

- 1) rozłączyć kłeme akumulatora
- 2) wymienić uszkodzone komponenty systemu zawieszenie
- 3) podłączyć sterownik zawieszenia
- 4) podłączyć kłeme akumulatora
- 5) postępować wg opisu poniżej

UWAGA – minimalna różnica przeswitu (karoseria/zawieszenie) wynosi 402 , natomiast maksymalna to 420 (audi allroad)

Pojazd ma się znajdować na równym podłożu

The 402 Mod: Suspension adjustment via VAG-COM tool



Disclaimer: I assume no liability or responsibility for any damages or loss that may arise either directly or indirectly as a result of the application of the information provided herein. Please read instructions fully before attempting this modification. Serious harm or injury may come to you or your vehicle by performing these modifications. This mod will seriously alter the handling characteristics of your vehicle. Perform this modification AT YOUR OWN RISK.

What will you need?

A VAG-COM tool: software and cable available from Ross-Tech

A ruler or tape measure if you're looking for precise measurements

And of course, an Audi allroad

What does this modification do?

The Audi allroad comes with a height adjustable suspension that lowers or raises the car through four preset levels. The car's computer includes a calibration tool that allows you to reset the height to factory specifications in case you're car was to get out of normal operating range. This modification "tricks" your car into thinking that it is out of normal specifications. By telling the allroad that it is indeed higher than it really is, it will adjust itself to ride lower on all four settings or vice versa if you were to tell it that it was lower than it really is.

Does the car still go "up and down"?,

Yes. However, if you lower your car 1/2 inch, ALL settings will be 1/2 inch lower. There is NO way to only lower the lowest setting.

How do I alter the ride height of my allroad?

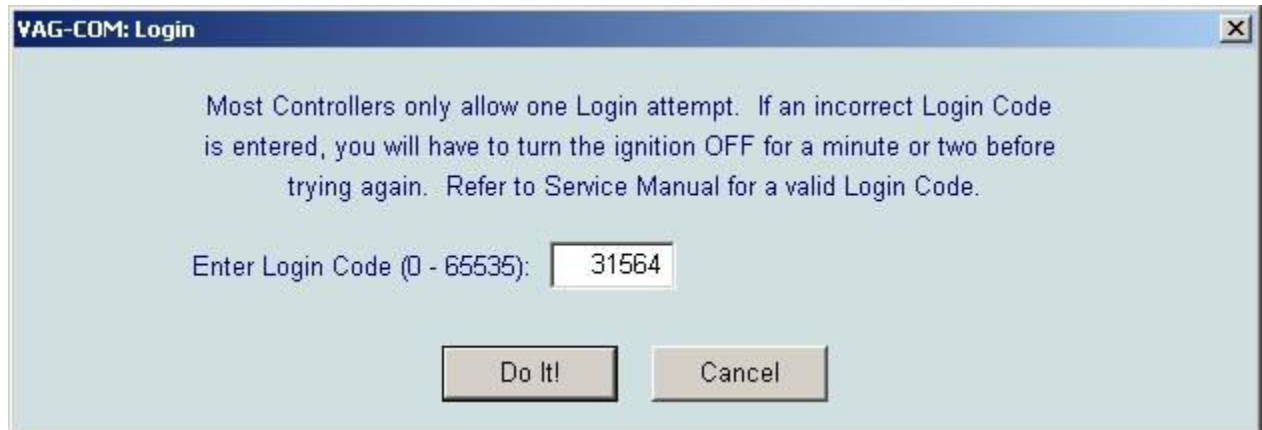
With your engine not running, but the car's ignition set to "on", log into the allroad using your VAG-COM tool. Select "Less Common Modules" you'll see the following screen:



Click on Module 34 to enter the Level Control module. Your VAG-COM will open the module and you'll be presented with this screen. Click on Advanced Function 11 for the Login screen. This function unlocks the adaptation module.



When the Login screen appears, enter in 31564 and click on "Do It". You will then return to the previous screen. Click on module 10 to open the adaptation screen.



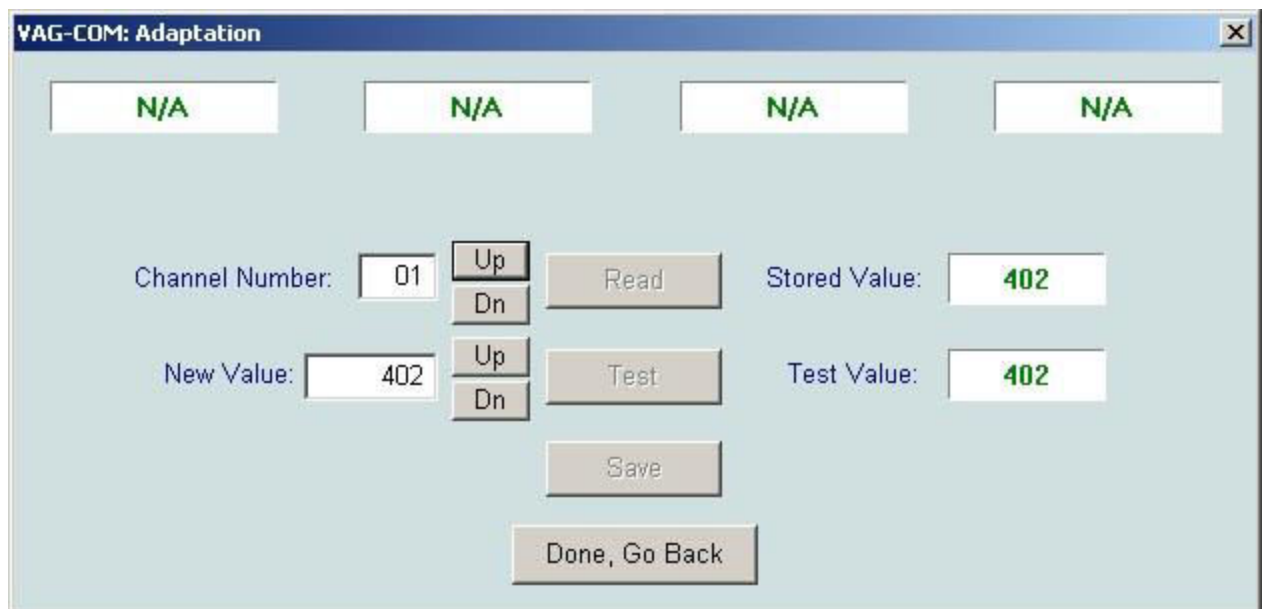
A screenshot of the 'VAG-COM: Login' dialog box. The title bar is blue with the text 'VAG-COM: Login' and a close button. The main area is light blue and contains the following text: 'Most Controllers only allow one Login attempt. If an incorrect Login Code is entered, you will have to turn the ignition OFF for a minute or two before trying again. Refer to Service Manual for a valid Login Code.' Below this text is a label 'Enter Login Code (0 - 65535):' followed by a text input field containing '31564'. At the bottom are two buttons: 'Do It!' and 'Cancel'.

When the adaptation screen appears, be warned that you MUST finish the entire adaptation or else you will cause an error and your suspension will be locked in Level 2 until you successfully complete the full adaptation process. If you just purchased your VAG-COM tool and it is still running in "Shareware" mode, you will not be able to complete the process. If you do encounter an error while doing the adaptation, don't panic. Simply start the process over again from the start and it will complete eventually.

Press the UP button next to Channel Number to increase it from the default value of "00" to "01". If required, press the READ button. Your car will automatically adjust its ride height to Level 2 for calibration. Wait for this height adjustment to complete. Your VAG-COM will list four green N/A's in the top four windows and the stored value will read "402".

Channels 01-04 correspond to the four corners of your vehicle. You must complete the following steps for all four corners of your car.

- 01 = Left Front
- 02 = Right Front
- 03 = Left Rear
- 04 = Right Rear



A screenshot of the 'VAG-COM: Adaptation' dialog box. The title bar is blue with the text 'VAG-COM: Adaptation' and a close button. The main area is light blue and contains several elements: at the top, four white boxes with green text 'N/A'; below them, a 'Channel Number' label with a text input field containing '01', a vertical stack of 'Up' and 'Dn' buttons, a 'Read' button, and a 'Stored Value' label with a text input field containing '402'; below that, a 'New Value' label with a text input field containing '402', another vertical stack of 'Up' and 'Dn' buttons, a 'Test' button, and a 'Test Value' label with a text input field containing '402'; at the bottom, a 'Save' button and a 'Done, Go Back' button.

"402" is what the allroad ALWAYS thinks is the proper setting for Level 2. The value of "402" according to the Bentley CD manual is the distance measured from the center of the wheel to the bottom of the fender in millimeters. If this is the first time you are performing this modification, and your car has been operating properly, it should be safe to assume that "402" is the proper value. You can also take a tape measure and measure this value if you care to. We will discuss secondary adjustments performed after modifying the ride height later in this document.

Knowing that the allroad at this point "thinks" it's at a 402mm setting, if we were to enter "402" in to the New Value window, we'd be making no change to the ride height. In fact, you can enter in 402 to successfully complete the adaptation process so your car doesn't go into Suspension Limp Mode. Note that although it already reads 402, you will need to delete and re-enter 402 to have the option of testing and saving the settings.

However, if you care to alter the ride height of your vehicle, we must trick the allroad into thinking that it is higher or

lower than it really is. Therefore, if we want to lower the allroad 15mm, we would tell the computer that the allroad measured "417" and enter that into the New Value field. To raise the allroad 15mm, we would enter in "387". What you enter is up to you, however, there are some limits as to what the computer will take as a valid entry, so it wouldn't be a bad idea to take baby steps in changing the settings.

To change the setting, enter in the New Value and press the Test button. Once the value is accepted by VAG-COM, press the Save button.

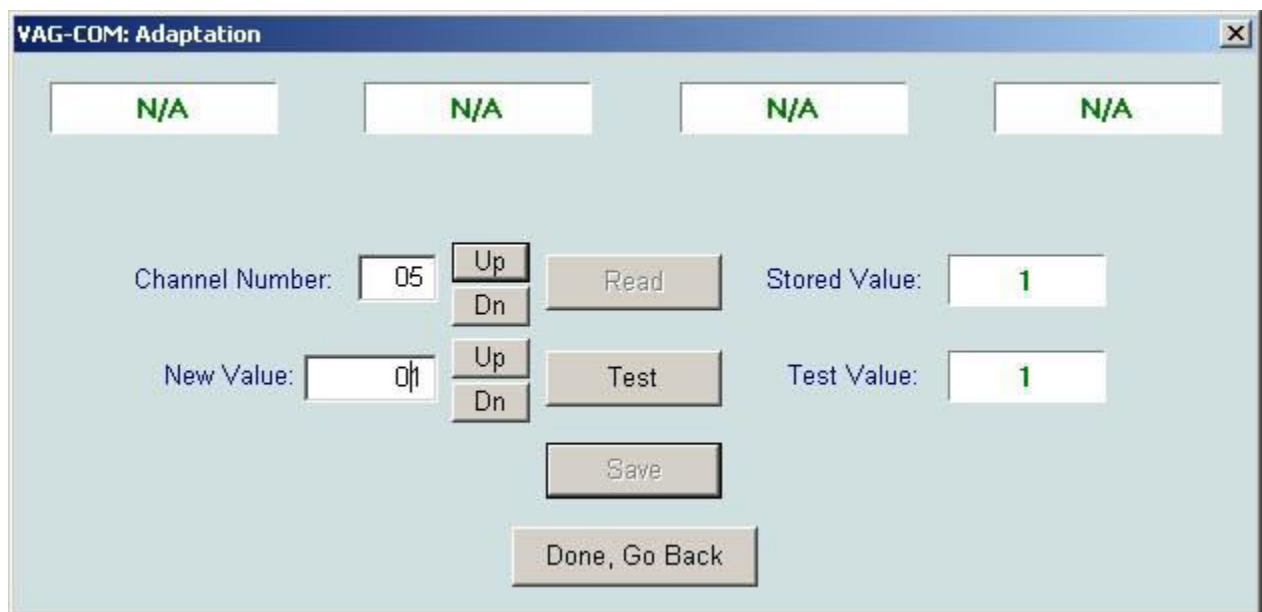


When presented with the "Are you SURE" prompt, click on Yes to proceed.

Press the UP button next to Channel Number again and the value will increase from "01" to "02". Enter in the same number as you did in the previous section into the New Value field and repeat the procedure. Do this until you have successfully set New Values for Channels 01 - 04.

NOTE: You may wish to enter in a slightly different value for Channels 03 and 04 when lowering your vehicle if you prefer for your car to have a more aggressive appearance. 5mm seems to be enough of a difference to prevent the allroad from looking "weighted down" in the rear.

After the four channels have been set to your preference, you must save your settings. After setting and saving Channel 04, press the UP button once more so that the Channel Number reads "05". This channel is for saving your previous work.



Enter in a New Value of "01", test and save. You'll get an error, but don't worry, everything is okay. Click on the "Done, Go Back" button to exit out of the adaptation screen. That's it, you're finished!

For good measure, start your allroad's engine and move up and down through the four levels of your car a few times before going for your first test drive. Once you've confirmed that all works well, carefully go for a test drive to check to see if it is to your liking.

If you need to readjust your allroad after completing your first adaptation, it is important to remember that your allroad thinks the last adaptation set it properly to 402mm between the center of your wheel to the fender. It has no clue as to where it really is set to. Therefore, if you lowered your allroad by 15mm by entering 417 into the New Value field on all four channels and wish to lower it an additional 5mm, you DO NOT enter in 422 the second time around. This will lower your allroad an ADDITIONAL 20mm. Rather, simply enter in 407 and your car will lower itself another 5mm since it thinks it's only off by 5mm. Keep a record of your modifications so you know exactly what number needs to be entered to get your car back to stock settings. Or you can measure and use this adaptation program as it was meant to be used to get your car back to factory specifications.

17mm in the front and 13mm in the rear will make your car noticeably lower, and you probably shouldn't go any lower. As for height, 20mm was accepted by the vehicle, however, no driving was done at this level, so please exercise caution and common sense. And remember the disclaimer above!!!

Suspension Level Control Calibration

Updated 26 Nov. 2005

Ross-Tech is not responsible for any damage or problems that may result from following these instructions. They are to be used at your own risk. As always, you should refer to a [Factory Repair Manual](#) for your vehicle!

This procedure details how to lower/raise the zero position for the Level Control module in VW Touareg (7L) and Audi A8 (4E) vehicles.

This procedure does not apply to the Audi Allroad. For that vehicle, there is a [different procedure](#).

There are certain test conditions that must be met before doing this procedure:

- Transmission in park/neutral.
- Start the vehicle, keep the engine running and do not switch off the ignition.
- Doors have to stay closed, otherwise the system is not ready.

The default values:

VW Touareg (7L) standard: 497 mm (front) and 502 mm (rear)

VW Touareg (7L) offroad: 488 mm (front) and 498 mm (rear)

Audi A8 (4E) standard suspension: 416 mm (front) and 398 mm (rear)

Audi A8 (4E) sport suspension: 396 mm (front) and 378 mm (rear)

VW Phaeton RoW (Rest of World): 407 mm (front) and 401 mm (rear)

VW Phaeton NAR (North American Region): 417 mm (front) and 411 mm (rear)

North American Phaeton owners: Please read a [very detailed alternate procedure here](#)

[Select]

[34 - Level Control]


VAG-COM: Open Controller

Comm Status
IC=1 TE=0 RE=0
Protocol: KWP2089 -



Open Controller

Controller Info

VAG Number: 7L6 907 553 B
Component: LUFTFDR.-CDC- 3C1P1 3650

Soft. Coding: 0025520
Shop #: Imp: 123 WSC 12345

Extra:

Extra: Geraet 58363

Basic Functions

These are "Safe"

Fault Codes - 02
Readiness - 15

Meas. Blocks - 08
Advanced ID - 1A

Single Reading - 09
Future Exp.

Advanced Functions

Refer to Service Manual !

Login - 11
Recode - 07

Basic Settings - 04
Adaptation - 10

Output Tests - 03
Security Access - 16

Close Controller, Go Back - 06

[Security Access - 16]
Enter 31564
[Do It!]

VAG-COM: Open Controller

Comm Status

IC=1 TE=0 RE=0

Protocol: KWP2089 -

VAG-COM

Open Controller

Controller Info

VAG Number: 7L6 907 553 B

Component: LUFTFDR.-CDC- 3C1P1 3650

Soft. Coding: 0025520

Shop #: Imp: 123 WSC 12345

Extra:

Extra: Geraet 58363

VAG-Com: Security Access

Most Controllers only allow one access attempt. If an incorrect access key is entered, you will have to leave the ignition ON for at least ten minutes before trying again. Refer to Service Manual for a valid access key.

Enter security access key (0 - 99999): 31564

Do it!

Cancel

[Adaption - 10]

Channel 01 (front left)

[Read]

Wait until the car goes into 2 different levels.

VAG-COM: Open Controller

Comm Status
IC=1 TE=0 RE=0
Protocol: KWP2089 /

VAG-COM
Open Controller

Controller Info
VAG Number: 7L6 907 553 B
Component: LUFTFDR.-CDC- 3C1P1 3650

VAG-COM: Adaptation

Wait

-

Low Level

Start driving

Channel Number: 01

Up

Dn

Read

Stored Value: 497

New Value: 497

Up

Dn

Test

Test Value:

Save

Done, Go Back

VAG-COM: Open Controller

Comm Status
IC=1 TE=0 RE=0
Protocol: KWP2089 -

VAG-COM
Open Controller

Controller Info
VAG Number: 7L6 907 553 B
Component: LUFTFDR.-CDC- 3C1P1 3650

VAG-COM: Adaptation

Wait

-

Normal Level

Start driving

Channel Number: 01

Up

Dn

Read

Stored Value: 497

New Value: 497

Up

Dn

Test

Test Value:

Save

Done, Go Back

Measure the heights from wheel center to the lower edge of the fender (see [comments](#)).

Enter "new value" in Millimeters into Channel 01.

[Test]

[Save]

VAG-COM: Open Controller

Comm Status
IC=1 TE=0 RE=0
Protocol: KWP2089 -

VAG-COM
Open Controller

Controller Info
VAG Number: **7L6 907 553 B** Component: **LUFTFDR.-CDC- 3C1P1 3650**

VAG-COM: Adaptation

Value **Wheel: F/Left** **Enter** **1000**
Bin. Bits

Channel Number: **01** Up Dn Read Stored Value: **497**

New Value: **497** Up Dn Test Test Value:

Save

Done, Go Back

Channel 02 (front right)

[Read]

Measure the heights from wheel center to the lower edge of the fender (see [comments](#)).

Enter "new value" in Millimeters into Channel 02.

[Test]

[Save]

VAG-COM

VAG-COM: Open Controller

×

Comm Status

IC=1 TE=0 RE=0

Protocol: KWP2089 |

VAG-COM

Open Controller

Controller Info

VAG Number:

7L6 907 553 B

Component:

LUFTFDR.-CDC- 3C1P1 3650

VAG-COM: Adaptation

×

Value

Wheel: F/Right

Enter

1000

Bin. Bits

Channel Number:

02

Up

Dn

Read

Stored Value:

497

New Value:

497

Up

Dn

Test

Test Value:

Save

Done, Go Back

Channel 03 (rear left)

[Read]

Measure the heights from wheel center to the lower edge of the fender (see [comments](#)).

Enter "new value" in Millimeters into Channel 03.

[Test]

[Save]

VAG-COM: Open Controller

Comm Status
IC=1 TE=0 RE=0
Protocol: KWP2089 \

VAG-COM
Open Controller

Controller Info
VAG Number: 7L6 907 553 B Component: LUFTFDR.-CDC- 3C1P1 3650

VAG-COM: Adaptation

Value	Wheel: R/Left	Enter	1100
			Bin. Bits

Channel Number: 03 Up Dn Read Stored Value: 502

New Value: 502 Up Dn Test Test Value:

Save

Done, Go Back

Channel 04 (rear right)

[Read]

Measure the heights from wheel center to the lower edge of the fender (see [comments](#)).

Enter "new value" in Millimeters into Channel 04.

[Test]

[Save]

VAG-COM

VAG-COM: Open Controller

×

Comm Status

IC=1 TE=0 RE=0

Protocol: KWP2089 |

VAG-COM

Open Controller

Controller Info

VAG Number: 7L6 907 553 B

Component: LUFTFDR.-CDC- 3C1P1 3650

VAG-COM: Adaptation

×

Value

Wheel: R/Right

Enter

1110

Bin. Bits

Channel Number: 04

Up

Dn

Read

Stored Value: 502

New Value: 502

Up

Dn

Test

Test Value:

Save

Done, Go Back

Channel 05 (confirmation)

[Read]

If all measured values are correct, enter "new value" of 1.

[Test]

[Save]

The screenshot shows two overlapping windows from the VAG-COM software. The top window, titled 'VAG-COM: Open Controller', displays communication status (IC=1, TE=0, RE=0, Protocol: KWP2089) and controller information (VAG Number: 7L6 907 553 B, Component: LUFTFDR.-CDC- 3C1P1 3650). The bottom window, titled 'VAG-COM: Adaptation', contains a table with four columns: Value, Valid, N/A, and N/A. Below the table are input fields for Channel Number (05) and New Value (1), along with buttons for Up/Dn, Read, Test, Save, and Done, Go Back. The Stored Value is 0 and the Test Value is 1.

Value	Valid	N/A	N/A
Channel Number: 05	Up Dn	Read	Stored Value: 0
New Value: 1	Up Dn	Test	Test Value: 1
Save			
Done, Go Back			

Click the **[Done, Go Back]** button and you're all set.

Check for fault codes, if all procedures went fine there should be none.

Comments:

The height of each wheel is measured between the center of the wheel (the space in between the V and the W) and the lower edge of the fender. All measurements have to be done in Millimeters (mm).



If a Channel is not accepting a value, put the "new value" in again and click **[Test]** and **[Save]** again instead of starting the whole process from the beginning.

In some cases the controller says "invalid value", start "rocking" the car a little bit, this should solve problem.