



Abstract

Component Security in keys of the Megamos48 type

The modern immobilizers of the VAG-group vehicles have such conception as “Component Security” (CS). The CS is an array of 7 bytes length. Its role in a vehicle is to forbid a mixing of electronic units from different cars. In terms of the immobilizer the CS is a “password” that used in couple of the Motor Unit (ECU) and the immobilizer.

The protection scheme includes 3 components that share the CS, they are:

ECU

IMMO

KEY

The protection scheme allows the engine to start only in case when the CS is identical in all the three components.

Key and CS

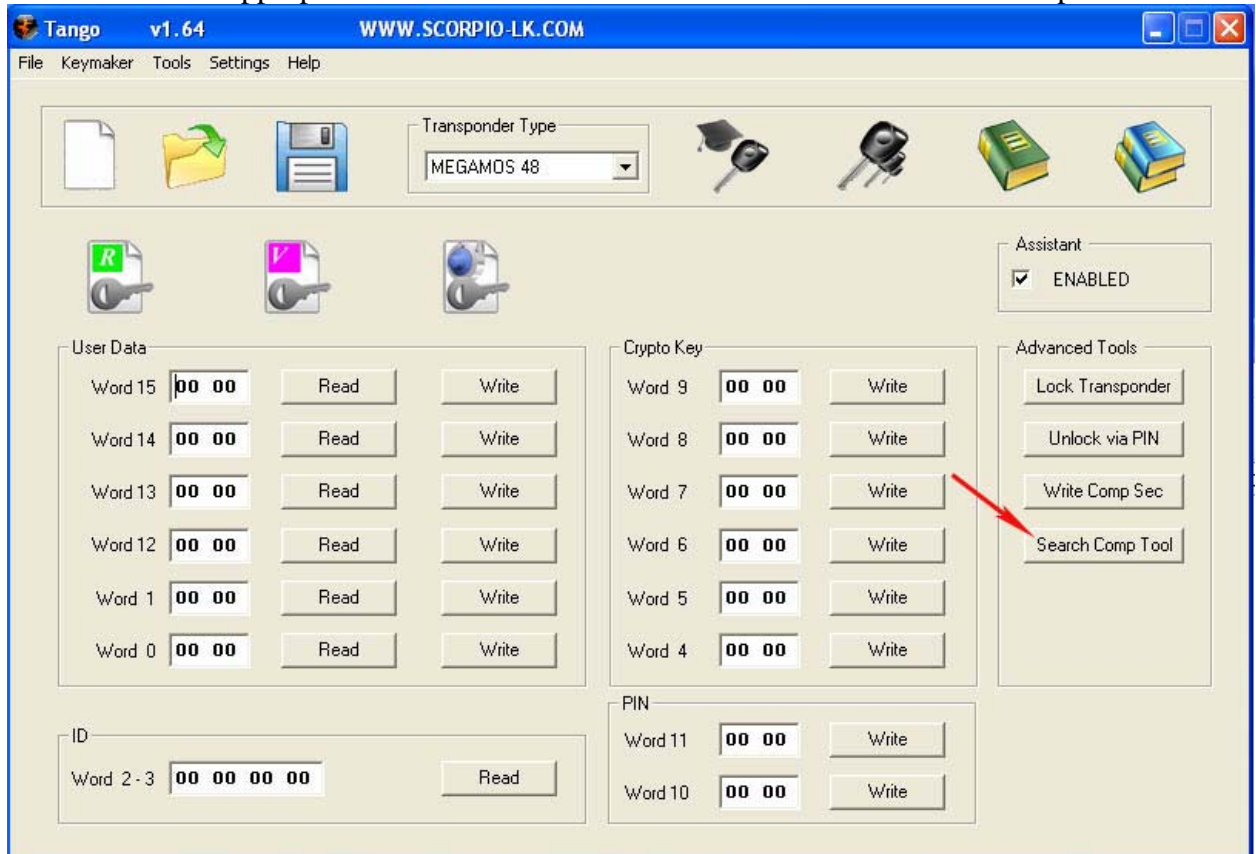
The CS is a part of the Crypto Key and fills its upper area Word9-Word6.

Usage

In common practice it is possible to get the first 6 bytes of CS. The last, 7th byte is unknown. There are many ways how to find out the 7th byte. One of them is to pull out it from an existing key. **Thus, to use this tool, it is needed to have at least one valid key.**

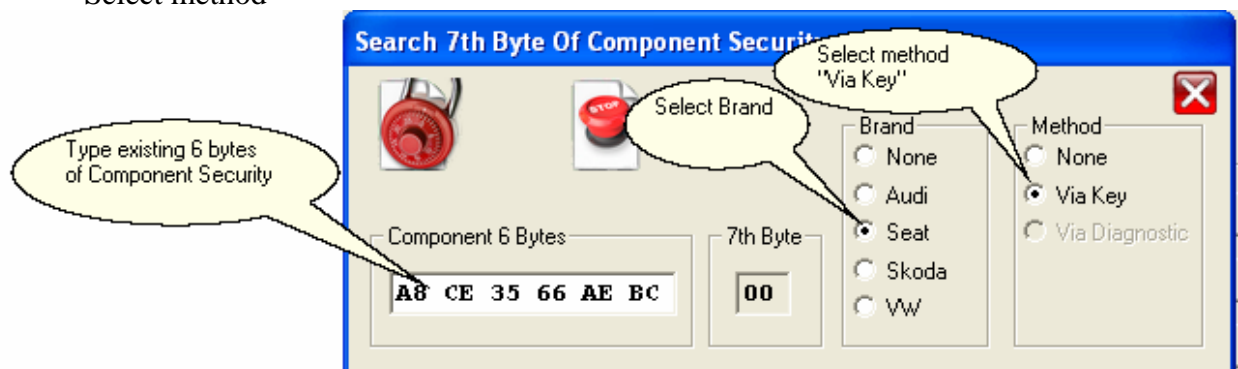
1. Running of the “Search Component Tool”

Click the appropriate button in the MEGAMOS-48 mode as shown on the picture:



2. In the new window:

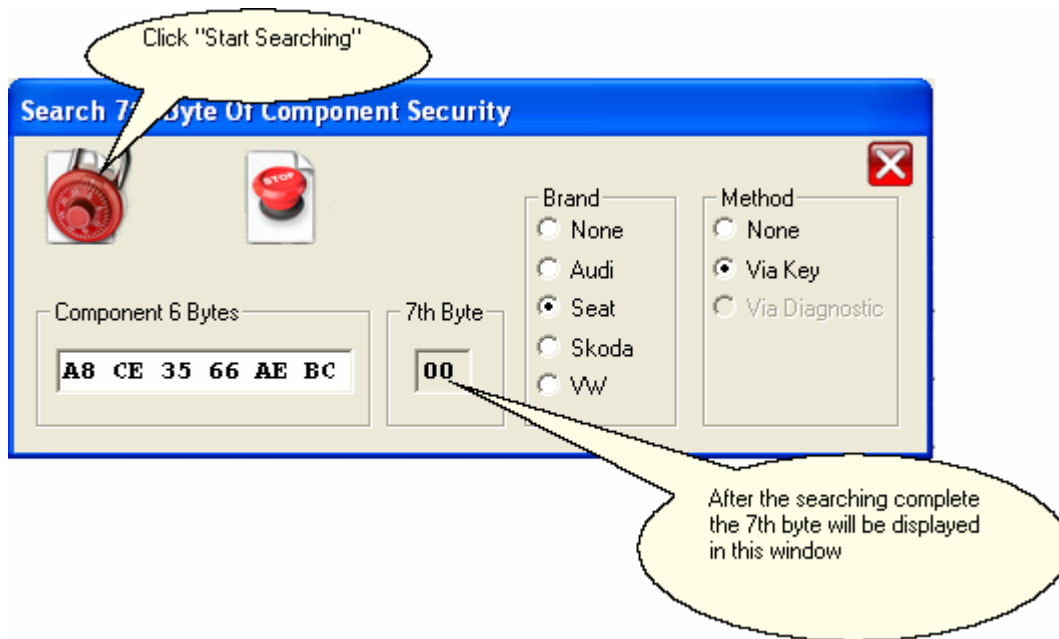
- Type the 6 bytes of CS that are known
- Select Brand
- Select method



At this example the CS assumed as A8CE3566AEBC and a car is Seat.

3. Now all is ready to start searching.

- Put the valid existing key into the programmer coil.
- Click the “Start Searching” button:



During operation the 7th Byte value will change sequently from 0x00 to 0xFF. When the value is valid, the process will be stopped. Operation takes up to 1 min of time.

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