## Repair Autocom CDP VCI

Test interface with usb cable, not bluetooth use software without internet connection or add "127.0.0.1 activation.autocom.se" to C:\Windows\system32\drivers\etc\hosts file firmware must be upgraded with vci connected to car, and to pc with usb cable

Most important is Change R74 and R75 + 2 K-line trancievers and will be OK on BMW E60 and E90.

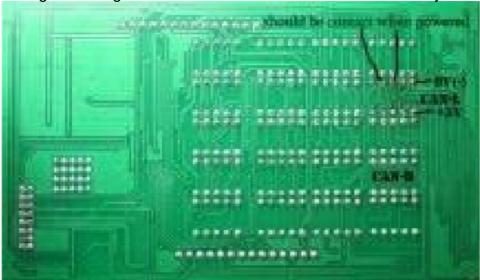
You have to change all together! If change first K-line trancievers and than connect to any brand of car, you will have to buy another pair of trancievers!)

- 1. check/replace 2 resitors > 390 ohm: R74/R75 SMD ones should be marked **391** or **3900** (not  $\frac{3980}{100} = 39$  ohm, not  $\frac{300}{100} = 30$  Ohm)
- 2. check/replace poor quality Vishay or SI9241 K-line transceivers > 9241A:



Check voltage on K and L line with multimeter. On idle you must have about **12V** on them. When you start communication with car lines shortly go down on about 1V. If you don't get that voltage drop try to check signal on TX input of **9141 IC**. If you have some pulse (i think from **-5V** to **5V**)

during initializing of connection with car then 9241 IC is surely defective



maybe transceiver is ok, change 3.9 or 39 ohm > **560** ohm on pull-up resistor of **SI9241** (or **470** ohm up to **1 Kohm**)

## 3. check/replace relays:

bad K-Line comunication: 1 relay in relay board freeze to position "ON". open the relay with a knife and I set the weight inside the spring to automatically switch to the OFF position



When CDP powered and connected to USB, run SW and connect to any car (no need for a real car!) and then go back to main SW window. measure relay coils and see how many are ON: 3 relays must be ON when in this window! If only 2 are ON BMW E60 and E90 don't work!

only 2 red marked must be ON when standby, both 2 red and 2 green marked (1 relay for obd pin 1 and 1 relay for obd pin 7 and 15) must be ON with bmw



replace relays drivers ic's LV125D > NPX 74LV125D

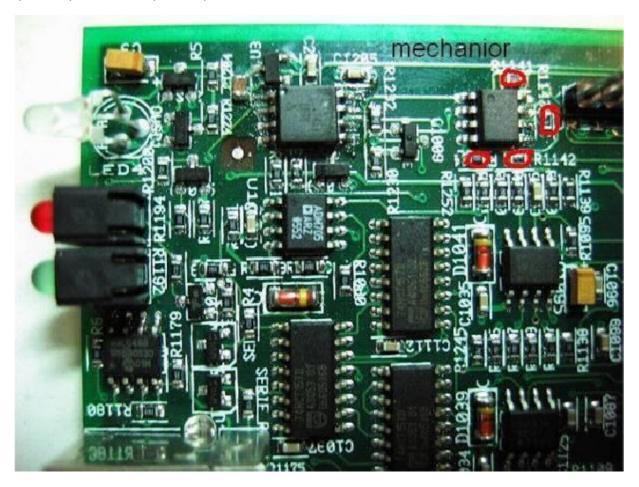
when applied 5v on one relay, if 3 relays turn ON this is not OK, only one by one must turn ON (+ is common for all relays, drive with –, you can test all of them just moving ground)

with bmw problem is on relay pcb, relays are ok, must be 1 of the relay drivers

replace MAX chips on relay board and if Ford not work get new OKI chip

- 4. check/replace oki chip, some come defective, or replace made in japan > thailand
- 5. check/replace capacitors (need 47uF 50V for trucks) replace all capacitors on PCB to electrolitic
- 6. check/replace voltage regulator near capacitors
- 7. check obd2 connector pins, all straight, not bended

8. check/replace 4 resitors together max1487: R36 (R1143) 47 Ohms, R34 (R1144) 10K, R33 (R1141) 10K, R35 (R1142) 10K or 470 ohms ???



9. check resitor **R58** and capacitors **C11** and **C5** (different between working and not working autocoms). with **9241A** diagram you can see that K line need resistor to Vbat (this is **500ohm** on both autocom) and capacitor to GND (measured this capacitance in circuit and on **working** AC is **40nF** and on **non working** AC is **100nF**) or change **C11** to **102pF** = **1nF** 



10. solder some surface of pcb with hot air



- 11. open the clone ,get a good flux, remake all soldures of the pcb
- 12. check/replace IC close to usb port **ATMLH124** > **93LC4681**