

- , Type of vehicle
- , TWC
- , Without TWC
- , 5-speed manual transmission
- , 4-speed automatic transmission
- , 5-speed automatic transmission
- , Cruise control
- , ASR
- , Electronic traction system
- , National version

Notes on immobilizer

, On model 124 with manual transmission as of 03/94 an immobilizer is fitted as standard which acts on the fuel injection and ignition system (HFM-SFI). The fuel pump relay and terminal 15 to the engine control module (HFM-SFI) is open-circuited. On all other models only terminal 50 to the starter is open-circuited. Before starting the test, it must be ensured that the disabling function of the immobilizer is isolated.

, On vehicles as of 12/94 (HHT diagnosis identifier 46) and model 124.062 as of 3/96 a stage 2 drive authorization system is fitted (except model 124). The drive authorization system is now activated by the RCL control module via the CAN data bus to the engine control module (HFM-SFI).

As soon as the key is turned in the ignition lock the DAS control module receives a signal and enables the engine control via the CAN data bus. Locking and unlocking the vehicle with the mechanical key has no effect on the drive authorization system. The DAS control module is actuated by the IR DAS control module on model 124.062 as of 3/96.

A stage 2b drive authorization system is fitted to model 170 as of 6/97. The design and function for the start enable of the control module corresponds to the DAS stage 2a.

Notes on stage 3 drive authorization system

The EZS with electronic ignition key is fitted to models 210 as of 3/97 and 202, 208 as of 6/97. It can only be activated or deactivated with the electronic ignition key. Once the electronic ignition key is inserted the EZS enables the engine control via the CAN data bus.

Once the drive authorization system is activated the engine control module (HFM-SFI) renders the injection system inoperative. This drive authorization system can only be activated or deactivated with the RCL remote control.

Locking and unlocking the vehicle with the mechanical key has no effect on the drive authorization system.

The engine control module (HFM-SFI) and RCL control module are permanently interlocked by means of an identification code. This identification cannot be erased (refer to HHT actual values "Drive authorization system" menu item 3/6).

It is therefore not possible to replace the engine control module (ME-SFI) or the RCL control module in another vehicle on an experimental basis.

Notes on stage 2, stage 2a and 2b drive authorization system (DAS)

A stage 2 drive authorization system is fitted to vehicles up to 5/96. It is activated or deactivated with the RCL remote control. A stage 2a drive authorization system is fitted to vehicles up to 5/96 (except model 124.062 as of 3/96). It is activated or deactivated with transponder technology via the ignition key.



If a new engine control module (HFM-SFI) is installed for test purposes, a maximum of 40 start-up operations may be carried out, as after this the control modules are permanently interlocked.

The identification must also be initiated and the vehicle ident. end no. entered. (Refer to HHT actual values "Drive authorization system" menu item 3/6)

Notes on HHT

, Troubleshooting with HHT

Fault memory: Select current faults

If the current fault status changes, e.g. due to a loose plug connection, an audible and visual signal is given so that troubleshooting can be carried out directly with the HHT.

, Loose contacts

Loose contacts are stored if they occur several times over a specific period of time. They can therefore only appear as stored faults and never as current faults.

Specified values

All specified values relating to the actual values displayed in the HHT are given in the Engine Diagnosis Manual.

Actual values of engine coolant temperature, intake air temperature and air mass

In the event of a short-circuit or open-circuit an immediate changeover is made from the current actual value to a substitute value which is very close to the actual value. Consequently a fault is not clearly recognizable and the fault can only be read out via the fault memory.

Actual engine speed value

For the engine speed, the specified idle speed value calculated by the control module appears on the left of the HHT display, and the actual speed appears on the right. Both values should only differ slightly. The permissible tolerances have not yet been specified.

Variant coding with the HHT as of 03/94 (HHT diagnosis identifier as of 45)

- a) Before removing the engine control module (HFM-SFI), read out and store the existing code number with the HHT (menu item 6 "Variant coding"). After the new control module has been installed, input the stored code number.



The code number must be erased when the new control module is returned to the Central Supply Depot.

- b) If the code number **cannot** be read out, the vehicle version must be established. The corresponding code number must be obtained from the spare parts microfilm, group 54 and input manually with the HHT.

- c) The following is to be observed when experimenting with the installation of a control module with the same part number from another vehicle:

- , Read out and note code number of the complaint vehicle
- , Exchange control modules
 - , Read out and note code number of exchanged control module
- , Enter code number of original control module in the exchanged control module
- , Perform function check
- , Before refitting the control module enter the code number read out at the start
- , Rebuild control module

Note on HHT (continued)

Drive authorization system stage 2, 2a and 3 (DAS)

After the engine control module (HFM-SFI) has been replaced, identification also has to be carried out after variant coding and the vehicle ident. end no. input (refer to HHT actual values "Drive authorization system" menu item 3/6).

Correction program for models

Models 202.024/025, 208 and 210

Model 202 as of 8/96

The following corrections can be made with the HHT:
(refer to HHT "Correction program" menu item 7)

1. Correction of ignition for different fuels (RON) except model 210.035 up to 5/96
2. Correction of fuel delivery in the event of complaint (MKV)
 3. Correction of idle speed in selector lever position P/N
4. Correction of idle speed with selector lever in drive stage
5. CO setting for vehicles without TWC