

THROTTLE BODY ALIGNMENT WITH ENGINE ECU

Dear customer,

With the current Tech News, we wish to provide you with important information about procedures for *throttle body adaptation (TBA)* on the main vehicles of the VAG group, which are the following:

- Audi
- Seat
- Skoda
- Volkswagen.

Procedure includes a synchronisation of the functions of the throttle body with the engine ECU, on many petrol vehicles of the VAG Group.

The adaptation consists in the acquisition of information about the position of the throttle for different functions.

More precisely, the following positions are memorised:

- Position **0** - throttle closing
- Position **100** - maximum throttle opening
- 5 intermediate functioning positions

ADAPTATION IS EXECUTED WHEN:

- The engine ECU has been removed and reinstalled
- Battery has been disconnected and reconnected
- The throttle body has been substituted or removed for cleaning purposes



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- The accelerator pedal has been substituted

Some vehicles may operate anomalously, unless an adaptation is performed, after the above mentioned operations.

Adaptation shall be possible on both, vehicles that adopt an electrical accelerator as well as the traditional ones (iron cable).

IMPORTANT NOTE

Cars equipped with an idle stabilization valve do not present a throttle body, therefore, no adaptation shall be executed.

ESSENTIAL REQUIREMENTS FOR THE REGULATION:

- Execute an error request and error cancellation of the engine ECU.
- Verify, if present, the battery's tension parameter. It should be of at least 11.5 V.
- The throttle has to be at the zero position (the accelerator must be released).
- The throttle body must be clean, there must not be any presence of carbon residues caused by a normal functioning.
- The engine temperature parameter must show a value over the 80°C.
- Do not press the accelerator during procedure.

FEATURES OF THE BRAIN BEE SYSTEM:

Currently, Brain Bee S.p.a. diagnosis software utilises 3 regulation channels in order to perform the adaptation:

1. channel **98** for the systems with KWP 1271 protocol
2. channel **60** for the systems with KWP 2000 protocol
3. channel **01** for the systems with KWP 1271 protocol. Only a few vehicles use this adaptation channel.

Important note: the insertion of regulation channels shall not be necessary, since Brain Bee software already contains detailed descriptions about the options to be selected. In this case, the option present on the regulations menu of the EFI system is the following: *"Throttle Valve Adaptation"*.



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Moreover, with release of CD 72, the throttle body adaptation shall be further simplified by means of a different selection mode.

After adaptation, it may be necessary to reset the self-adapting parameters. Such a function is executed before the insertion of the regulation channel **00**, which is not required during the TBA.

The *self-adapting parameters reset* function consists in resetting the engine ECU to the initial values, through a new acquisition of the functioning parameters.

It shall be important to be careful not to perform a reset of the self-adapting parameters when not necessary.

This reset may temporarily compromise the vehicle's functions.

A clear example, is that of EOBD diagnosis; when an errors reset is executed, the readiness test (EOBD parameters) displays zero values.

This means that during the self-acquisition performed by the ECU, in order to recognise and correct eventual anomalies, the vehicle may not respect the normal EOBD functioning in charge of environmental pollution.

Therefore, and only when strictly necessary, we recommend the reset of the self-adapting parameters after the throttle body alignment.

Looking forward to offering information of great use, we hope it may also become a reason for an exchange of ideas.

Do not hesitate to contact us for further clarifications!

After Sales Department Technical Staff



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