Engine control module coding procedure: 1.8Ltr 5V (AWP Engine)

A 5-character code must always be displayed during the control module identification.

The control module must be recoded if the vehicle relevant coding is not displayed or the control module has been replaced.

Special tools and equipment
VAG1551 scan tool with VAG1551/3B cable – iScan Scan Tool

Connect VAG1551 scan tool (VAG1552). Switch ignition on and select engine control module with "Address Word" 01. (Connecting scan tool and selecting engine control module)

Using iScan Tool: Volkswagen > Engine > Engine > Coding

Indicated on display: (Using VAG 1552)
Coding control module Q
Enter code number XXXXX (0-32000)

Enter relevant code number for this vehicle and confirm.

Control module identification and coding are indicated on display (example):

06A906032DL 1,8L R4/5VT G 0001
Coding 07500 WSC 00000

Indicated on display when a non-authorized code number has been entered.

Function is not recognized or cannot
be performed at the moment.

- Press key ⟶
- Press keys 0 and 6 for "End output" function and confirm input with “Q” key.
- Switch ignition off.

Note:
The code entered and shown on the display will not be used by the Motronic control module until the ignition has been switched off once. An incorrect coding leads to:

- *Engine running malfunctions (gear change jerks, load change jerks, etc.)*
- *Increased fuel consumption*
- *Increased exhaust gas emissions*
- *Codes stored in DTC memory which are not actually present*
- *Functions will not be performed (oxygen sensor control, activation of the Evaporative Emission (EVAP) system, etc.).*
- *On front wheel drive vehicles the traction control will not function (TC warning lamp comes on)*
- *Reduced transmission life*

Coding variations of engine control module

Country/emission	Drive/additional functions	Transmission	Vehicle type
00 =	0 = Front wheel drive	0 = 5-speed manual transmission	0 = A class: e.g. Golf
01 =	1 =	1 = 6-speed manual transmission	1 =
02 =	2 = All Wheel Drive	2 =	2 =
03 =	3 =	3 = Automatic transmission 01M	3 =
04 =	4 = All Wheel Drive without traction control (TC), data bus	4 =	4 =
05 =	5 = Front wheel drive with traction control (TC), data bus	5 = Automatic transmission 09A	5 =
06 = TLEV	6 = All Wheel Drive without Anti-Slip Regulation (ASR), data bus	6 =	6 =
07 = LEV	7 = All Wheel Drive with Anti-Slip Regulation (ASR), data bus	7 =	7 =
08 =	8 =	8 =	8 =

The code number is compiled as shown in the following examples:

Golf:				0
5-speed manual transmission:			0	
Front wheel drive with TC and data bus:		5		
Emissions concept LEV:	07			
Code number:	07	5	0	0

GTI:				0
6-speed manual transmission:			1	
Front wheel drive with TC and data bus:		5		
Emissions concept LEV:	07			
Code number:	07	5	1	0

Engine control module, Throttle Valve Control Module Adapting

The adaptation teaches the engine control module the various positions of the throttle unit when the ignition is switched on and the engine is not running. These positions are stored in the control module. The feedback of the throttle valve position is via both angle senders for throttle valve drive.

Adapting sequence must be performed if:

- Throttle valve control module is removed and installed
- Throttle valve control module is replaced
- If when installing another engine another throttle valve control module is installed
- Engine control module is replaced

Note:
On vehicles installed with an automatic transmission the transmission control module must also be adapted

Tools and Equipment Required:
VAG1551 scan tool or VAG1552 mobile scan tool with VAG1551/3B cable – iScan Tool

Test conditions requirements:

- ✓ No malfunctions must be stored in DTC memory
- ✓ Check DTC Memory
- ✓ Battery voltage must be at least 11.5 V.
- ✓ Throttle valve must be at idling speed position (The accelerator must not be operated during the test)
- ✓ Throttle valve part must not be dirty (carbonization).
- ✓ Coolant temperature must be 5 to 95 C Basic Settings (function 04) Field 3
- ✓ Cruise control system must be functioning correctly if installed.

Connect VAG scan tool (VAG1552). Switch ignition on and select engine control module with "Address word" 01.(Connecting scan tool and selecting engine control module

Using iScan Tool: Volkswagen > Engine > Engine > Basic Settings

Indicated on display (VAG 1552)
Rapid data transfer HELP
Select function XX

Press keys 0 and 4 for function "Introduction of basic setting" and confirm entry with Q key.

Indicated on display (VAG 1552)
Basic setting HELP
Input display group number XXX

Press keys 0, 6 and 0 for "Display group number “060" and confirm entry with Q key.

Indicated on display: (1 to 4 display zones)
Basic setting 060
xxx % xxx % x ADP. Runs

After pressing the Q key the throttle valve positioner is switched so that it is not supplied with voltage at start of test.

In this condition the throttle valve is pulled into an emergency running position by a mechanical spring in the throttle valve control module. The values that both angle sensors provide in the emergency running position are stored by the engine control module.

Thereafter, the throttle valve is opened a predetermined value. If this value is achieved, the throttle valve is again switched so that it is not supplied with voltage. Now the mechanical spring must pull the throttle valve to the previously learned emergency running position within a predetermined period (spring test).

Then the throttle valve is closed by the throttle valve positioner and the values, which are supplied by the angle senders in the throttle valve control module, are stored by the engine control module.

If the engine control module switches the throttle valve positioner so that it is without voltage during normal operation, this is indicated by the increased and hunting idling speed. The engine reacts slowly to accelerator changes.

Indicated on display: (1 to 4 display zones)
Basic setting 060
xxx % xxx % 8 ADP. OK

Adapting has been performed successfully.

Using iScan Tool:
Volkswagen > Engine > Engine > Basic Settings > Data Block 060
In Field 3 and Field 4, the same results will be seen as the VAG 1552!

Note:
If the basic setting of the control module is interrupted, the cause could be one of the following:

1. The test conditions were not fulfilled.

2. Throttle valve control module or wiring is faulty.

After an interruption a code is stored in DTC memory. When next switching on ignition the basic setting is automatically performed again.

Kick-down point, learning (Transmission)

Following replacement of the engine control module or the accelerator pedal, vehicles with automatic transmissions must relearn the kickdown point.

Test conditions
Ignition on, engine not running

Connect VAG1551 scan tool (VAG1552). Switch ignition on and select engine control module with "Address word" 01.(Connecting scan tool and selecting engine control module

Indicated on display
Rapid data transfer HELP
Select function XX

Press keys 0 and 4 for function "Introduction of basic setting" and confirm entry with Q key.

Indicated on display
Basic setting HELP
Input display group number XXX

Press keys 0, 6 and 3 for "Display group number 63" and confirm with Q key.

Indicated on display
System in basic setting 063
1 2 3 4

Observe display in Fields 3 and 4:

Press accelerator pedal beyond kickdown pressure point to floor.

Hold pedal at this point for at least 5 seconds.

Observe display in Fields 3 and 4:

Specification: Kick Down ADP runs
Specification: Kick Down ADP OK

Appears in display zones 3 and 4:
Display: Kick Down ERROR

Check accelerator pedal position sensor:
Will require the needed diagnostic information to perform Throttle Body Diagnostics