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# Technical Bulletin

Subject: **During Low Speed Turns/Maneuvering Vehicle Feels as if it is Binding/Tires Scrubbing (BP)** Group: **39**

Number: **04-02**

Model(s): **Touareg**

**2004**

Date: **June 21, 2004**

**Instructions:** Perform this procedure on all applicable vehicles within the Limited New Vehicle Warranty

**ATTENTION!**

This Technical Bulletin is in effect for 15 months from date of publication as listed above. After that date, this Technical Bulletin will expire and no longer be in effect.

## Condition

During low speed turns/maneuvering vehicle feels as if it is binding/tires scrubbing.

## Production

For vehicles from VIN: 4D000001 to 4D040953

## Service

### Requirements:

Vehicle must meet ALL of the following criteria.

- 1 - Procedure is valid only for vehicles that show the BP code in the OTIS View Campaign inquiry screen on the day of repair.
- 2 - Vehicle must be within the Limited New Vehicle Warranty.
- 3 - Procedure must be performed within the allotted time frame stated in this Technical Bulletin.

### Note:

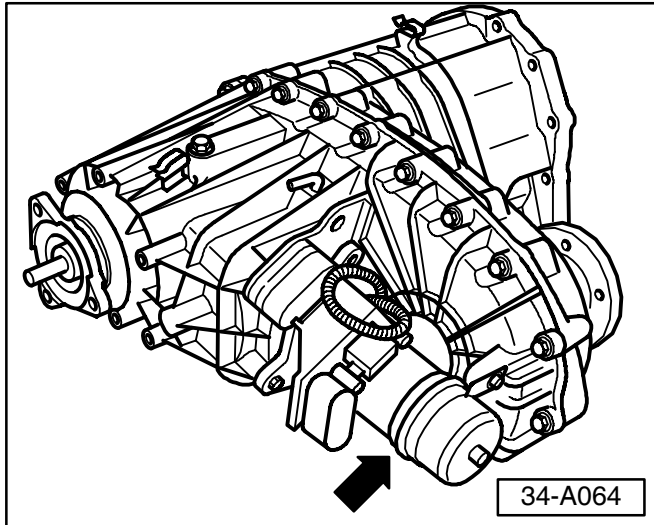
*Procedure must also be performed on applicable vehicles in Dealer inventory.*



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## Procedure:

- Check vehicle for “tension” in drivetrain by driving (with shift selector lever in “D”) into a Low Speed, tight turn. While driving in this turn, switch the Differential Lock from high to low, while keeping selector lever in “D” (DO NOT shift to Neutral).

- If tension loosens (binding goes away):

- Check Part Number on Differential motor (arrow) -V253- (see sticker on motor).

If Part Number is 0AD 341 601A:

- Go to “Differential Control Module -J646- Part Number, Checking”.

If Part Number is NOT 0AD 341 601A:

- Install Differential motor -V253- Part No: 0AD 341 601A with new gasket (included). See Repair Manual, Group 34 Manual Transmission – Controls, Housing Controls, housing *Differential motor -V253-*, removing and installing.

## **CAUTION!**

***Part numbers are for reference only. Always check with your Parts Dept. for the latest parts information.***

## **Differential Control Module Part Number, Checking”**

- Check Differential Control Module -J646- Part Number using VAS 5051 / VAS 5052 Diagnostic tool:

If Differential Control Module -J646- Part No. is 0AD 927 755AB:

- No further action is required.

If Differential Control Module -J646- Part No. is NOT 0AD 927 755AB:

- Perform Differential Control Module -J646- Flashing procedure as follows:



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**CAUTION!**

*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.*

**CAUTION!**

*The following "Update - Programming" (flashing) process may overwrite any "TUNED" Control Module programming.*

*A "TUNED" Control Module is described as any Control Module 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" Differential Control Module, prior to performing the "Update - Programming" (flashing) procedure:

- Your Dealership should place the vehicle owner on notice in writing, that their Differential Control Module was found to have been tuned, and that any damage caused by the tuning of the Differential Control Module (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 his 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.06.05 and the Brand CD V.06.51.00 or higher) with old diagnosis logs erased prior to start.
- ◆ “Update - Programming” (flashing) CD W42TOUAREGSHIFT

## Note:

*Additional copies of the “Update - Programming” CD (Literature Number W42TOUAREGSHIFT) may be ordered from the Volkswagen Technical Literature Ordering Center at [vw.dds1td.com](http://vw.dds1td.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 Differential Control Module failure) (it is advised to 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 CAUTION on Page 3).



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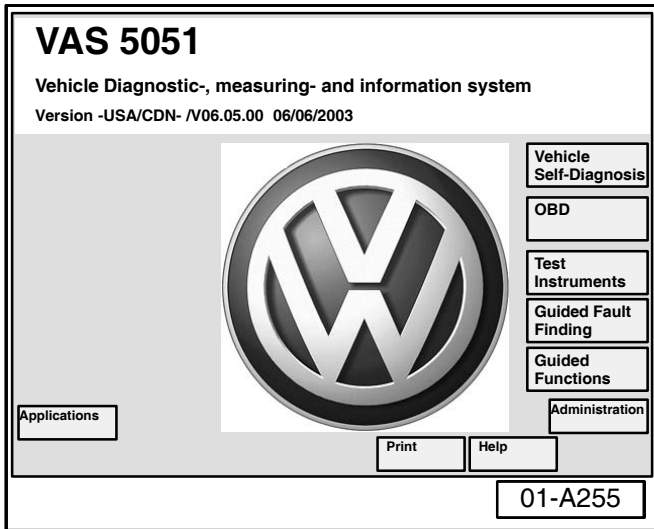
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### CAUTION!

*Non-observance of the following points may lead to Differential Control Module 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.*



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

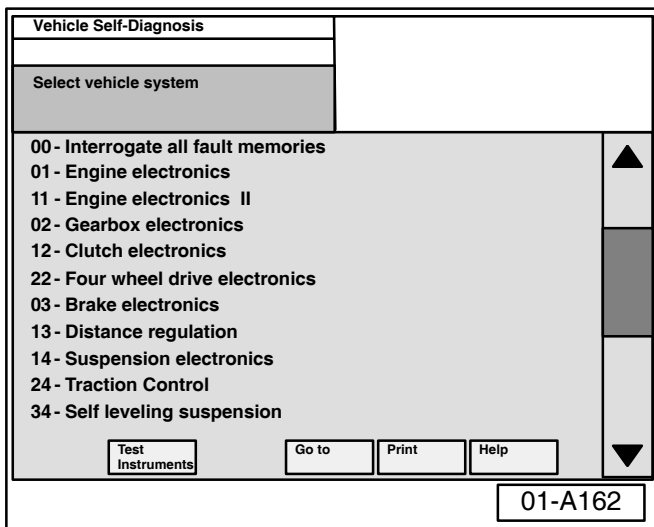
– Switch ignition ON.

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

### NOTE:

*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.



◀ Similar screen appears. Using the scroll bar to the right of the screen:

– Scroll and select vehicle system “22-Four wheel drive electronics”.



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Vehicle Self-Diagnosis	22 - Four wheel drive electronics
	Control Module (CM) Part Number
	CM description & software level
	Coding XXXXX
	Dealership number XXXXX
Select diagnosis function	
02 - Interrogate fault memory	
03 - Final control diagnosis	
04 - Basic settings	
05 - Erase fault memory	
06 - End output	
07 - Code control unit	
08 - Read Measuring Value block	
09 - Reading individual measuring value	
10 - Adaption	
11 - Log-in procedure	
Update - Programming	
◀ Test Instruments	Go to Print Help
01-A256	

◀ Similar screen appears.

- Select "Update - Programming" option at bottom of screen (arrow).

**Note:**

*The "Update - Programming" function is only available when the inserted flashing CD level and current vehicle Differential Control Module level are different.*

If "Update - Programming" does not appear:

- Programming (flashing Differential Control Module cannot be performed, continue to diagnose condition.

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

- ◆ "Update - Programming" function appears.

Vehicle Self-Diagnosis	22 - Four wheel drive electronics
	Control Module (CM) Part Number
	CM description & software level
	Coding XXXXX
	Dealership number XXXXX
Select diagnosis function	
02 - Interrogate fault memory	
03 - Final control diagnosis	
04 - Basic settings	
05 - Erase fault memory	
06 - End output	
07 - Code control unit	
08 - Read Measuring Value block	
09 - Reading individual measuring value	
10 - Adaption	
11 - Log-in procedure	
Update - Programming	
◀ Test Instruments	Go to Print Help
01-A257	

**PRIOR to performing procedure to "Update - Programming" (flash) the Control Module:**

- ◆ ALL fault memories must be interrogated and erased (see CAUTION on Page 3).

**Note:**

*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.
- Erase ALL fault memories.



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Vehicle Self-Diagnosis	
Select vehicle system	
00- Interrogate all fault memories 01 - Engine electronics 11 - Engine electronics II 02- Gearbox electronics 12- Clutch electronics 22- Four wheel drive electronics 03- Brake electronics 13- Distance regulation 14- Suspension electronics 24- Traction Control 34- Self leveling suspension	
Test Instruments	Go to Print Help
01-A162	

With all fault memories erased:

- ◀ Similar screen appears. Using the scroll bar to the right of the screen:
  - Scroll and select vehicle system "22-Four wheel drive electronics".

Vehicle Self-Diagnosis	
Select diagnosis function	22 - Four wheel drive electronics Control Module (CM) Part Number CM description & software level Coding XXXXX Dealership number XXXXX
02 - Interrogate fault memory 03 - Final control diagnosis 04 - Basic settings 05 - Erase fault memory 06 - End output 07 - Code control unit 08 - Read Measuring Value block 09 - Reading individual measuring value 10 - Adaption 11 - Log-in procedure Update - Programming	
Test Instruments	Go to Print Help
01-A258	

- ◀ Similar screen appears.
  - Select "Update - Programming" option at bottom of screen.

Vehicle Self-Diagnosis	
Update - Programming	22 - Four wheel drive electronics Control Module (CM) Part Number CM description & software level Coding XXXXX Dealership number XXXXX
Programming can be carried out.	
<b>WARNING!</b> 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. <b>IMPORTANT -- PLEASE NOTE:</b> Switching ignition off or disconnecting the diagnostic connector during programming may completely destroy the control module!	
Test Instruments	Go to Print Help
01-A259	

- ◀ Similar screen appears.
  - "Update - Programming" (flashing), performing for Differential Control Module**
  - After selecting "Update - Programming" function:
    - By selecting the ► button, the Differential Control Module programming procedure begins.



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Vehicle Self-Diagnosis	22 – Four wheel drive electronics
Update - Programming	Control Module (CM) Part Number
Programming in progress	CM description & software level
	Coding XXXXX
	Dealership number XXXXX
Data Transfer in %	
01-A260	

◀ Similar screen appears.

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

### CAUTION!

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

Vehicle Self-Diagnosis	22 – Four wheel drive electronics
Update - Programming	Control Module (CM) Part Number
Programming in progress	CM description & software level
	Coding XXXXX
	Dealership number XXXXX
Data Transferred in %	
01-A261	

### NOTE:

◀ 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.

### Important!

On NO occasion should the “Cancel” button be selected.





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Vehicle Self-Diagnosis	22 – Four wheel drive electronics
Update - Programming	Control Module (CM) Part Number
Programming log	CM description & software level
Save result?	000X
	Dealership number XXXXX
Expanded identification old XXXXXXXXXX	Expanded identification new XXXXXXXXXX
Description and software level	000X
Coding xxxxx	
Dealership number xxxxx	Dealership number xxxxx
Unit number 942	Unit number 0
Importer number 444	
Programming status	
Status	No malfunction
Counter programming status	1
Counter successful attempts	1
Programming pre-condition	fulfilled
<input type="button" value="Test Instruments"/> <input type="button" value="Go to"/> <input type="button" value="Print"/> <input type="button" value="Help"/>	
01-A262	

Once "Update - Programming" (flashing) is complete:

◆ Similar screen appears.

### Note:

*Old software level is still displayed at (arrows). New software level is not displayed until process is complete and fault memories have been erased.*

- Print this screen.
- Attach print to vehicle Repair Order.

Once "Update - Programming" (flashing) is complete, the Differential Control Module must be re-initialized.

- Select the ► button.

◆ The tester requests you to switch the ignition OFF.

- Switch ignition OFF.

### IMPORTANT!

◆ Wait at least 20 seconds before switching the ignition back ON (failure to wait at least 20 seconds may damage the Control Module).

After waiting 20 seconds:

- Switch ignition ON.

After switching ignition ON, the Differential Control Module has been re-initialized, however, fault memories must now be erased.

Vehicle Self-Diagnosis	22 – Four wheel drive electronics
Update - Programming	Control Module (CM) Part Number
	CM description & software level
<p>To continue, the control unit requires an ignition off/on cycle</p> <p>Switch off ignition.</p>	
01-A263	



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Vehicle Self-Diagnosis	22 – Four wheel drive electronics
Update - Programming	Control Module (CM) Part Number
Erase fault memory	CM description & software level Coding XXXXX Dealership number XXXXX
<p>The programming causes fault records in related control units. The fault memories of all control units in the vehicle must be erased.</p> <p>Pressing the Continue button will automatically erase the fault memories.</p> <p>Pressing the Back button will not erase fault memories</p>	
<p>◀ Test Instruments ▶ Go to Print Help ▶</p>	
01-A263	

## Fault memories, erasing after “Update - Programming” (flashing)

Due to the CAN bus system, fault messages will be stored in various Control Modules during programming.

◀ – To erase ALL fault memories, confirm by selecting the ▶ button.

Vehicle Self-Diagnosis	22 – Four wheel drive electronics
Update Programming	Control Module (CM) Part Number
DTC memories are erased	CM description & software level
Function ended	Coding XXXXX Dealership number XXXXX
<p>Vehicle systems with erased fault memories:</p> <ul style="list-style-type: none"> <li>01 - Engine electronics</li> <li>02 - Gearbox electronics</li> <li>03 - Brake electronics</li> <li>15 - Airbag</li> <li>25 - Immobilizer</li> <li>16 - Steering wheel electronics</li> <li>46 - Convenience system central module</li> <li>56 - Radio</li> <li>17 - Dash panel insert</li> </ul> <p>Function ended!</p>	
<p>◀ Test Instruments ▶ Go to Print Help ▶</p>	
01-A264	

### Note:

*This will take a few minutes, depending on how many control modules are accessed.*

Once fault memories have been erased:

- ◀ ◆ Similar screen appears.
- ◆ Old Differential Control Module Part No. and software level still appear at (arrow)
- ◆ Function ended appears at bottom of screen.
- Finish update of the Differential Control Module by selecting the ◀ button.

Vehicle Self-Diagnosis	22 – Four wheel drive electronics
Select diagnosis function	Control Module (CM) Part Number
02 - Interrogate fault memory	CM description & software level
03 - Final control diagnosis	Coding XXXXX
04 - Basic settings	Dealership number XXXXX
05 - Erase fault memory	
06 - End output	
07 - Code control unit	
08 - Read Measuring Value block	
09 - Reading individual measuring value	
10 - Adaption	
11 - Log-in procedure	
<p>◀ Test Instruments ▶ Go to Print Help ▶</p>	
01-A265	

- ◀ ◆ New update version software level “0094” will appear at (arrow).
- Print this screen to verify Differential Control Module software level.
- Attach print to vehicle Repair Order.
- ◆ Flash CD can now be removed from VAS 5051 or VAS 5052 Diagnostic tool.
- Select “Go to” then select “Exit”.
- Use VAS 5051/ 5052 to set readiness code.
- Test drive to ensure condition has been resolved.



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**Note:**

*In isolated cases ONLY! If the Control Module was reflashed and the Part Number on Differential motor -V253- was OK (motor was not replaced) and the Condition still has not been eliminated, it may be necessary to replace Differential motor (arrow) -V253- with a new part.*

- Install Differential motor -V253- Part No: 0AD 341 601A with new gasket (included). See Repair Manual, Group 34 Manual Transmission – Controls, Housing Controls, housing *Differential motor -V253-*, removing and installing.



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### Required Vehicle Update Technical Bulletin Time Requirements/ Reimbursement

To ensure prompt and proper payment, be sure to enter, immediately upon completion of the repair work, the applicable reimbursement code listed below. Claims will only be paid for vehicles that show the BP code in the OTIS View Campaign inquiry screen on the day of repair.

### BP Data Entry Procedure Use Claim Type RC

Repair Code (Damage Code Field)	Time Units	Work Scope
BP 11	20 T.U.	Check Part Nos. on Differential Motor -V253- & Differential Control Module -J646-
BP 12	70 T.U.	Check Part No. on Differential Motor -V253- & Reflash Differential Control Module -J646
BP 13	50 T.U.	Check Part No. on Differential Control Module -J646- & Replace Differential Motor -V253-
BP 14	80 T.U.	Replace Differential Motor -V253- & Reflash Differential Control Module -J646

**There is NO Reimbursement for Vehicle Wash or Loaner Vehicle**

The system automatically enters parts and labor applicable to the above listed code.

For vehicles that, according to your information, cannot be corrected or reached, and one of the codes below best describe the reason, please enter one of the applicable codes into the system:

- BP 20 Customer Refused Repairs
- BP 30 Total Loss
- BP 40 Vehicle Stolen
- BP 50 Vehicle Exported

### Additional Required Vehicle Update Technical Bulletins

Some of the affected vehicles may be involved in additional Required Vehicle Update Technical Bulletins. Please check your OTIS View Campaign inquiry screen so that any additional required work can be done simultaneously.

### Required Vehicle Update Technical Bulletin Verification

For verification, **always** check the OTIS View Campaign inquiry screen. The OTIS system is the **only** binding inquiry and verification system; other systems are not valid and may result in non-payment of a claim.

### Help for Claim Input

**For questions regarding claim input, contact your appropriate Warranty Claim specialist.**

Please do not contact the Campaign Helpline regarding claim input.

### Required Customer Notification

**Inform your customer in writing by recording on the Repair Order any and all work that was conducted on the vehicle, including any and all updates completed under this Technical Bulletin.**



**OWNER INFORMATION ABOUT CONTROL MODULE TUNING\* AND  
AUTHORIZATION FOR REPROGRAMMING (REFLASHING) OF  
CONTROL MODULE(S)**

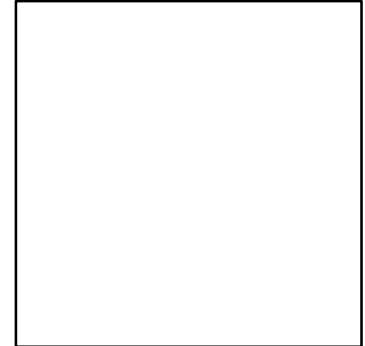
*\*) "TUNING" is described as the addition of or modification of any component which causes a Volkswagen vehicle to perform outside the normal parameters and specifications approved by Volkswagen of America, Inc..*

**Date:** \_\_\_\_\_

**Dealer Number:** \_\_\_\_\_

**Vehicle Identification Number:** \_\_\_\_\_

**Repair Order Number:** \_\_\_\_\_



Dealer stamp

I \_\_\_\_\_, owner or driver of the above identified Volkswagen, confirm:

“Tuning” as described above (especially power increasing modifications) has NOT been performed on my vehicle.

“Tuning” as described above has been performed on my vehicle and the following components were modified or installed:

\_\_\_\_\_  
 \_\_\_\_\_  
TUNING was performed by (Please provide Company name and telephone number, if you wish us to contact them):  
 \_\_\_\_\_

I understand that if my Control Module is determined to have been tuned, any damage caused by the tuning of the Control Module (including adverse emissions consequences) will not be covered by Volkswagen of America, Inc. warranties.

I am requesting that my Dealer reflash (update) my Control Module, and understand that this process will automatically (overwrite) and permanently wipe out any “Tuning” program which was previously performed on the Control Module.

I have read this statement and confirm my request by affixing my signature immediately below.

\_\_\_\_\_  
Signature of Customer