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Technical Bulletin

Subject: Runs Rough On Initial Start at Temperatures Below -7°C (20°F)

Group: 23

Number: 05-02

Model(s): Golf, Jetta, Jetta Wagon, New Beetle 2004, 2005 with 1.9L 2V TDI PD (Eng. Code BEW)

Date: Feb. 23, 2005

Supersedes T.B. Group 23 number 05-01 dated Feb. 3, 2005 due to Injector Labor Operation Update.

Condition

Vehicle runs rough on initial start at cold temperatures (below -7°C (20°F)).

Service

◀ Workflow Overview for Service Procedures incorporated into this Technical Bulletin.

- Verify that Work procedures in the following Technical bulletin (depending on model) have been performed:

2005 Models

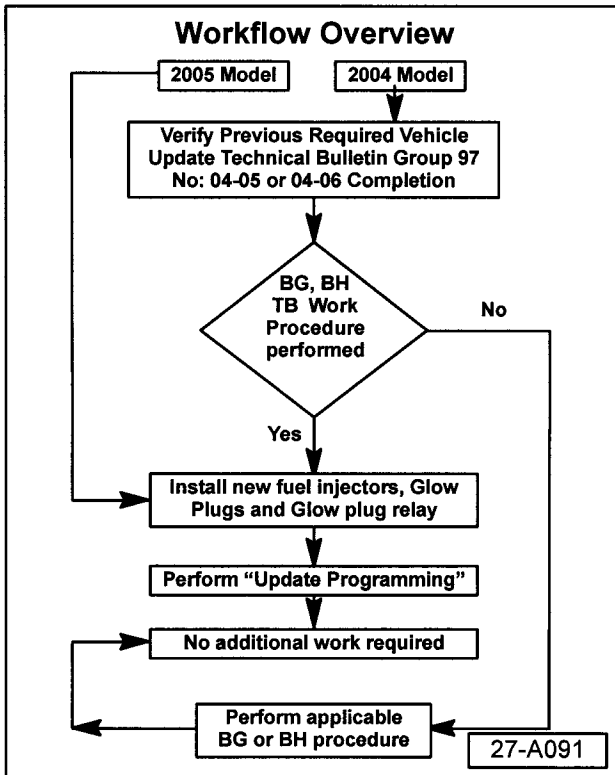
- If condition exists, install kit and Update ECM programming (flash) as follows.

2004 Models

Golf, Jetta, Jetta Wagon - Group 97 No: 04-05 (BG) (2004 only)

New Beetle - Group 97 No: 04-06 (BH) (2004 only).

If condition still exists, install Kit Part No: 038 198 073B* and update ECM programming (flash) as follows:



Kit Part No: 038 198 073B* includes

| Part No: | Qty. | Description |
|------------------|------|--------------------------|
| 038 130 073 AG** | 4 | Fuel injectors |
| N 105 916 04 | 4 | Glow Plugs |
| 038 907 281C | 1 | Glow Plug Control Module |

*) At a later date, Kit will supersede to individual Part Nos. as listed in table.

***) To install injectors also requires bolts, (not included in kit) Part Nos: 038 103 714A (qty 8) and 038 103 385A (qty 4).



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Tip:

Part numbers listed in this T.B. are for reference only. Always check with your Parts Dept. for the latest parts information.



Note:

Ignition key must remain OFF until all parts have been replaced.

- Install new fuel injectors (see Repair Manual Group 23 - *Mixture preparation, Injection, Unit injector*, removing and installing)
- Install new engine Glow plugs -Q6-.
- ◆ Golf Jetta (see Repair Manual Group 28 – *Glow plug system, Glow plug system, checking*).
- ◆ New Beetle (see Repair Manual Group 28 – *Glow plug system, Glow plugs, servicing*).
- Install new Glow activation control module -J370- (for location see Repair Manual *Component locations*).

With Parts replaced as necessary:

- Update ECM software using Flash CD W42TDISWU7000.



Note:

- ◆ **DO NOT** install this software update if injectors, glow plugs and glow plug relay as listed on page 1 have not been installed. *Damage to glow plugs will occur.*



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Procedure:

Update - Programming (Flashing)



Tip:

- ◆ *When performing the reflash procedure, ALL DTCs for all systems are erased.*
- ◆ *DTCs linked to Guided Fault Finding function tests will be lost. Therefore, always address stored DTCs for Customer concerns unrelated to the reflash procedure first.*



Tip:

- ◆ *The following "Update - Programming" (flashing) process may overwrite any "TUNED" ECM programming.*
- ◆ *A "TUNED" ECM is described as any ECM altered so as to perform outside the normal parameters and specifications approved by Volkswagen of America, Inc..*

If you encounter a vehicle with a "Tuned" ECM, prior to performing the "Update - Programming" (flashing) procedure:

- Your Dealership should place the vehicle owner on notice in writing, that their ECM was found to have been tuned, and that any damage caused by the tuning of the ECM (including any adverse emissions consequences) will not be covered by Volkswagen of America, Inc. warranties.
- For any repair requested by the owner under warranty or outside warranty that requires flashing, which will automatically wipe out the "Tuning" program, your Dealership should advise the owner of the above and get Owner's written consent (see attached Control Module Tuning form) to the flashing procedure.



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Tool requirements

- ◆ VAS 5051 or 5052 (with Basis CD V.07.55 and the Brand CD V.07.00 or higher) with old diagnosis logs erased prior to start.
- ◆ “Update - Programming” (flashing) CD W42TDISWU7000.
- ◆ Approved battery charger.



Tip:

Additional copies of the “Update - Programming” CD (Literature Number W42TDISWU7000) may be ordered from the Volkswagen Technical Literature Ordering Center at www.vw.dds ltd.com, or by calling 1-800-544-8021 from 8:00 a.m. to 8:00 p.m. EST Monday through Friday. This number can be dialed in both the United States and Canada.

Vehicle requirements

- ◆ **Battery MUST have minimum no-load charge of 12.5V** (failure to maintain voltage during update process can lead to ECM failure) (use an approved battery charger to maintain battery voltage).
- ◆ VAS 5051: connected to vehicle and to 110V AC Power supply at all times during procedure.
- ◆ VAS 5052: connected to vehicle with battery voltage requirements met.
- ◆ Any appliances with high electromagnetic radiation (i.e. mobile phones) switched OFF.
- ◆ No Stored DTC's, erase any stored DTCs (see Tip on page 7).



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Note:

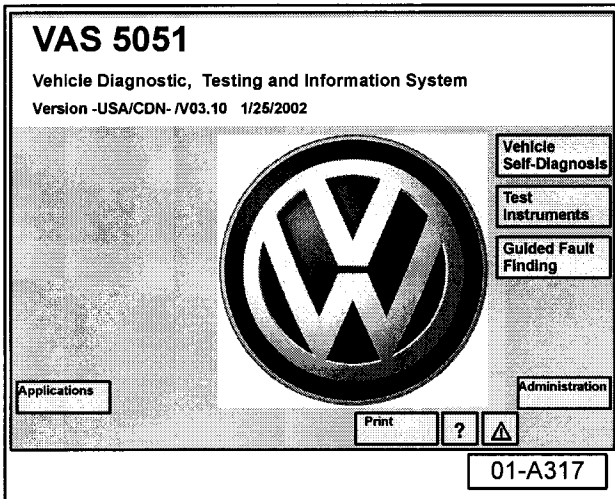
- ◆ *Non-observance of the following points may lead to ECM failure!*
- ◆ *VAS 5051 or 5052 must always be connected to the approved power supply at the approved voltages. Under no circumstances should the power supply be interrupted or the diagnostic connector unplugged during the flash procedure.*
- ◆ *Any appliances with high electromagnetic radiation (i.e. mobile phones) must be switched OFF.*



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“Update - Programming” (flashing) procedure, checking for update match

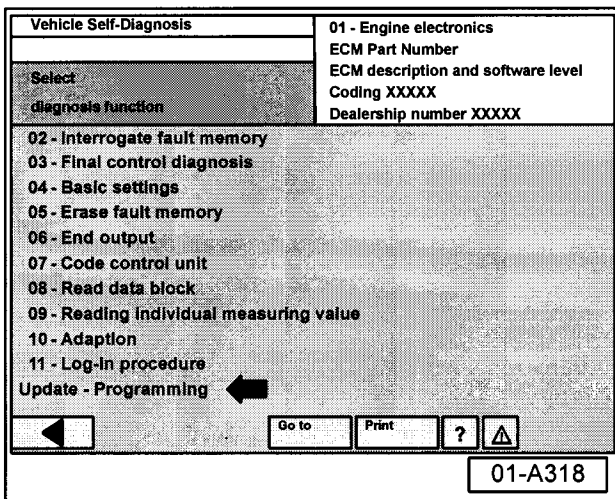
- Switch ignition ON.
- Switch VAS 5051/5052 ON and insert flash CD into CD drive as soon as start screen appears.



Tip:

You must return to the start screen before starting a new (flashing) session, otherwise the flashing CD will not be recognized by the tester.

- Select “Vehicle Self Diagnosis” mode.



- Select vehicle system “01-Engine electronics”.

◆ Program checks software level.

If software level of ECM MATCHES level indicated by Flashing CD:

- ◆ “Update - Programming” (arrow) will not appear.



Tip:

The “Update - Programming” function is only available when the inserted flashing CD level and current vehicle ECM level are different.

If “Update - Programming” does not appear:

- Programming (flashing ECM) cannot be performed, continue to diagnose condition.

If software level DOES NOT match the level indicated on Flashing CD:

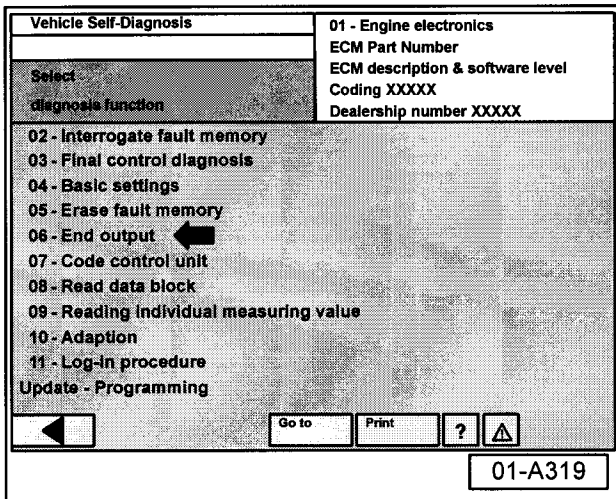
- ◆ “Update - Programming” (arrow) appears.



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PRIOR to performing procedure to “Update - Programming” (flash) the ECM:

- ◆ ALL fault memories must be interrogated and erased.

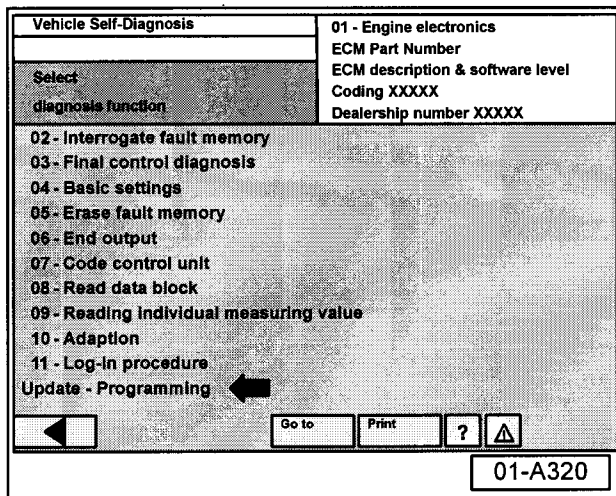
Tip:

Failure to erase ALL fault memories may cause “Update - Programming” (flashing) procedure to fail!

- ← Select Diagnosis function 06 “End output”.
- Select Diagnosis function 00 “Collection services”.
- Select “Check DTC memory - complete system”. which will interrogate all fault memories.

Tip:

- ◆ *When performing the reflash procedure, ALL DTCs for all systems are erased.*
- ◆ *DTCs linked to Guided Fault Finding function tests will be lost. Therefore, always address stored DTCs for Customer concerns unrelated to the reflash procedure first.*
- Erase ALL fault memories.



Once ALL fault memories have been erased:

- Select vehicle system “01-Engine electronics”.
- ← – Select “Update - Programming” option at bottom of screen (arrow).

Note:

Once “Update - Programming” function has been started, switching ignition OFF or disconnecting the diagnostic connector may completely destroy the ECM.



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| | |
|--|----------------------------------|
| Vehicle Self-Diagnosis | 01 - Engine electronics |
| Update - Programming | ECM Part Number |
| Programming can be carried out. | ECM description & software level |
| | Coding XXXXX |
| | Dealership number XXXXX |
| WARNING! | |
| The programme version stored in the control unit will be erased. It will be programmed with the new version 000X. | |
| The erasing programming process will last roughly XX minutes. The part number in the control unit identification may change. Vehicle specific data (coding, adaptation etc.) might be lost. It must be checked after successful programming. | |
| After the continue button has been pressed the process cannot be cancelled. | |
| IMPORTANT -- PLEASE NOTE: | |
| Switching ignition off or disconnecting the diagnostic connector during programming may completely destroy the control module! | |
| Test Instruments | Go to Print ? ⚠ |
| 01-A321 | |

“Update - Programming” (flashing), performing

After selecting “Update - Programming” function, new program version as listed below will install:

- ◆ 7000 for ECM Part No: 038 997 016 C. (Golf, Jetta, Jetta Wagon)
- ◆ 7000 for ECM Part No: 038 997 016 D. (New Beetle)
- ◆ Approximate timing for update is shown on the VAS 5051/5052 screen.

– By selecting the ► button, the programming procedure begins.

| | |
|---|----------------------------------|
| Vehicle Self-Diagnosis | 01 - Engine electronics |
| Update - Programming | ECM Part Number |
| Programming in progress | ECM description & software level |
| | Coding XXXXX |
| | Dealership number XXXXX |
| Data Transfer in % | |
| 0 11 100 | |
|  | |
| 01-A137 | |

Similar screen appears:

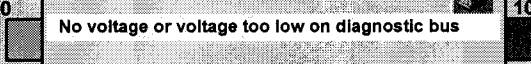

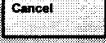
The previous data in the ECM is erased and the new data is being transferred to the module from the flash CD.

 **Tip:**

If, during the “Update - Programming”, a fault message is displayed:

– Confirm that VAS 5051 or VAS 5052 diagnostic tool power supply is adequate and that ALL appliances with high electromagnetic radiation (i.e. mobile phones) are switched OFF.

– The “Update - Programming” (flashing) process must then be started from the beginning using the “Repeat” button (arrow). DO NOT use the “Cancel” button.

| | |
|---|----------------------------------|
| Vehicle Self-Diagnosis | 01 - Engine electronics |
| Update - Programming | ECM Part Number |
| Programming in progress | ECM description & software level |
| | Coding XXXXX |
| | Dealership number XXXXX |
| Data Transferred in % | |
| 0 100 | |
|  | |
| Diagnosis bus faulty No voltage or voltage too low on diagnostic bus Is the battery voltage from the vehicle too low? Is the diagnostic connector connected to the vehicle? | |
|   | |
| 01-A138 | |

