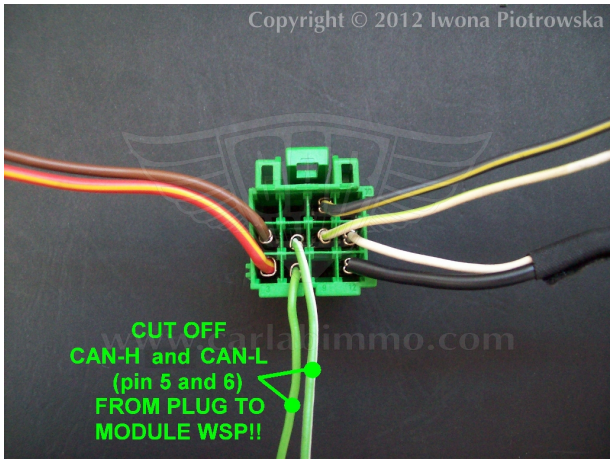
**A-class VDO MSM ECU**
**1.4 1.6 1.9 gasoline**

**When the emulator is connected, disconnect CAN from original immo!**

A-class VDO MSM ECU
**1.4** 1.6 1.9 gasoline



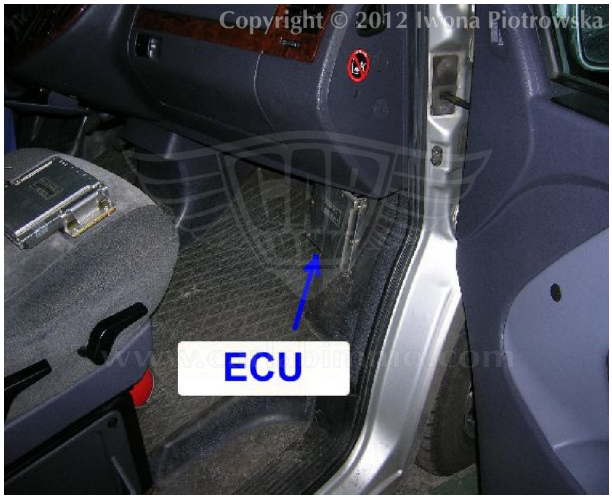

Vito 2.2 CDi 5-socket ECU

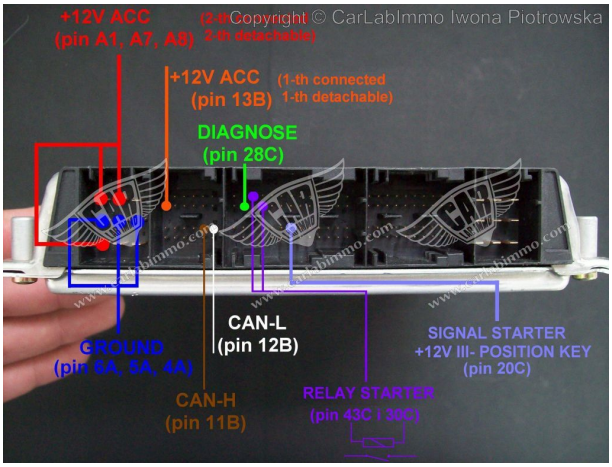


## Vito 2.2 CDi 5-socket ECU


In Mercedes Vito 2.2 Cdi, the starter does not turn, there is a **START ERROR** on the dashboard.

ECU is located on the passenger side



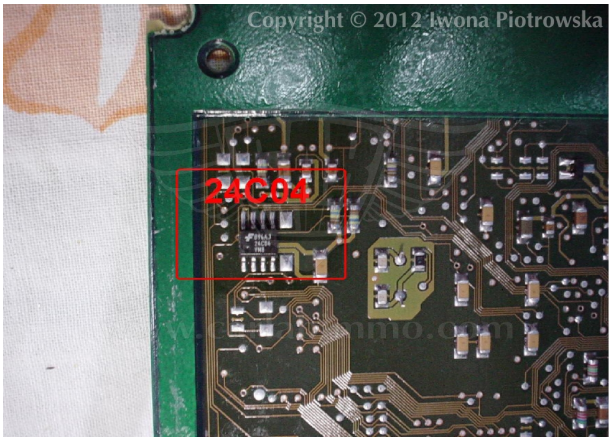



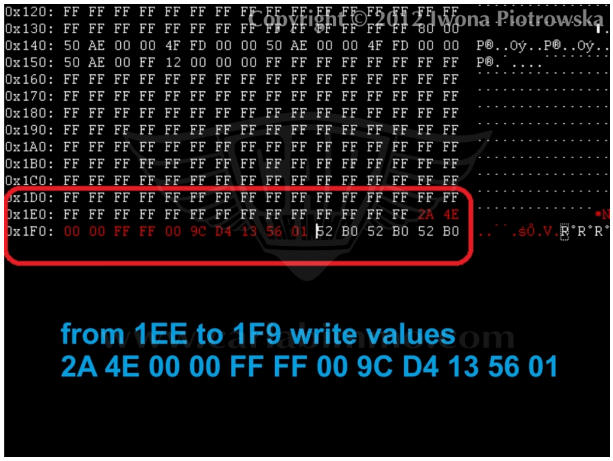


### Connecting emulator to ECU

| | |
|---|---|
| ACC | 2.13 pin |
| GND | 1.04 1.05 1.06 pin |
| CAN-L | 2.12 pin |
| CAN-H | 2.11 pin |

Find 24C04 memory


In addresses 1EE to 1F9, write values 2A 4E 00 00 FF FF 00 9C D4 13 56 01

**Disconnect CAN from WSP!!!**

**A-class 1.7 CDi**
**5-socket ECU**

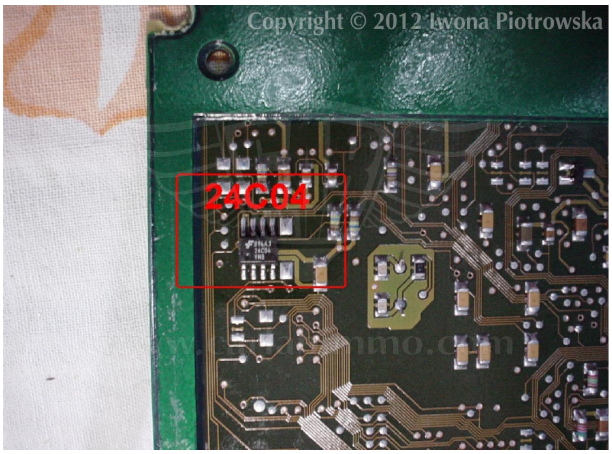

In Mercedes A-class 1.7 CDi, the starter does not turn,
there is **START ERROR** on the dashboard

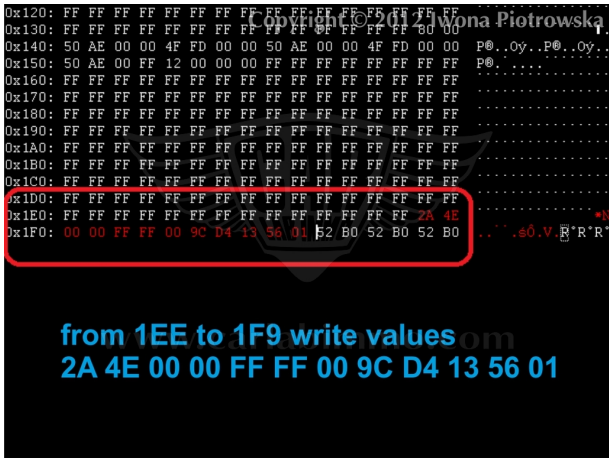
ECU is located under the hood on the left side, behind the engine covered with plastic

## Connecting emulator to ECU

| | |
|---|---|
| ACC | 2.13 pin |
| GND | 1.04 1.05 1.06 pin |
| CAN-L | 2.12 pin |
| CAN-H | 2.11 pin |

Find **24C04** memory

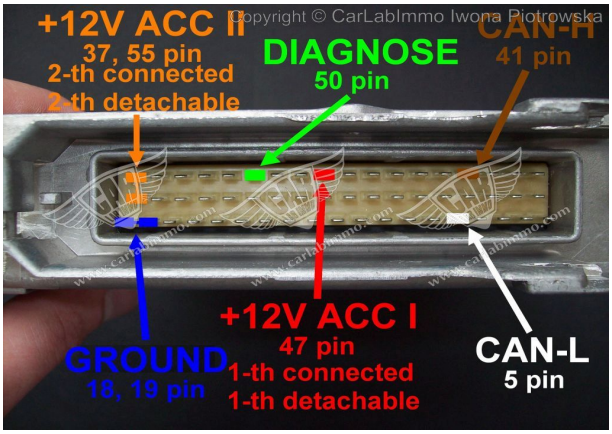



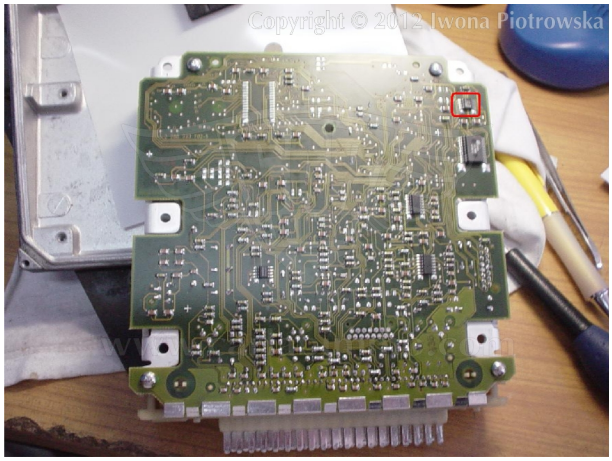

In the address **1EE** to **1F9** enter values
**2A 4E 00 00 FF FF 00 9C D4 13 56 01**

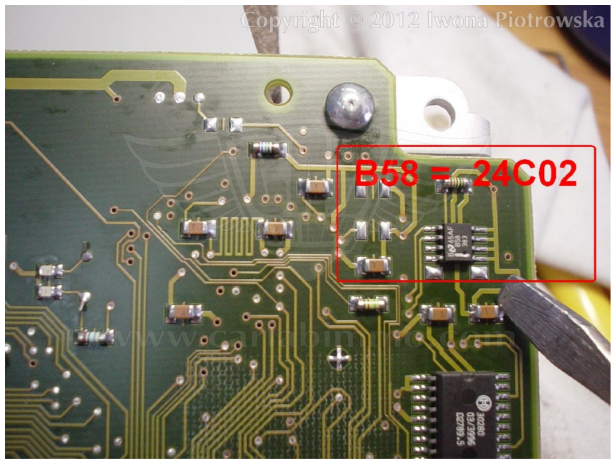
**Disconnect CAN from WSP!!!**

## EDC 1-socket ECU 2.5TD 2.9TD 3.0TD with mechanical and electronic ignition switch

C-class 2.5 TD, Sprinter 2.9 TD, E-class 3.0 TD

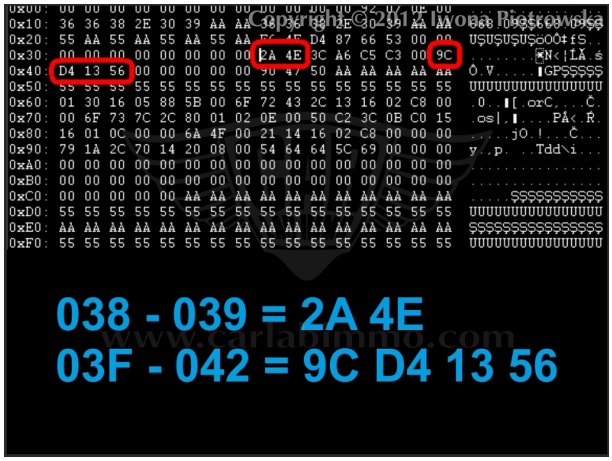





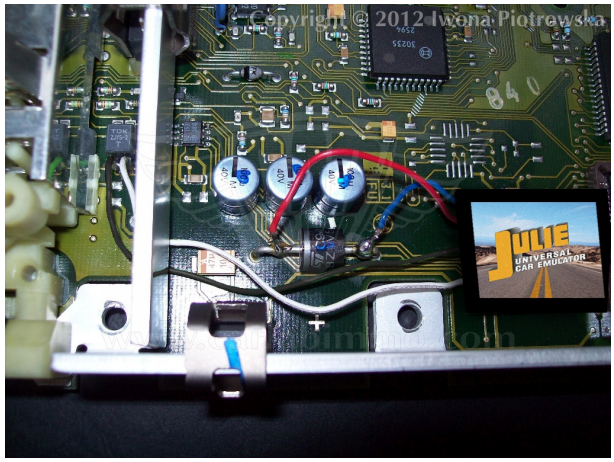





In early 1-socket ECU types, you need to find **24C02** memory marked as **B58** or **24C04** memory




In address **38** and **39** write **2A 4E** values
in address **3F to 42 write**
**9C D4 13 56** values



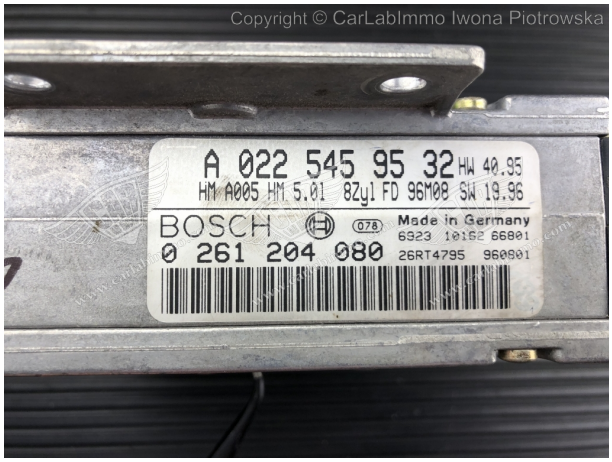

**Connecting emulator to EDC 1-socket ECU**
CAN H and CAN L from the choke.
GND and power from diode.

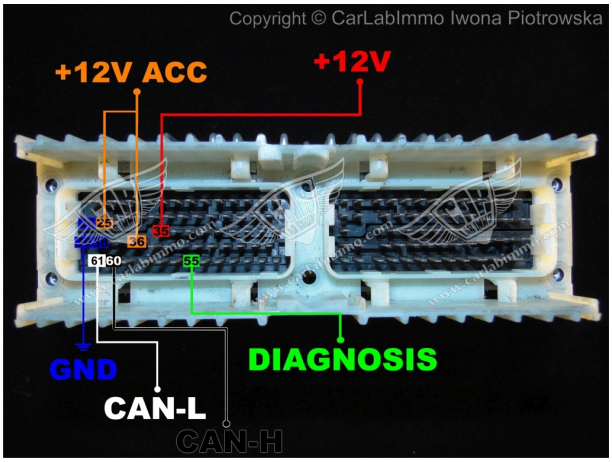
If there are problems to start the car, add ACC onto pin 13 of ECU
(take it from second leg of diode). Then, cut off pin 13 from the ECU plug

**Disconnect CAN from WSP!!!**

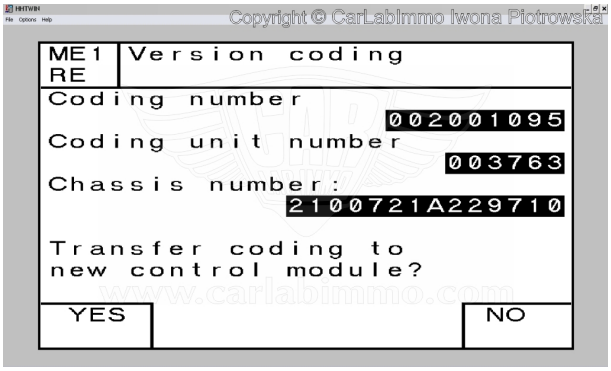
## Bosch ME1.0 ECU with HC11E9 processor


There is a Motorola **E28B HC11E9** processor in the ECU



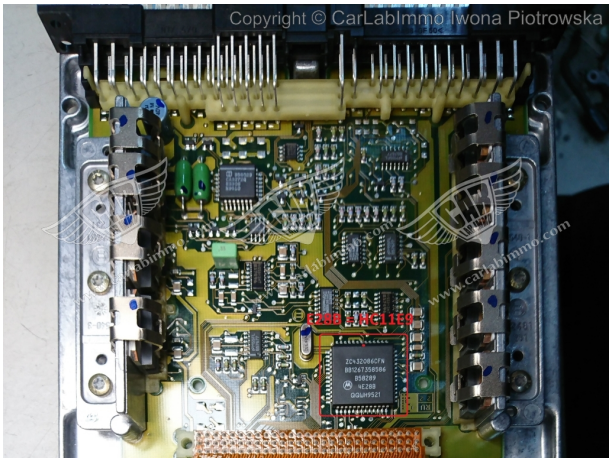




1. Read the coding number using **Star Diagnosis** tool

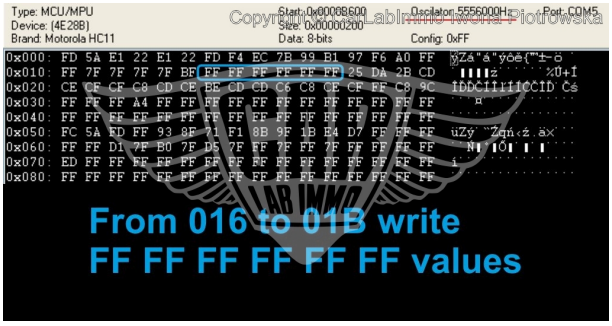


2. Read the content of **Motorola E28B = HC11E9** (marked in the picture) using X-Prog programmer

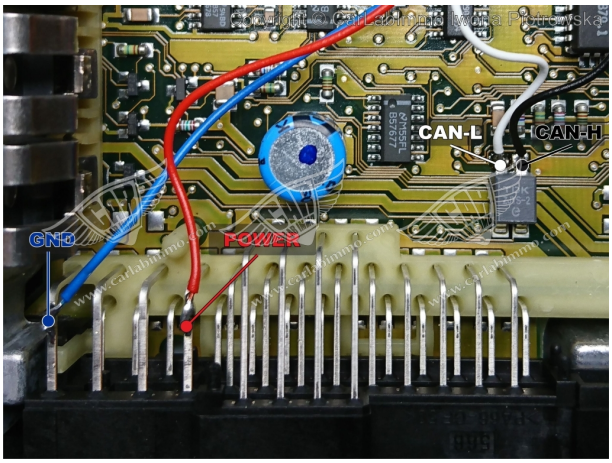
**Set the oscillator to 5556 KHz!**




and write **FF FF FF FF FF FF** values in addresses from **016** to **01B**




3. Connect Julie Emulator to the ECU




**After connecting the emulator to the ECU, you need to carry out personalization with HHT or Star Diagnosis diagnostics tools. Then, start the engine, and let the car run for 60 seconds for the coding to complete.**

EXAMPLE OF PERSONALISATION

**Disconnect CAN from WSP!!!**

## Bosch ME2.0 ECU with HC11E9

There is a Motorola **4E28B HC11E9 52PLCC** processor in the ECU

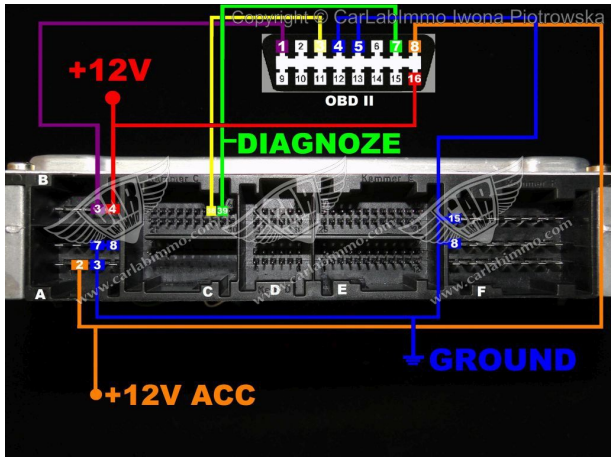
**After connecting the emulator to the ECU, you need to carry out personalization with HHT or Star Diagnosis diagnostics tools. Then, start the engine, and let the car run for 60 seconds for the coding to complete.**

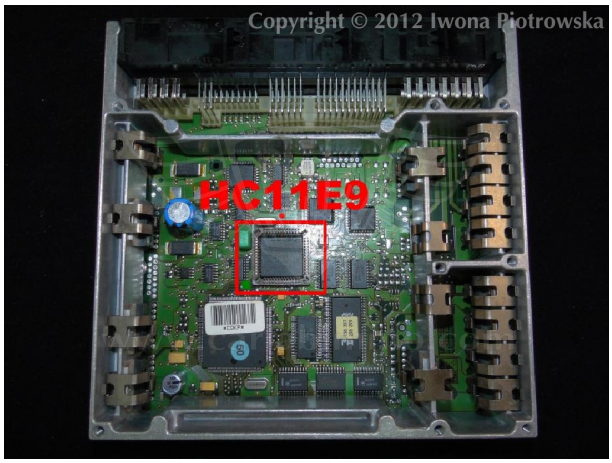
EXAMPLE OF PERSONALISATION

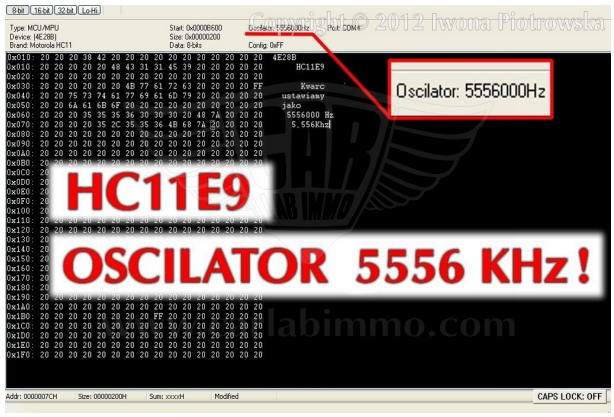
**Disconnect CAN from WSP!!!**

**If the car sometimes doesn't start after the personalisation (the LED on the emulator blinks fast), cut +12V from the ECU and connect it to +12V ACC (ignition)**


*Click on the thumbnail to watch the video*

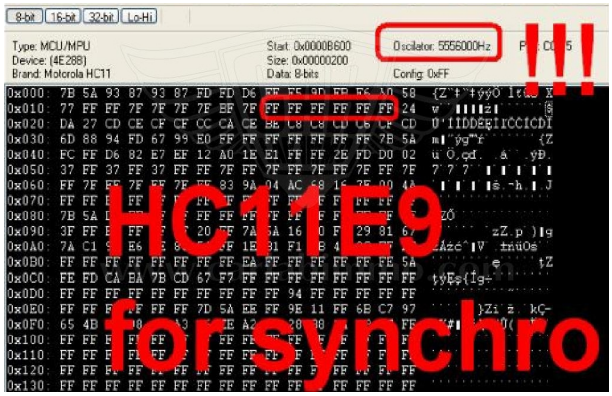



**Before reading the content of the memory, set the oscillator to 5556000Hz!**

## 1st CHANGE

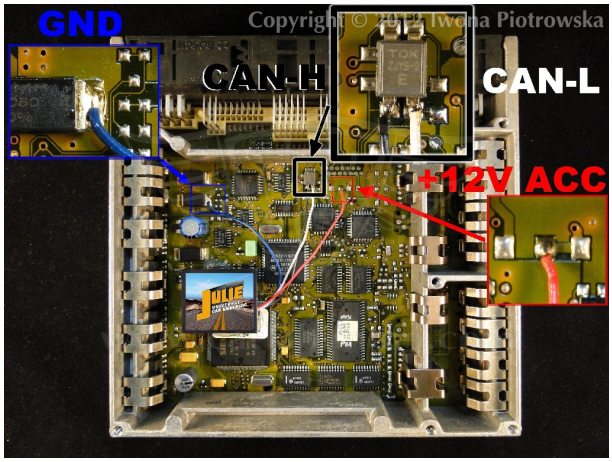



In addresses from **019** to **01E** (ETL 619 to 61E), write **FF** values

## 2nd CHANGE


In addresses from **029** to **02E** write **FF** values

## Connecting the emulator to the ECU




| | |
|---|---|
| +12V ACC | A2 pin |
| GND | A3 pin |
| CAN-L | D12 pin |
| CAN-H | D11 pin |

**E-class Lucas 4-socket ECU**
**with mechanical and electronic ignition switch**

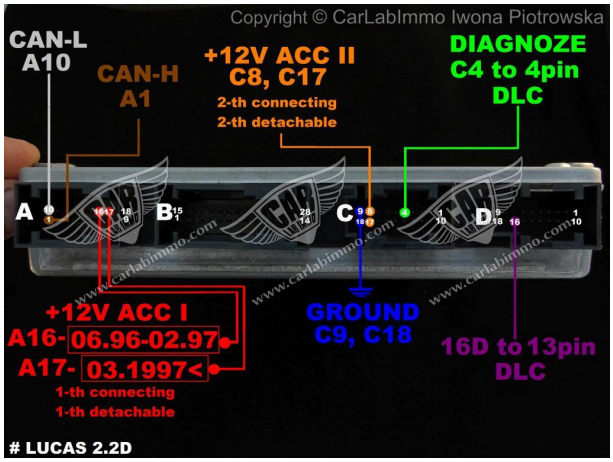
Mercedes E-class 2.0 diesel 1996
Lucas A0195459432 ed013 sw25.96 fd30.96

ECU is located in the engine compartment on the passenger's side

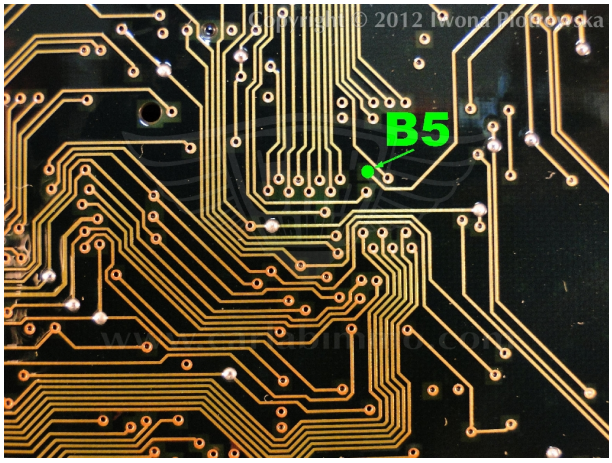
**After connecting the emulator, you need to carry out personalization with HHT or Star Diagnosis diagnostics tools. After starting the engine, you must run the car for 60 seconds for coding to be completed.**

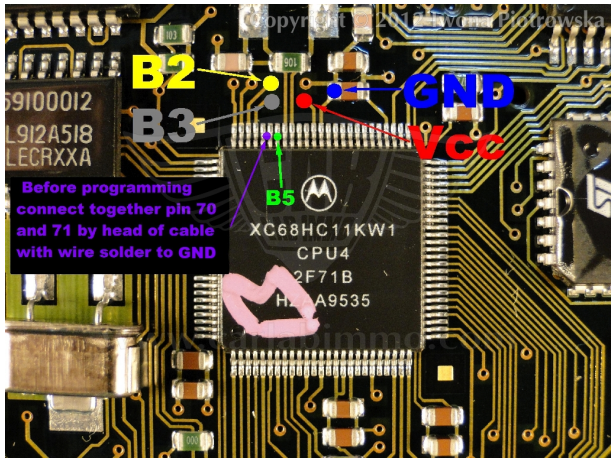
EXAMPLE OF PERSONALISATION

**Disconnect CAN from WSP!!!**




Motorola **HC11KW1** quartz **8MHz** – connection of **X-Prog** programmer to Motorola

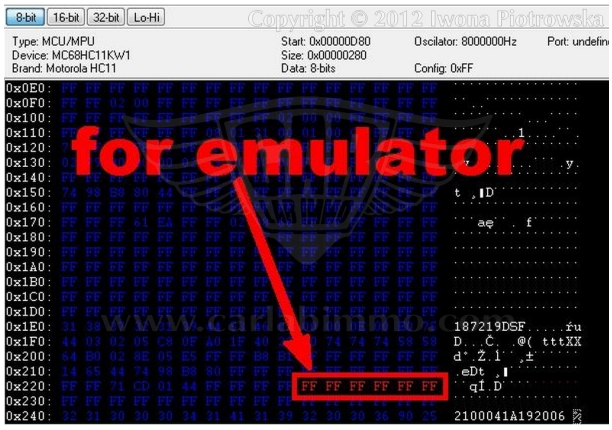


Before making a connection to processor you have to connect pin 70 and 71 together with a needle. Solder the wire to the needle that you then connect to GND.

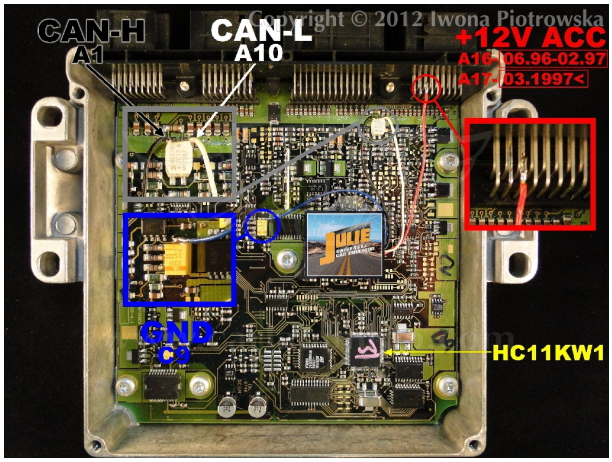
| | | |
|---|---|---|
| pin 63 | VSS ground | GND |
| pin 64 | VDD +5V | A3 pin |
| pin 69 | reset | B5 |
| pin 70 | Mod B to GND | B4 |
| pin 71 | Mod A to GND | GND |
| pin 72 | RXT | B3 |
| pin 73 | TXD | B2 |

Change to **HC11KW1** processor




In address from **22A** to **22F** write **FF** values

## Connecting emulator to ECU



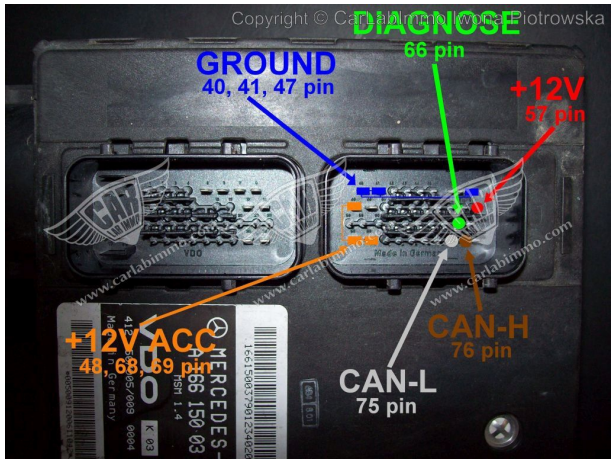

| | |
|---|---|
| +12V ACC | A16 pin |
| GND | C9 pin |
| CAN-L | A10 pin |
| CAN-H | A1 pin |

**A-class VDO MSM ECU**
**1.4 1.6 1.9 gasoline**

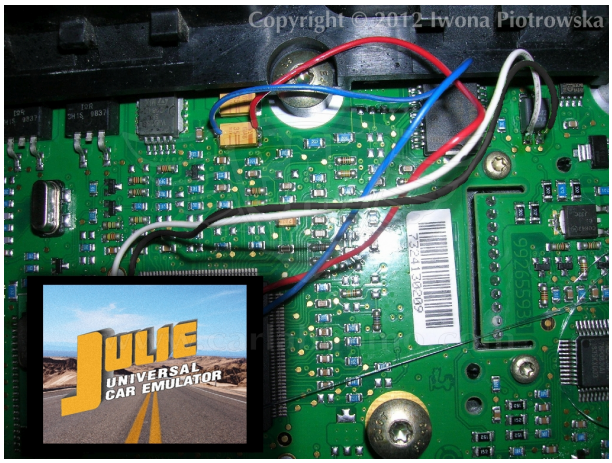
**After connecting the emulator, you need to carry out personalization with HHT or Star Diagnosis diagnostics tools. After starting the engine, you must run the car for 60 seconds for coding to be completed.**

EXAMPLE OF PERSONALISATION

**Disconnect CAN from WSP!!!**

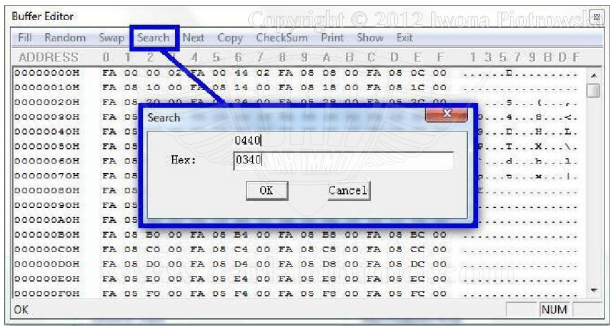

ECU is located on the air delivery pipe together with Air Mass Flow Sensor




**Connecting emulator to ECU**

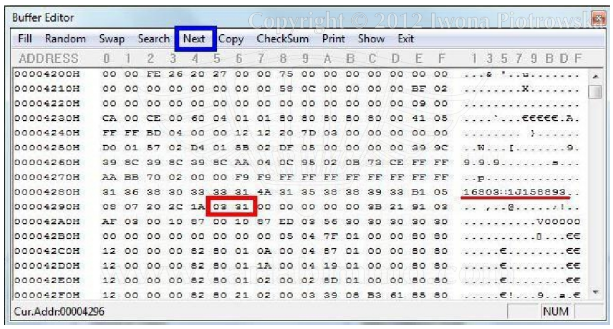
| | |
|---|---|
| +12V ACC | red |
| GND | blue |
| CAN-L | white |
| CAN-H | black |

To read and make changes to the memory, use **Wellon** programmer




Once **29F200** (44pin) flash memory is read, write **03 40** (or 04 40) value in search window

All **03 40** (or 04 40) values which you will find under chassis number, change into **03 31** (or 04 31)



**Warning!!!**

**Due to possible construction changes of cars, check signals with multimeter in the ECU plug.**

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