

L83X-
A.14.14

To: Official After Sales Network
Subject: Drivability enhancement
Date: 03rd/10/2014
Pages: 25



Subject

Drivability enhancement

Model

All Lamborghini Aventador MY 12.

Warning: some vehicles included in this VIN range may not be involved, so check carefully on the Lamborghini WEB Portal (at the section named VIN Info) if the cars in your workshop or in your dealer stock are involved before performing any other operation.

Information to the field

As a result of continuous product monitoring, Automobili Lamborghini Spa has introduced a new software that manage gearbox and instrument cluster to enhance driveability.

Field solution

Update software that manage gearbox and instrument cluster.

Spare Parts replace

owner's manual **P/N [1]**, and Quick guide **P/N [2]** on the basis of the template here below..

P/N. [1]	P/N. [2]	Language or Country	Q
476012003AA	476012040E	German	1+1
476012003AB	476012040F	English	1+1
476012003AC	476012040M	Russian	1+1
476012003AD	476012040G	French	1+1
476012003AE	476012040H	Spanish	1+1
476012003AF	476012040J	Japanese	1+1
476012003AG	476012040K	Arabian	1+1
476012003AJ	476012040P	Taiwan	1+1
476012003P	476012040	USA	1+1
476012003Q	476012040A	Canada	1+1
476012003R	476012040B	Korean	1+1
476012003S	476012040C	Chinese	1+1
476012003T	476012040D	Italian	1+1

Replaced parts management

Store replaced parts properly, and tagged them with bar code for their identification during Area Manager visits

Warranty Claim data

The warranty reimbursement request for this rework action will be managed by the following standard Warranty Claim procedures.

Campaign Code: L83X-A.14.14

Campaign Des.: Drivability enhancement

Cost code: 50

Component code: CCA0414

Trouble code: 220

Labor code: CC0414100

Labor Time: 2 h

Remember to fill all data in the section “Service and Recall Campaign” in the Warranty booklet of the vehicle as shown below.



Workshop instructions



The instructions contained in this bulletin are based on ODIS Service diagnosis software updated to release 2.2.1 and database Lamborghini 19.62 (see information bulletin BI.12.14)

Preliminary operations:

1. Make sure to be recently synchronized with Mirrorserver by checking the Last Sync date under:

<http://mirrorserver/welcome>

or under:

http://IP_address/welcome

if you didn't yet set up the mirrorserver IP alias



IMPORTANT

Make sure the last synchronization has been done after the 25th september 2014.

Congratulations

You have successfully installed your MirrorServer/2 NOS-Box.

Testing the connection to the configured Provider Server. Please wait a moment, this takes some time ...

Configuration	
Base path	/var/www/desert
Provider URL	https://altair.mirrorserver2.net/deployment
Repository URL	https://altair.mirrorserver2.net/storage
Feedback URL	https://altair.mirrorserver2.net/health
Proxy	http://svc_blackbox?:@10.48.187.43:8080
Key file	/var/www/desert/certs/userkey.pem
Certificate	/var/www/desert/certs/usercert.pem
Tests	
Provider WebDAV access	OK (/deployment/)
Repository WebDAV access	OK (/storage/)
Feedback WebDAV access	OK (/health/)
Successful package downloads	5
Failed package downloads	0
Last Sync	28-09-14 at 22:42:15

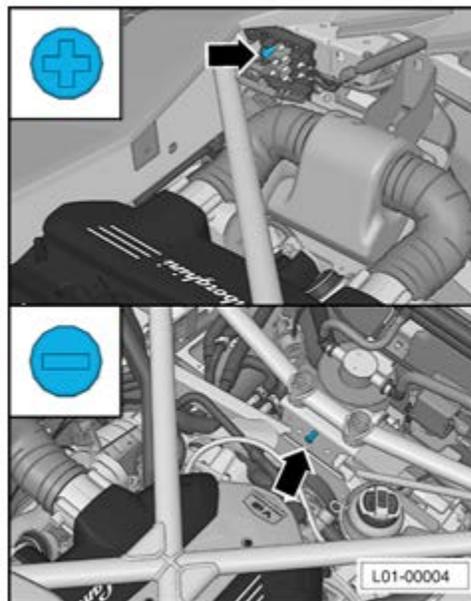
Before starting the drivability package installation procedure, it is necessary to take note of the current service interval status from the specific menu on the instrument cluster.



In this example it is 3400 km and 200 days.

Update procedure:

2. Please connect a battery charger to the recharge points available in the engine bonnet, as shown in picture.





- 3. Please connect the VAS5054 interface to the vehicle's OBD plug and to the diagnostic laptop.

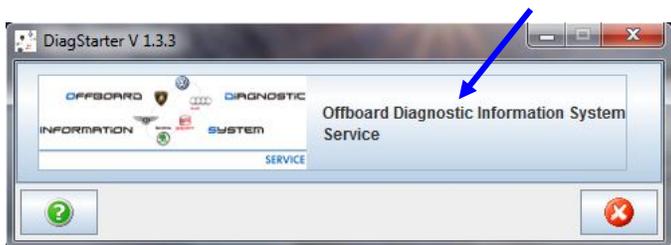
Turn the ignition ON



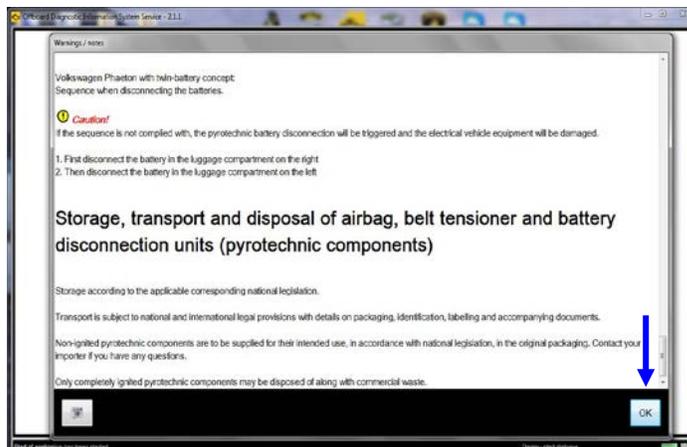
- 4. Start the ODIS Service double clicking on the related icon on the desktop of the diagnosis laptop.



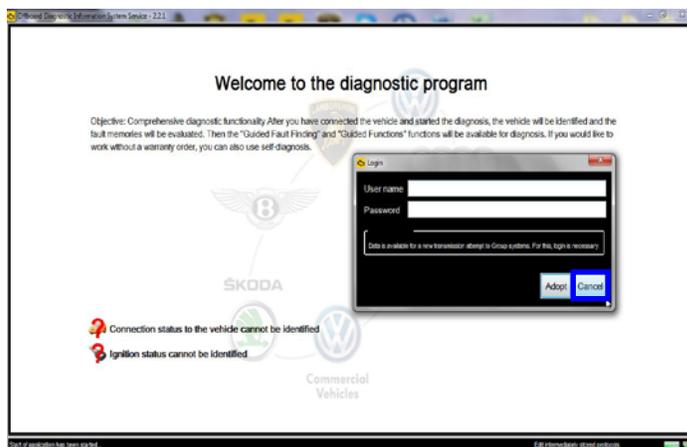
- 5. Select Offboard Diagnostic Information System Service clicking on it.



- 6. Scroll down the right side vertical bar. Click on "OK" to hide the general information window.



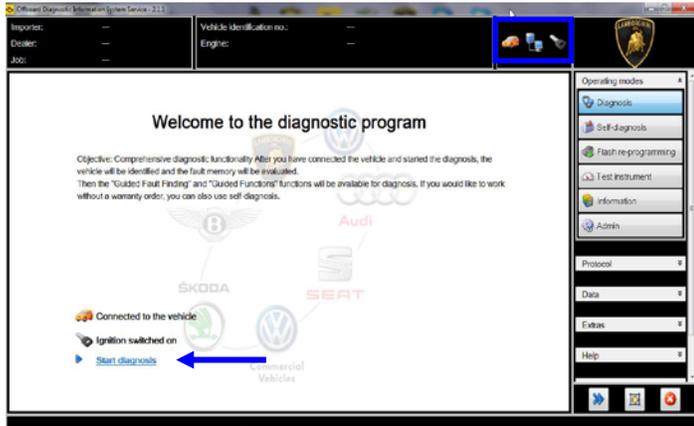
- 7. Click "Cancel" to bypass the Login to Group Systems



- 8. Select "Start diagnosis".



Make sure that ODIS can detect the vehicle connection status and the key ON.

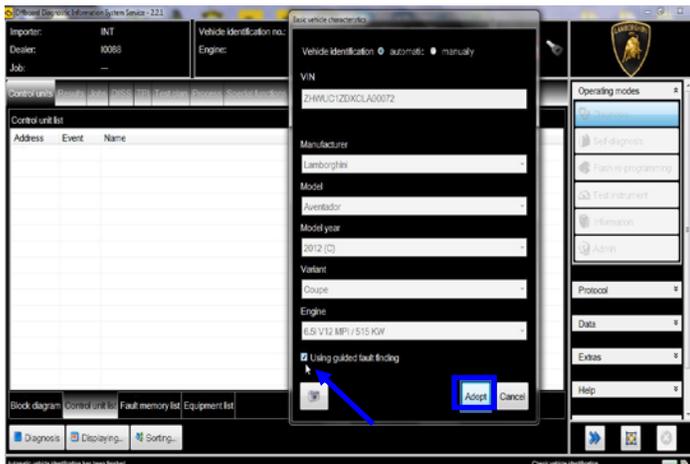


9. Check the vehicle identification on the window “Basic vehicle characteristics”.

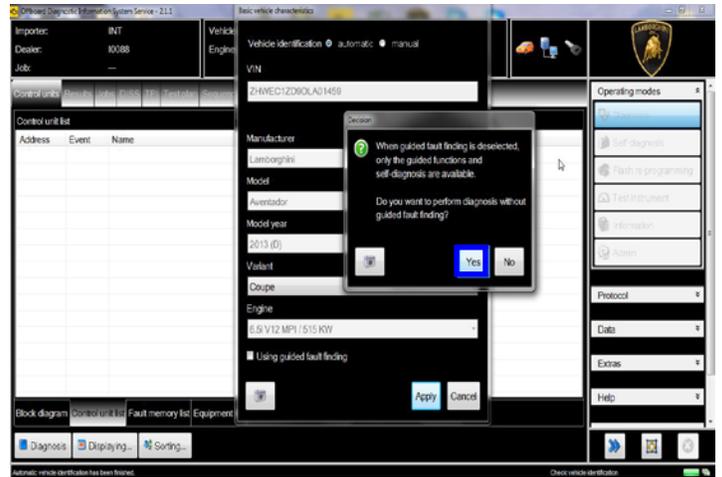
Select the Variant in the related menu

Deselect the checkbox “Using guided fault finding”

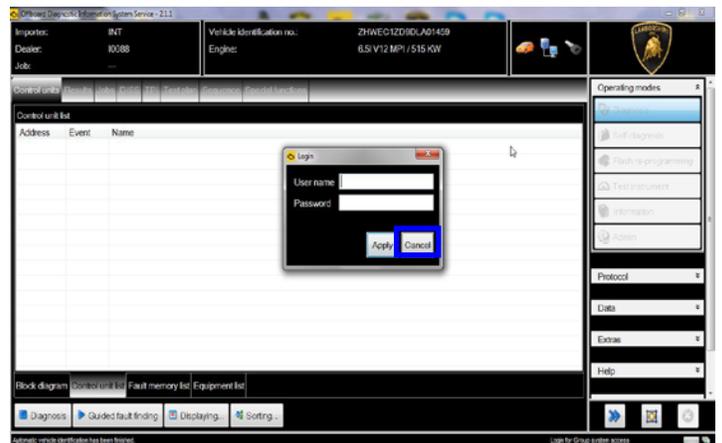
Click “Apply”



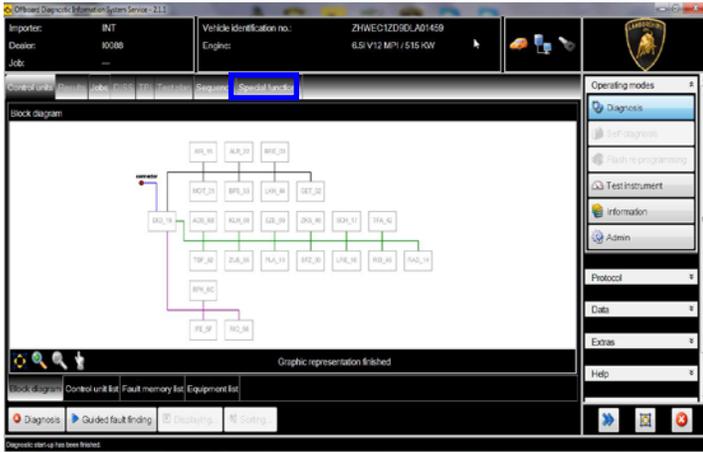
10. Click “Yes”



11. Skip the Login window by clicking “Cancel”

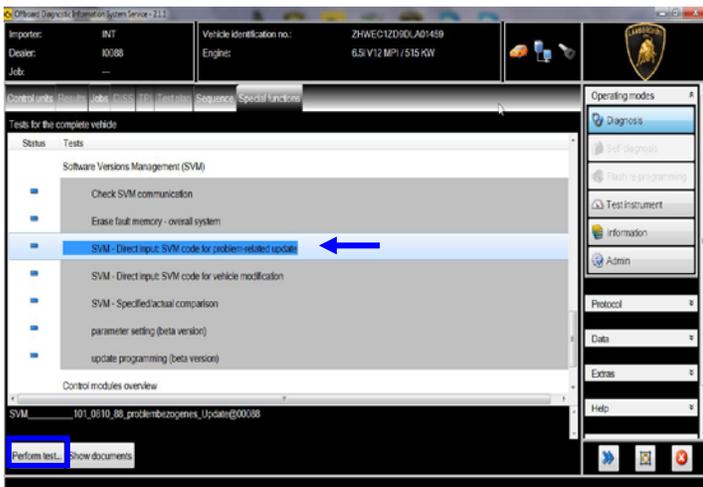


12. At the end of start-up procedure (see status in the progress bar bottom right), move on the ODIS tab “Special functions” now available.



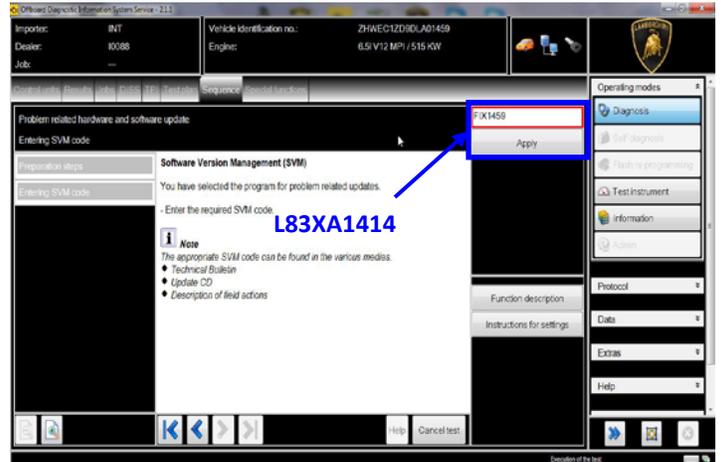
13. Select “SVM – Direct input: SVM code for problem related update” by clicking the related row with the mouse.

Click “Perform test...” to execute the SVM function



14. Insert in the upper box with the cursor the code **L83XA1414**

Click “Apply”



15. Confirm that the inserted code is correct clicking on “Yes”.

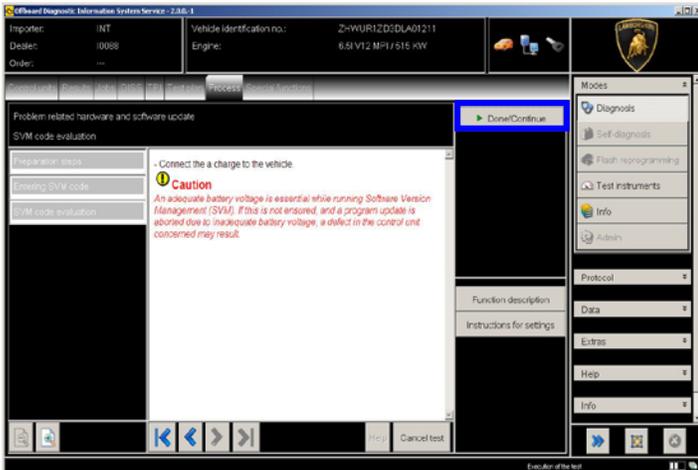


16. Click on “Done/Continue” to start the data acquisition from all the vehicle’s ECUs.



IMPORTANT

Connect always a battery charger during the SVM function



17. Wait until the data acquisition from all control modules is completed.



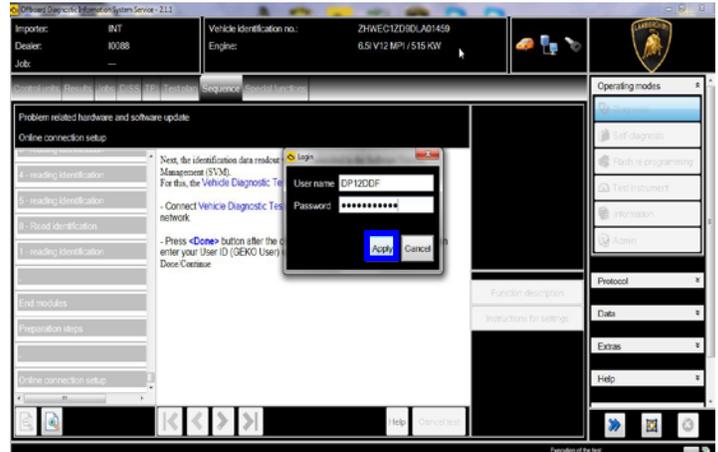
18. For the online authentication a valid GeKo account is necessary.

Be sure that your internet connection is working properly.

Click on “Done/Continue” to access the Login window.

Insert your GeKo user name in the field “Login” and the pin 1324 + current 6 digit code displayed on your GeKo token in the field Password.

Then confirm clicking on “Apply”.



19. The communication is then established with the central server.

At the end of communication you receive following feedback, with 2 different possible results:

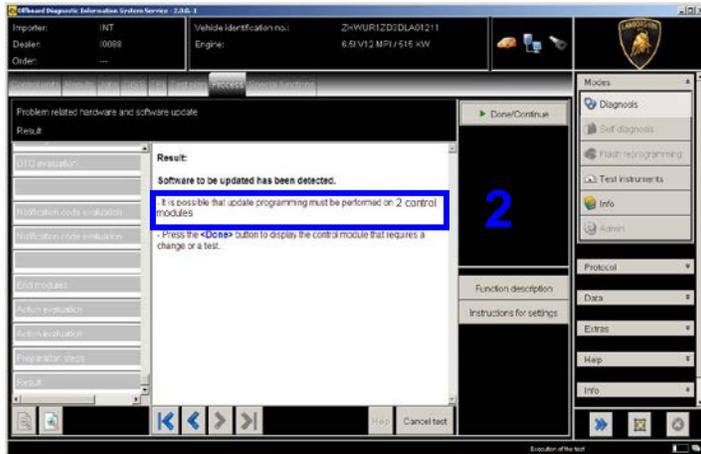
“-software to be update has been detected (on 3 control units).” (1)

“-software to be update has been detected (on 2 control units).” (2)

If the results (1) is displayed, please continue the procedure with next step (step 20)

If the results (2) is displayed, please continue the procedure always with next step (step 20), but without perform the steps 22, the steps from 27 to 31 included and the steps from 65 to 80 included.





Click “Done/Continue”.

20. All the data to be updated on all the interested control units have to be determined.

Click “Done/Continue”.



21. By choosing the 2nd option, all the interested control units will be updated without interruption.

Click “Done/Continue”.



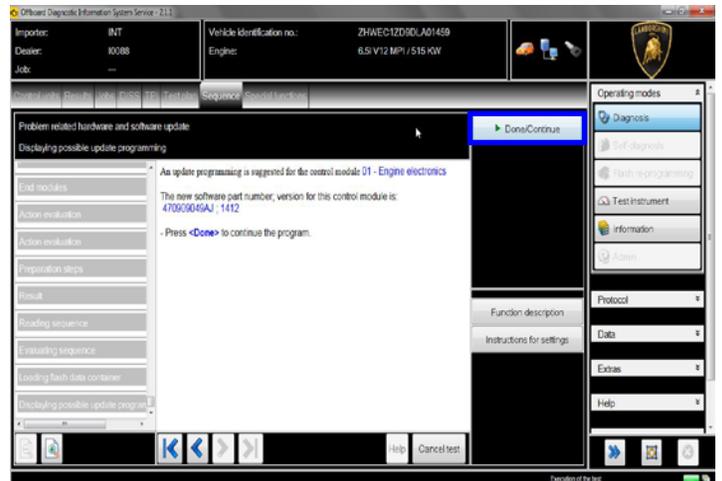
22. Engine Software Update.

Depending on the market and according to car’s equipment, new engine software part number and version will be different.

The example in the figure below refer to software version for MY12 Coupe’:

470909049A; U122

Click “Done/Continue” to continue.

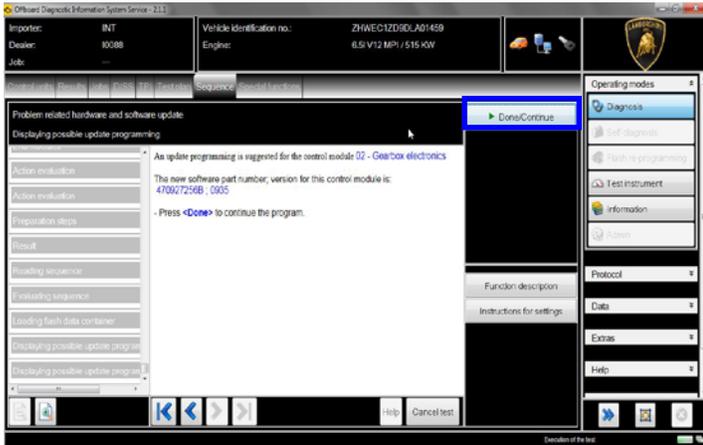


23. Gearbox Software Update.

The example in the figure below refer to software part number and version of the Gearbox.

470927156; 0905

Click “Done/Continue” to continue.

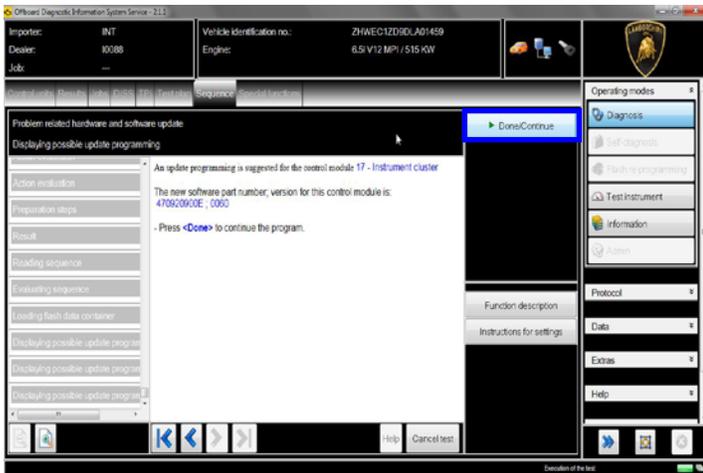


24. Instrument cluster Software Update.

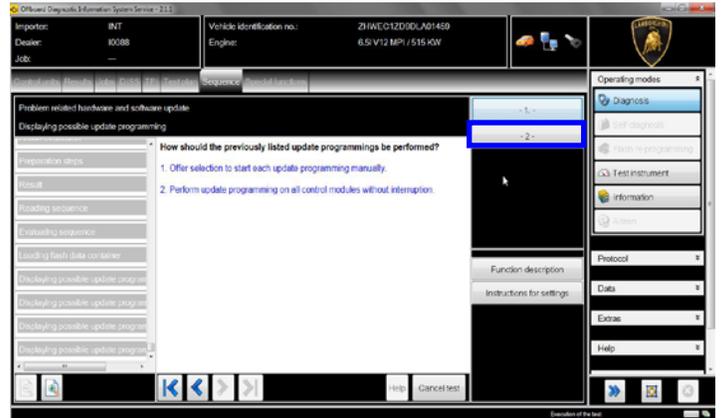
The example in the figure below refer to software part number and version of the Instrument Cluster (Kombi) Software.

470920900E; 0062

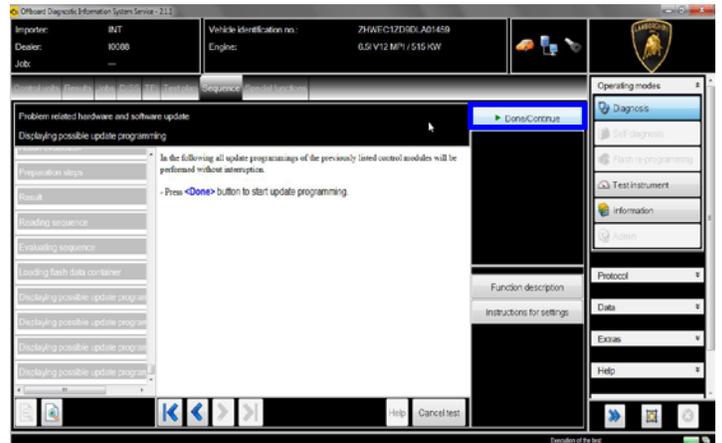
Click “Done/Continue” to continue.



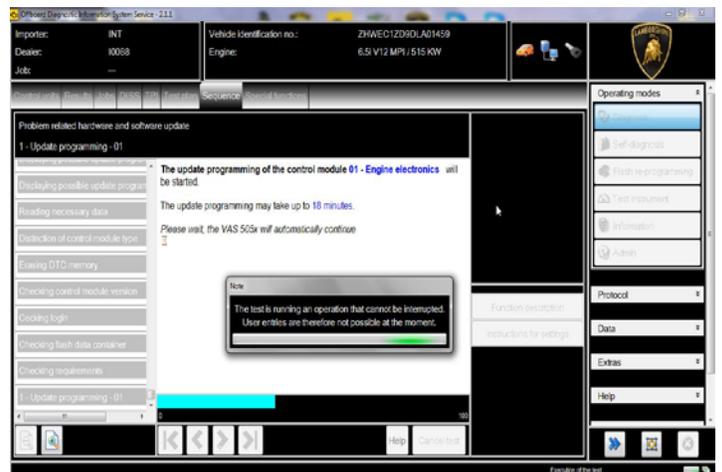
25. Click “2” to select the Software update without interruption on all electronics control units interested in.



26. Click “Done/Continue” to update without interruption all electronics control units interested in Software Update.



27. Wait until the update programming of the engine ECU is completed.



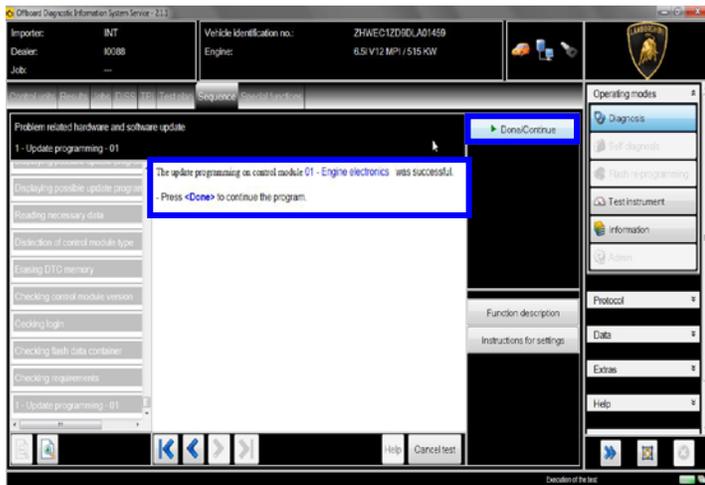


28. Once the update programming has been completed successfully a feedback as in the picture below is displayed.

Click “Done/Continue”.

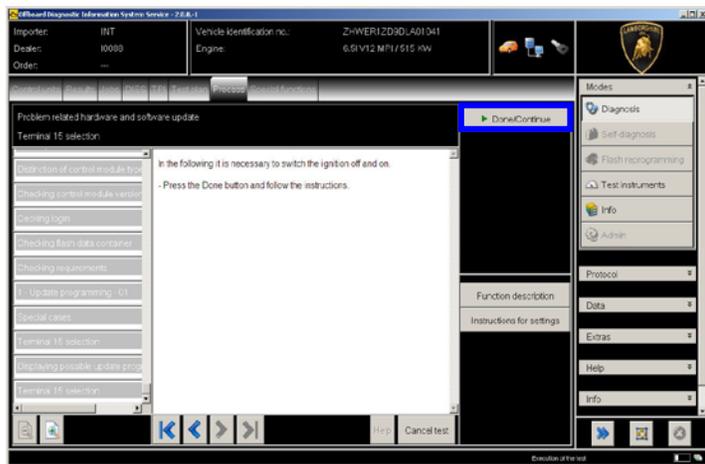
If the update programming has not been completed or has been unsuccessful:

- turn the ignition OFF;
- wait 1 minute before turning the ignition ON again;
- if offered by the program: select “Repeat” to re-try the update programming, otherwise repeat the procedure from step 12.



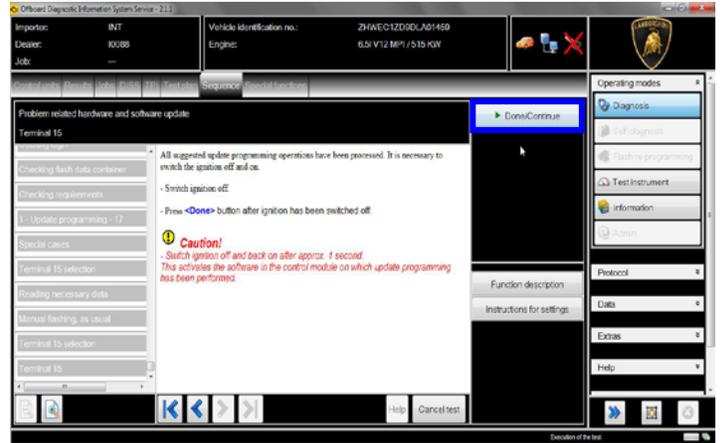
29. In the following an ignition OFF – ON cycle is necessary to restart both the ECU.

Press “Done/Continue” to continue.



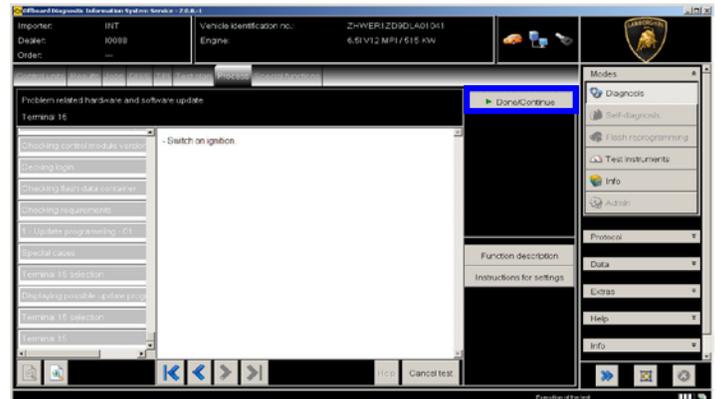
30. Switch the ignition OFF.

Press “Done/Continue”.



31. Wait 1 minute before switching the ignition back ON again.

Then press “Done/Continue” to continue.



32. Wait until the update programming of the gearbox ECU is completed.



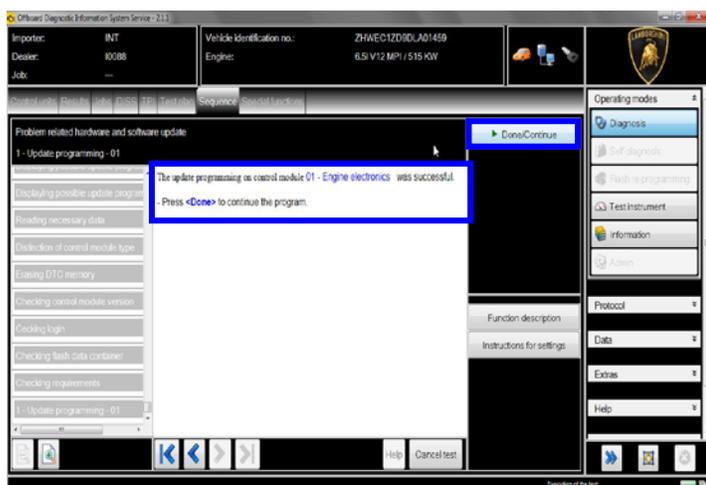


33. Once the update programming has been completed successfully a feedback as in the picture below is displayed.

Click “Done/Continue”.

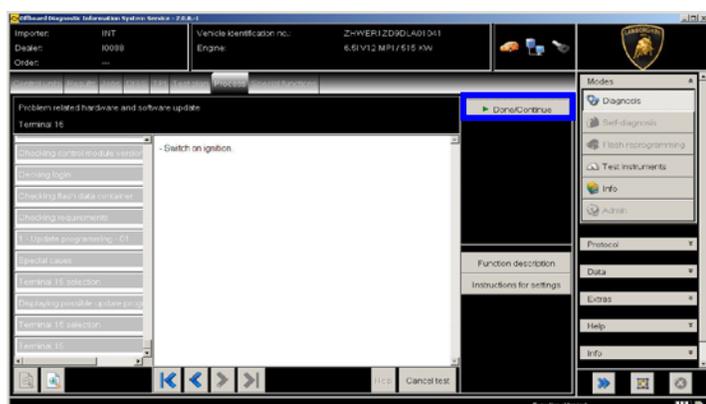
If the update programming has not been completed or has been unsuccessful:

- turn the ignition OFF;
- wait 1 minute before turning the ignition ON again;
- if offered by the program: select “Repeat” to retry the update programming, otherwise repeat the procedure from step 29;

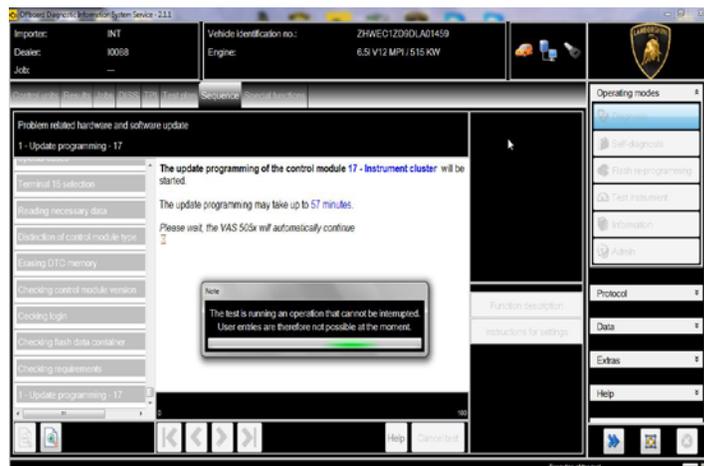


34. Wait 1 minute before switching the ignition back ON again.

Then press “Done/Continue” to continue.



35. Wait until the update programming of the Instrument Cluster (Kombi) ECU is completed.

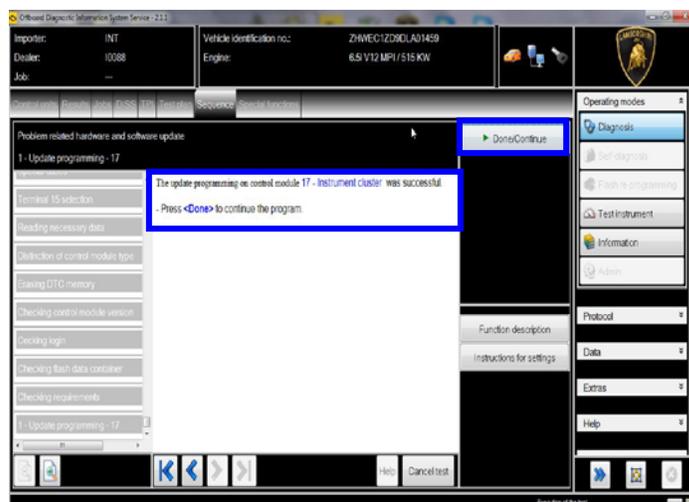


36. Once the update programming has been completed successfully a feedback as in the picture below is displayed.

Click “Done/Continue”.

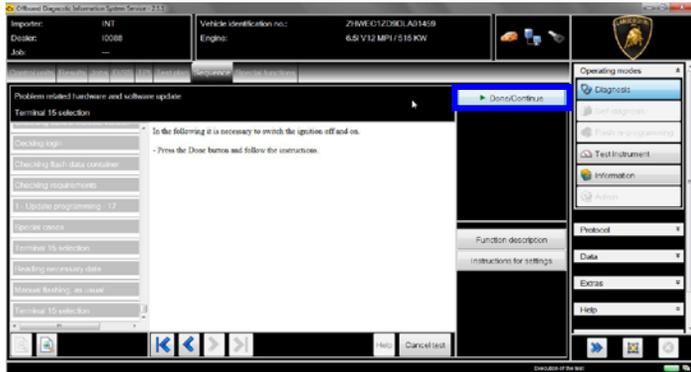
If the update programming has not been completed or has been unsuccessful:

- turn the ignition OFF;
- wait 1 minute before turning the ignition ON again;
- if offered by the program: select “Repeat” to retry the update programming, otherwise repeat the procedure from step 34.

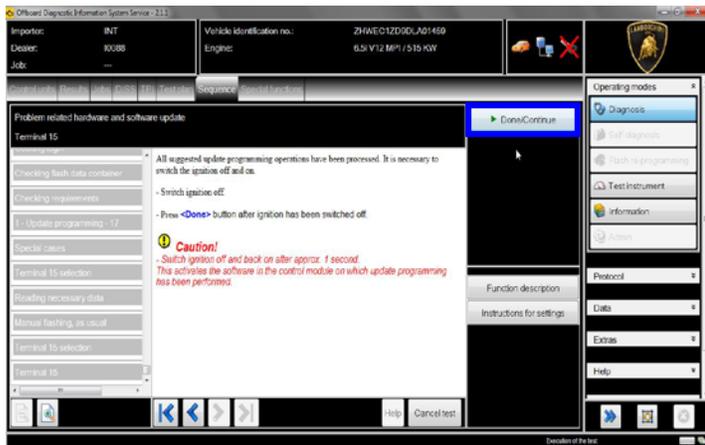


37. In the following an ignition OFF – ON cycle is necessary to restart both the ECU.

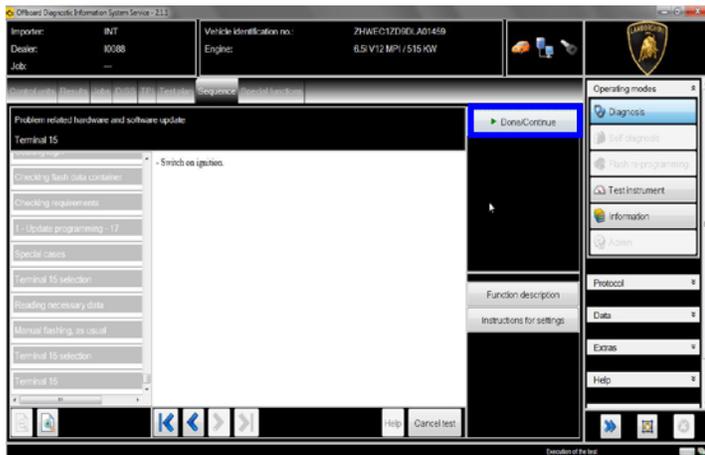
Press “Done/Continue” to continue.



38. Switch the ignition OFF.
Press “Done/Continue”.

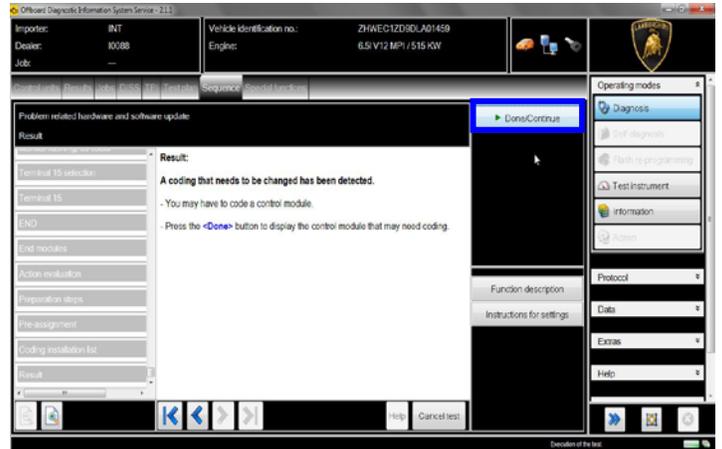


39. Switch the ignition ON.
Press “Done/Continue”.



40. New coding has been detected.

Click “Done/Continue” to continue with the coding.



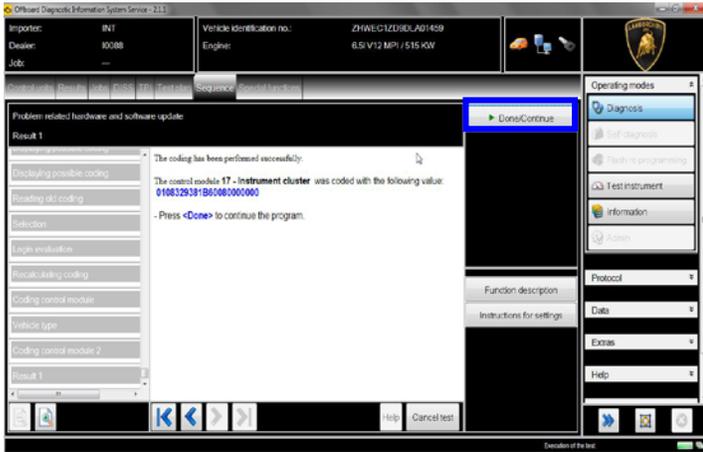
41. New coding has been calculated on control unit 17 – Instrument Cluster and it is necessary to write in the ECU.

Click “Yes”.

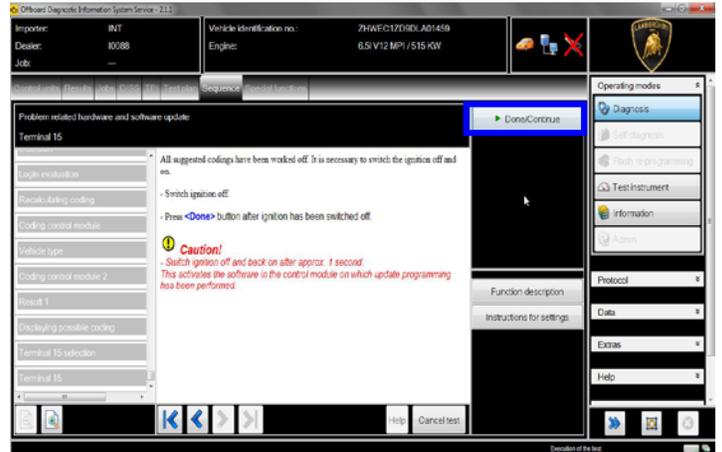


42. At the end of the coding update a feedback is displayed as indicated in the below figure.

Click “Done/Continue”.



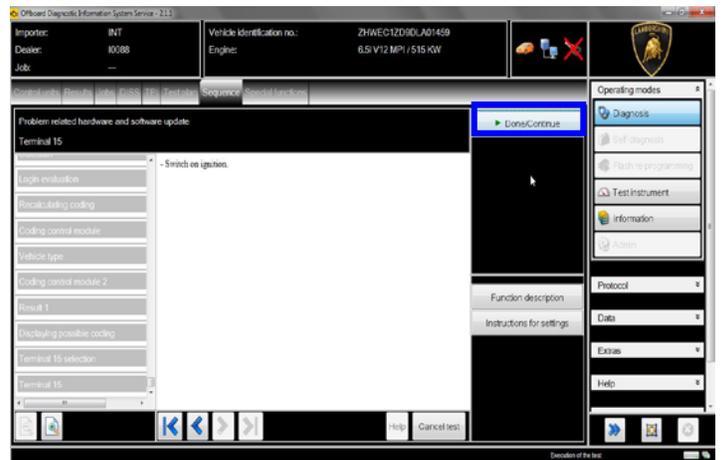
43. In the following an ignition OFF – ON cycle is necessary to restart both the ECUs.
 Press “Done/Continue” to continue.



45. Switch the ignition ON.
 Press “Done/Continue”.



44. Switch the ignition OFF.
 Press “Done/Continue”.



46. REMARK



In the case of MY12 Aventador cars with SW campaign L834A0212 not yet performed (see technical information of 10/02/12), there's the need to update also the Central Electrics BCM1 in 2 steps: calibration and parameterization.

If this was the case, please answer always “Yes” to the messages given by the ODIS tester and proceed with “Done/Continue” when requested”.

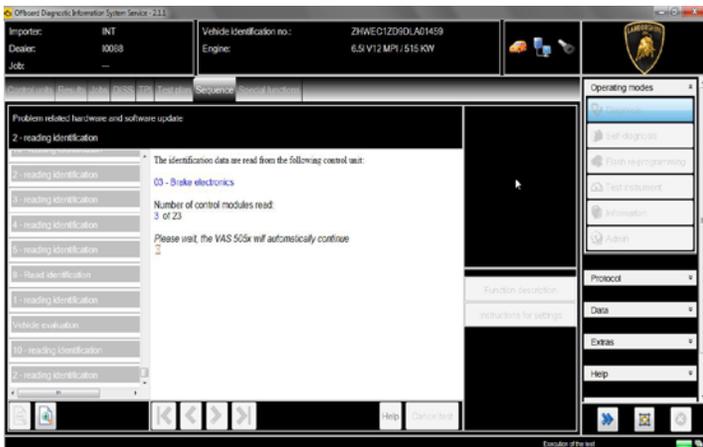


47. SVM can be completed after data acquisition from all ECUs.

Click “Done/Continue”.



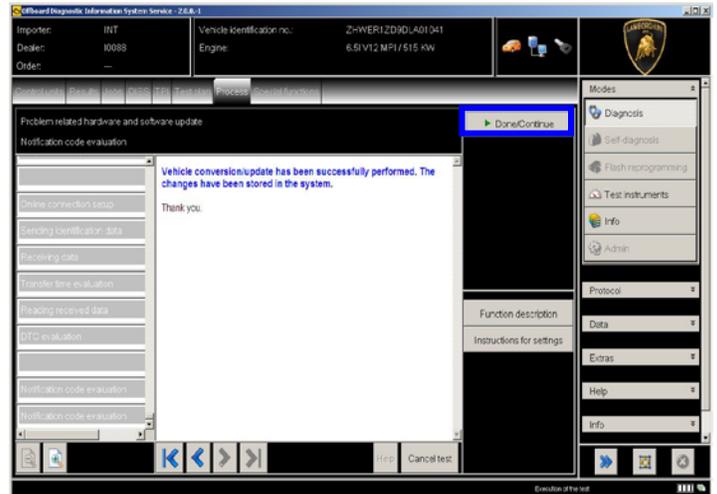
48. Wait until the data acquisition from all the control modules is completed.



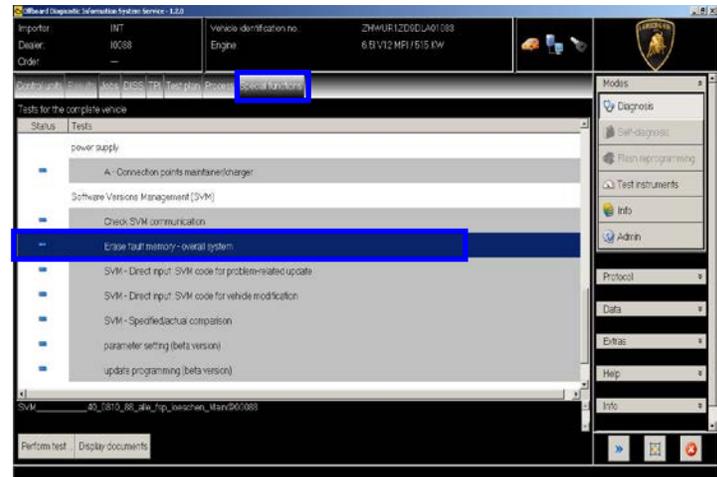
49. Once the data report has been sent to the servers a feedback as in the picture below is displayed.

The software update of engine, gearbox and instrument cluster ECUs has been completed successfully and all the information have been stored in the system.

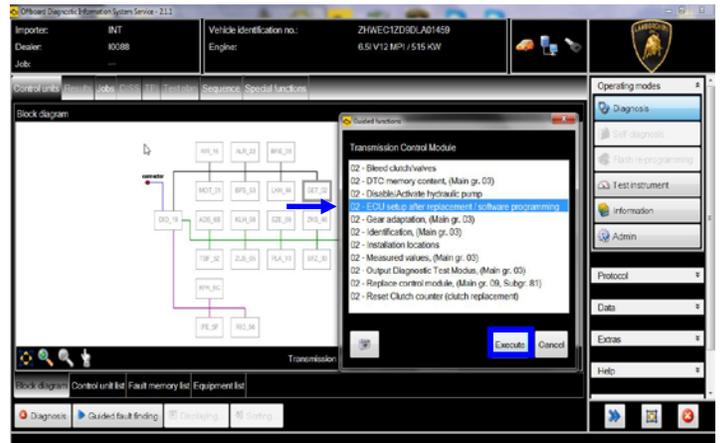
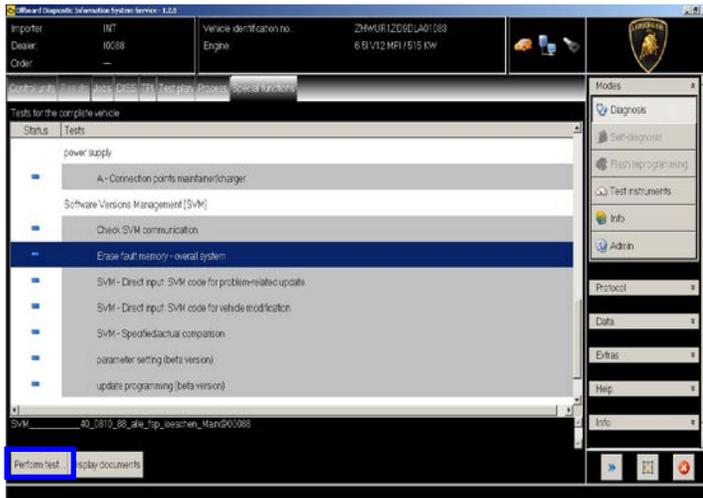
Press “Done/Continue” to exit the program.



50. Go back to the tab “Special functions” and select “Erase fault memory – overall system” to clear all the faults stored because of the recent software update.

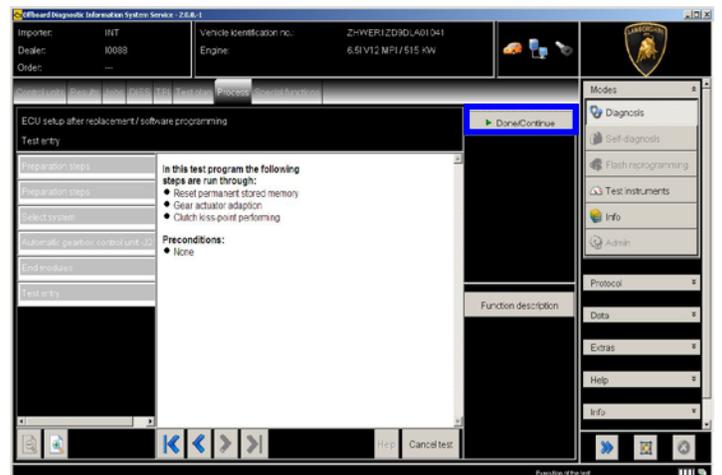
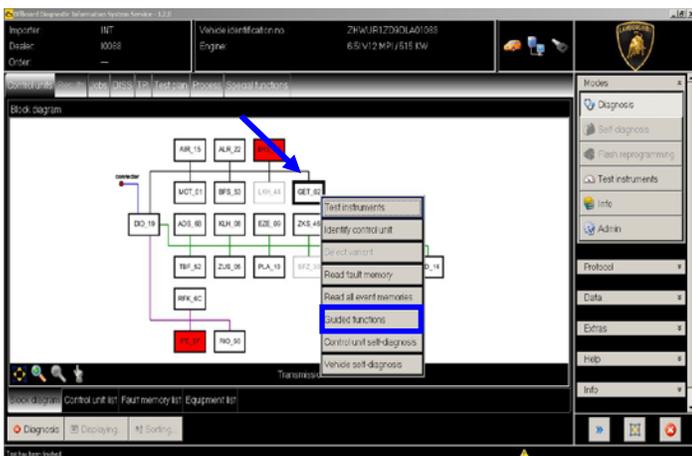


51. Execute the program “Erase fault memory – overall system” clicking on “Perform test...”



52. Go back to the Control Unit tab (block diagram or list view), to select the Transmission Electronics ECU GET_02 and its Guided Function.

54. Click “Done/Continue”.



53. Select the function “02 – ECU setup after replacement / software programming” in order to initialize the gearbox ECU.

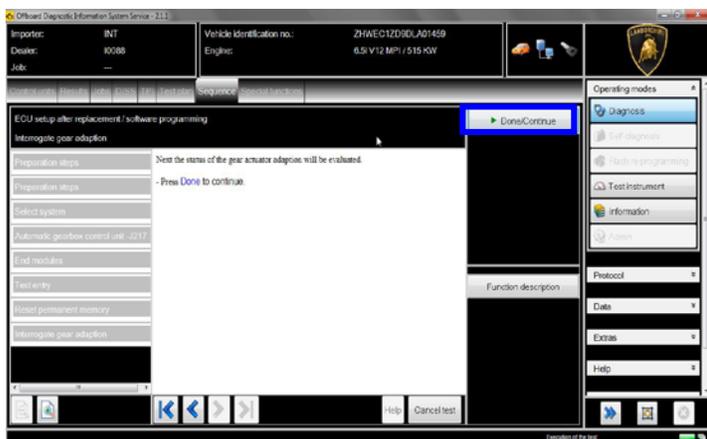
Click “Execute” to run the test.

55. Select “NO”

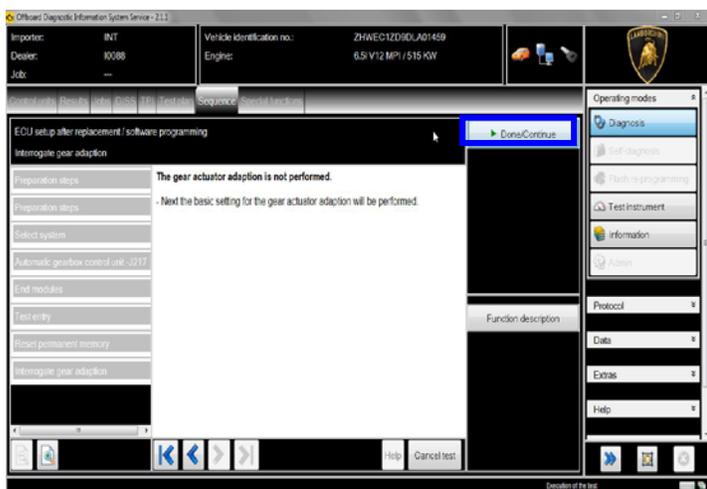




56. The status of the gear adaptation is evaluated.
 Click “Done/Continue”.



57. Click “Done/Continue”.



58. Click “Done/Continue” in order to execute the gear adaption.



59. Gear adaptation.

Confirm clicking on “Yes”.

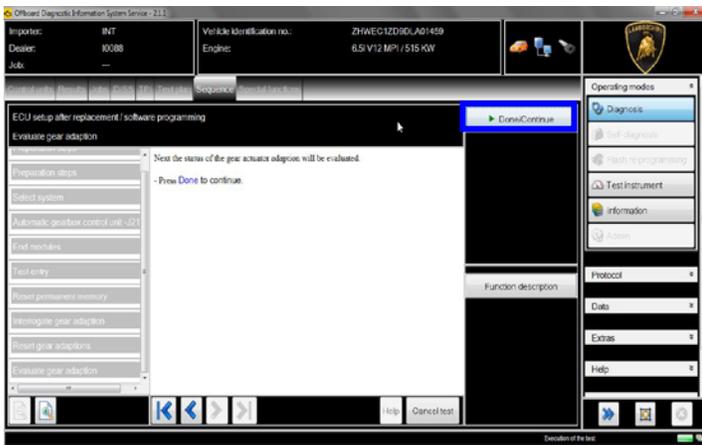


60. Wait until the gear adaption procedure is completed.

Gear engagements can be checked directly from the instrument cluster.

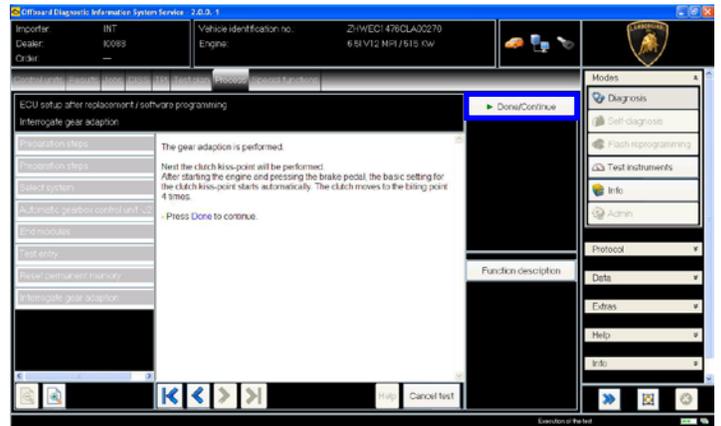


61. Click “Done/Continue”.



62. Kiss point

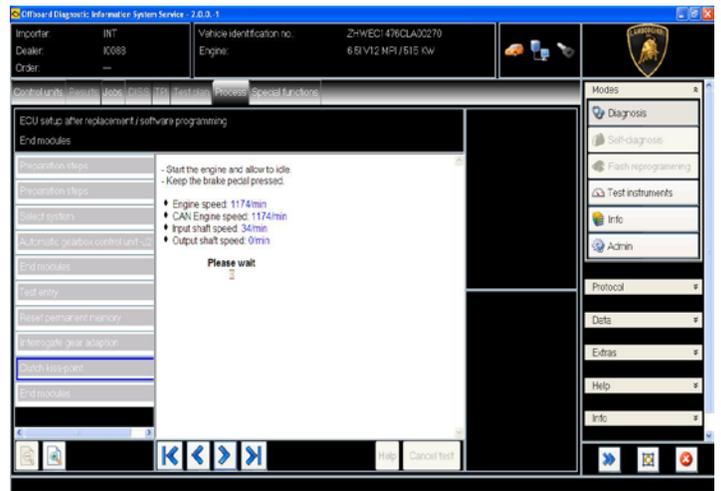
Click “Done/Continue” in order to perform the Kiss Point adaptation.



63. Start the engine at idle and keep pressed the brake pedal for at least 1 minute.

If the engine doesn't start:

- turn the ignition OFF;
- disconnect the diagnostic interface;
- wait at least 1 minute before turn the ignition ON again;
- reconnect the diagnostic interface and repeat the program from step 52.



64. If the Kiss Point adaptation is completed successfully the screenshot below will be displayed.

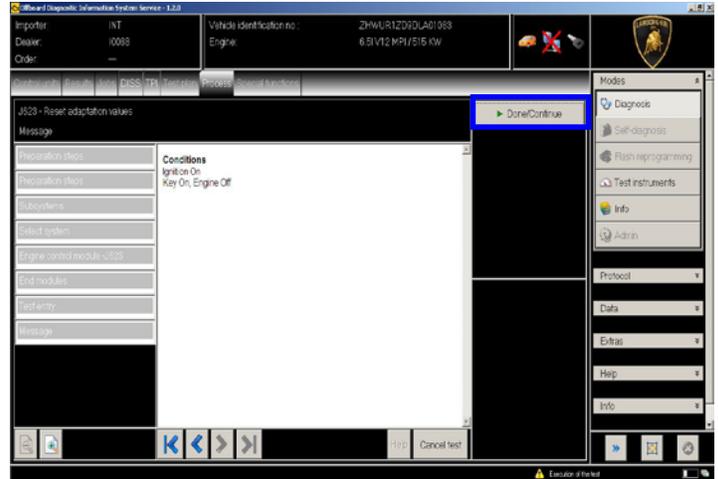
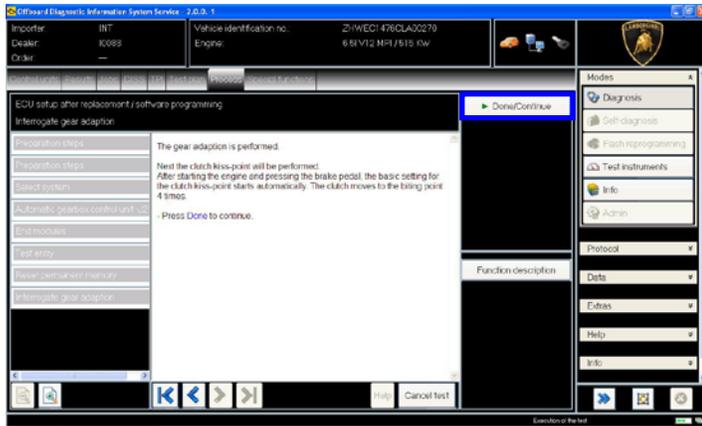
Click on “Done/Continue” in order to exit from the program.

If the Kiss Point adaptation is not completed successfully:



- turn the ignition OFF;
- disconnect the diagnostic interface;
- wait at least 1 minute before turn the ignition ON again;
- reconnect the diagnostic interface and repeat the program from step 52.

- no faults stored in the Engine ECU's memory;
- press "Done/Continue".

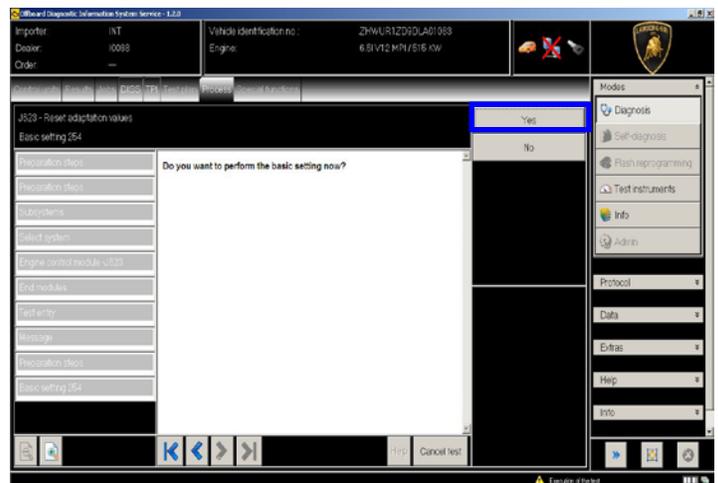


65. Go back to the Control Unit tab (block diagram or list view), to select the Engine ECU MOT_01 and the Guided Function:

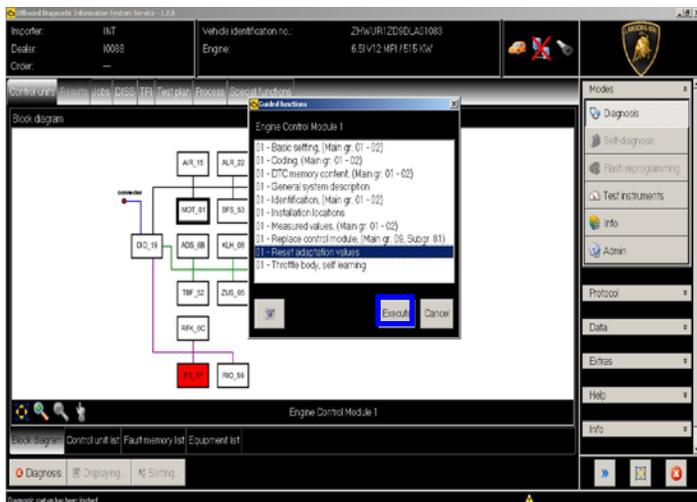
01 – Reset adaptation values.

Click "Execute" to start the procedure for resetting the adaptation values (Basic Setting 254).

67. Click "Yes" to continue.

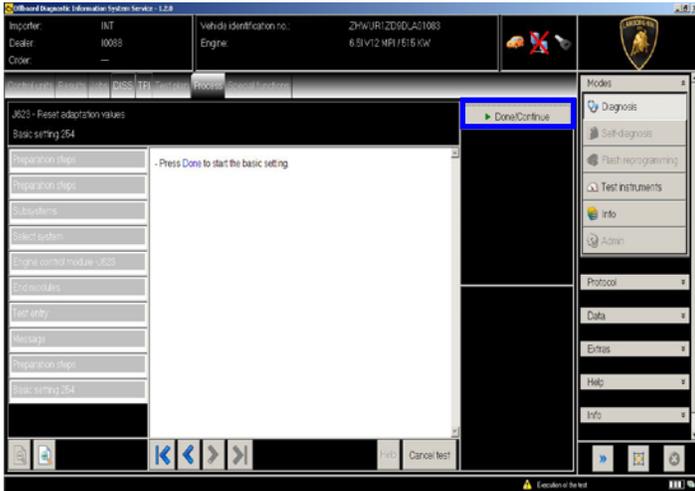


68. Click "Done/Continue" to perform the basic setting.



66. Be sure the activation conditions are respected:

- key ON;
- engine OFF;



69. Wait until the feedback message is shown.

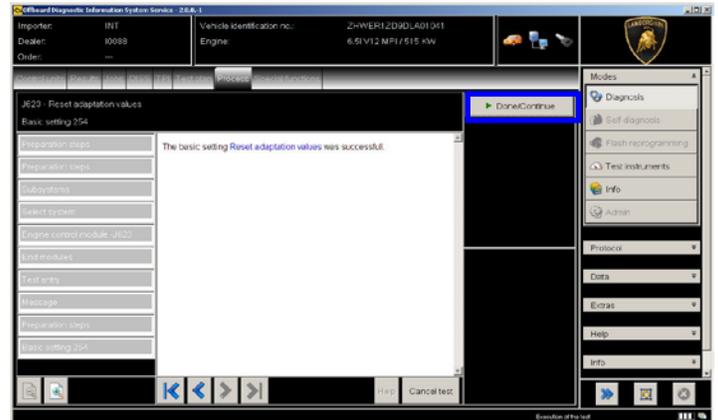
If the procedure has been performed successfully the message “Syst.OK” will appear, as shown in the picture below.



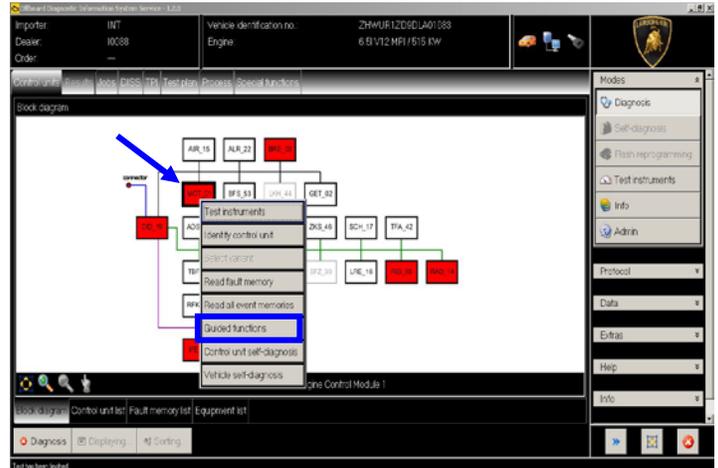
70. If the procedure has not been performed successfully:

- turn the ignition OFF;
- wait at least 1 minute before turn the ignition ON again;
- repeat the program from step 65.

Click “Done/Continue” to exit the basic setting.

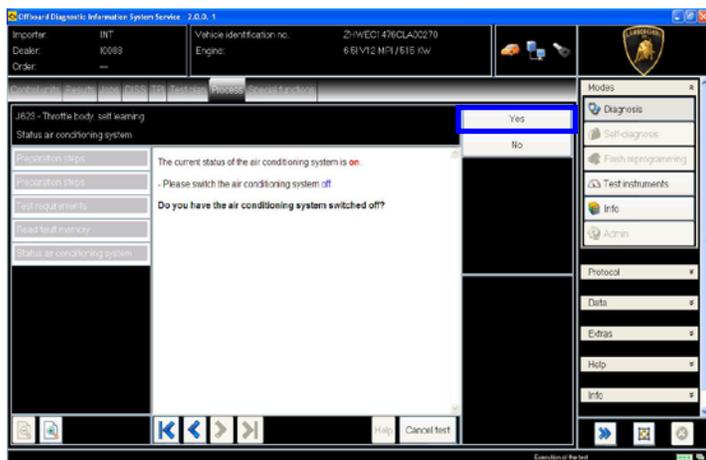


71. Go back to the Control Unit tab (block diagram or list view), to select the Engine ECU MOT_01 and the Guided Function.

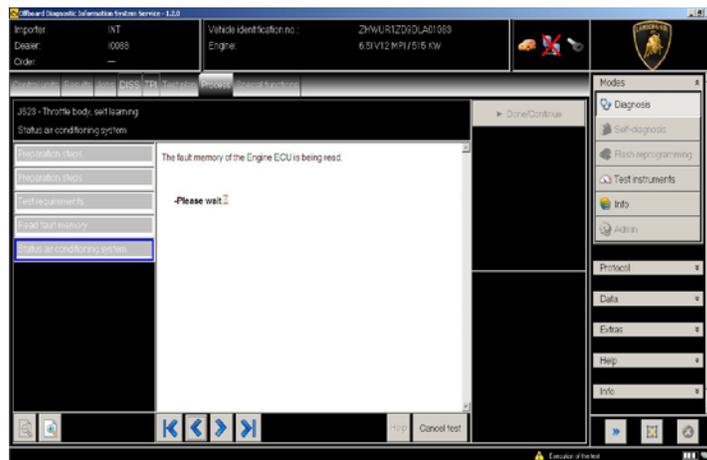


72. Select the program
 “01 – Throttle bodies, self learn-ing”.
 And execute clicking on “Execute”.

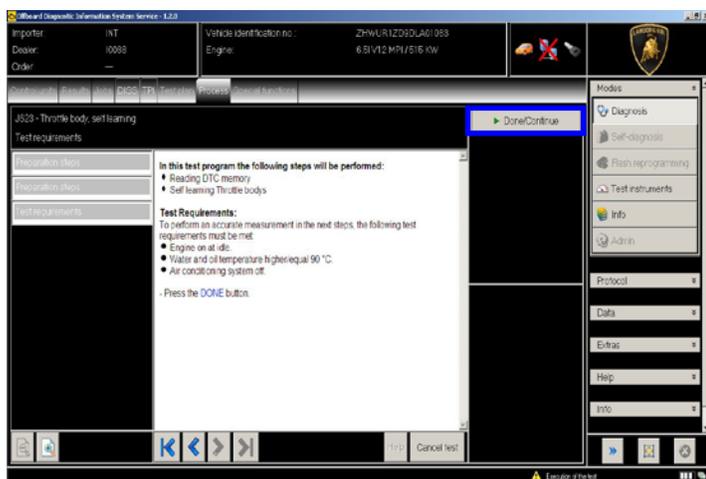
73. Be sure that Air Conditioning is OFF.
 Click “Yes”;



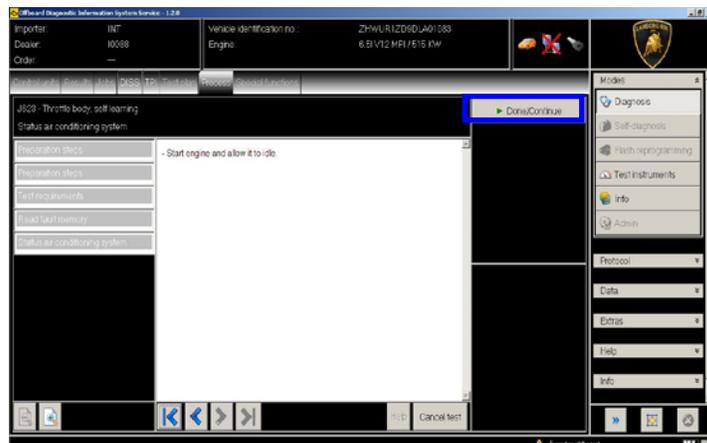
74. The prerequisites for the test are summarized.
 Press “Done/Continue”;



76. Start the engine at idle.
 Click “Done/Continue.”



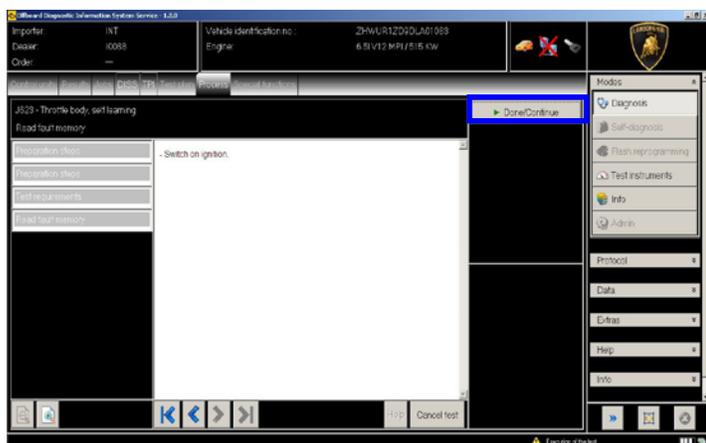
75. Switch the ignition ON.
 Click “Done/Continue”.

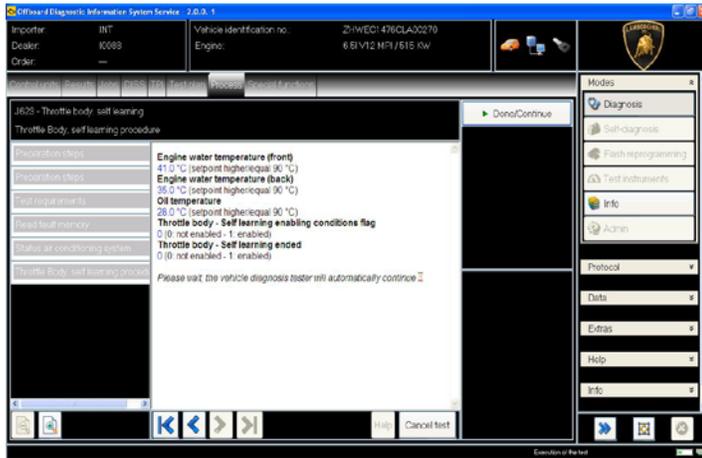


77. Self learning is an automatic procedure and it is activated when engine water and oil temperature exceed 90 °C.

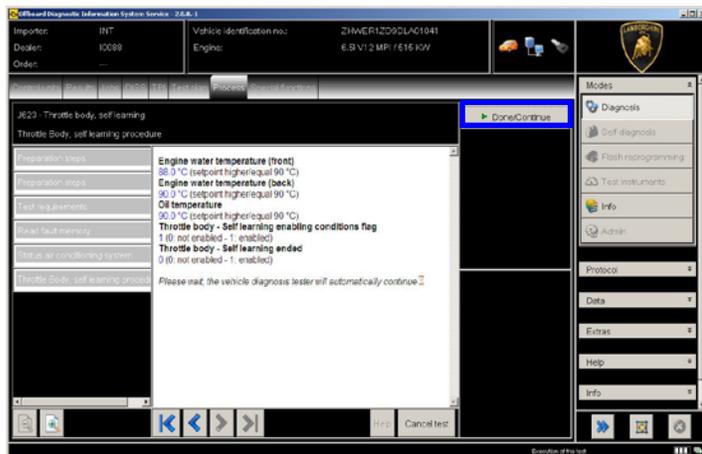
Check the parameters from ODIS and wait until water and oil temperatures reach the target.

Don't perform any action on the car (e.g. pushing the accelerator pedal) if not necessary.





78. Once reached the activation conditions (water and oil temperatures major than 90°C) the “Throttle body – Self learning enabling conditions flag” changes from 0 to 1 indicating the start of the self-learning procedure.



79. If the self-learning is completed successfully a screen as in the picture below is shown.

Click “Done/Continue” to display the ignition advance values.

If in 10 minutes from the activation the procedure has not been completed, interrupt and:

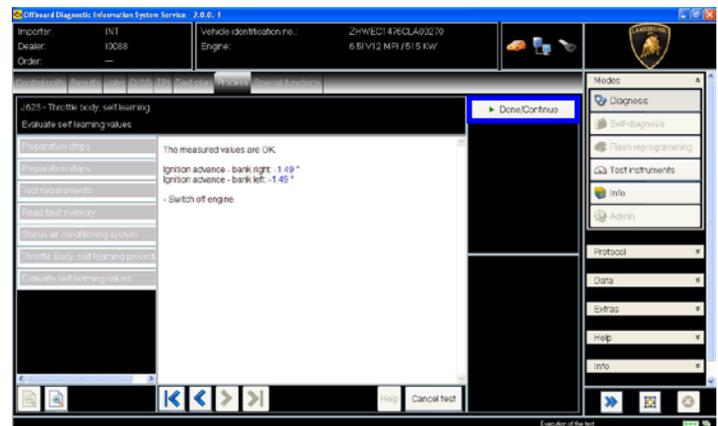
- Switch the ignition OFF;
- Wait 1 minute before redo the ignition ON;
- Restart the procedure from step **71**.



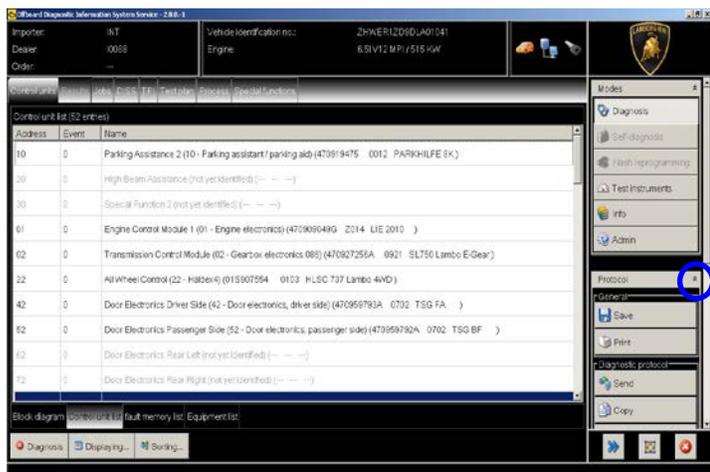
80. Have a look to the ignition advance values, that must be inside the range [-2° 3°].

In the case those values were out-side the range, restart the procedure from step **71** after an ignition switch OFF for at least 1 minute.

Switch the engine OFF and press “Done/Continue” to exit the pro-gram.



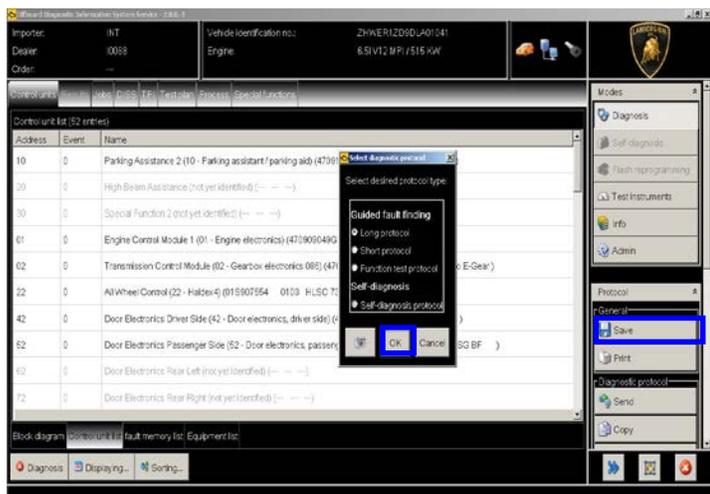
81. . At the end of previous steps, expand the menu “Protocol” on the right side (menu bar).



82. Click “Save” in the subgroup of buttons “General” In the diagnosis protocol window under GFF select:

- Long protocol.

By clicking on it. Then click “OK”.



83. Select the position where you want to save the diagnosis protocol on your diagnosis laptop.

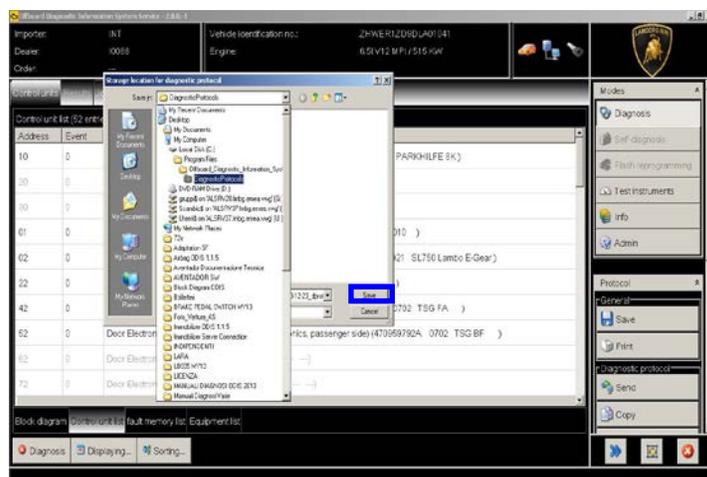
(default path can be changed under Admin and is set under ODIS Service installation folder).

Diagnosis protocol format is internet (.html).

Click “Save” to save the protocol.



Click “Print” in the subgroup of buttons “General” to print the protocol directly on a pdf file (if available Adobe pdf) or in paper format by sending to an installed network printer



84. The diagnosis protocol has to be attached to the related Warranty Claim

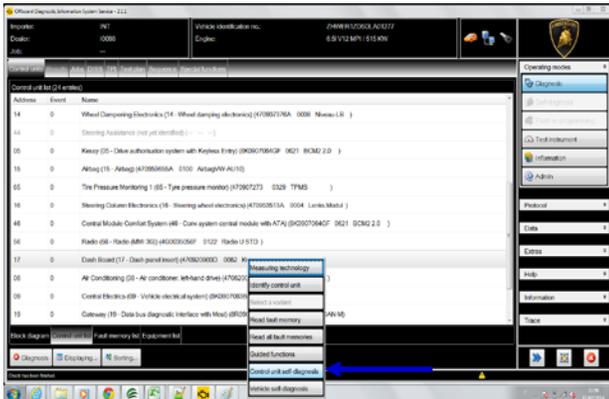
(in order to insert the claim on the Web Portal, please refer to Warranty Claim Manual you can find under the Portal, Warranty section).

85. Replace the user and maintenance manual on the car with its updated release

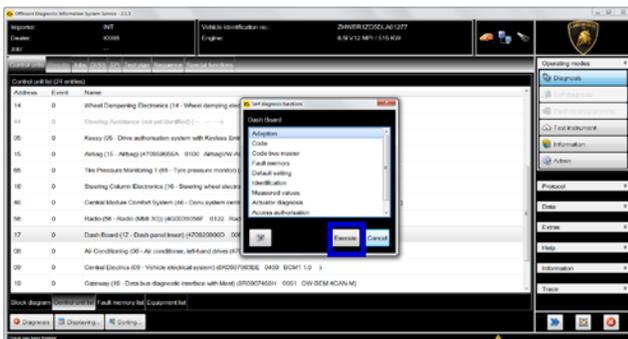
(check the correct code inside the list on page 1 of the current bulletin)

86. Restore the previously Service Intervals with following procedure:

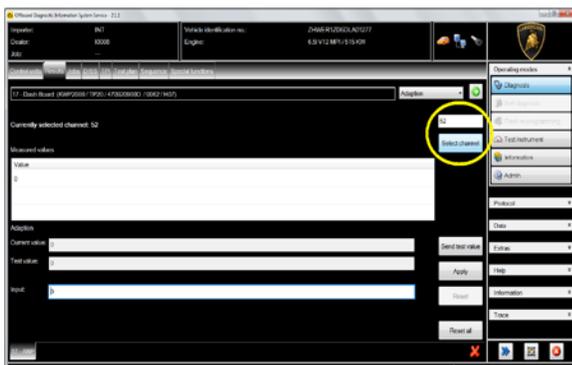
- 1) Remain in Odis Service for diagnosis
- 2) From Control Units list, select “17 – Dashboard” and right click with the mouse
- 3) Select “Control unit self diagnosis”



87. Select “Adaption” and click “Execute”:



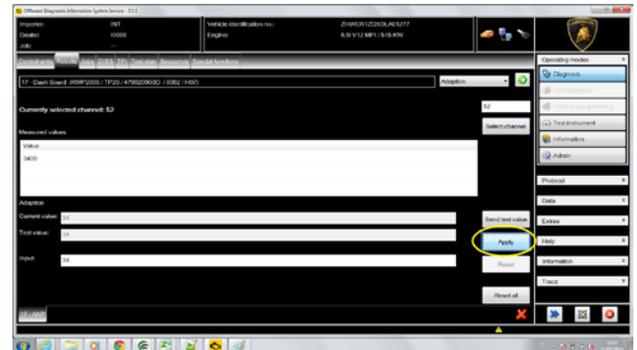
88. Type “52” in the upper right text box and click “Select Channel” button.



89. Insert the kilometers to the next service divided by 10 in the “Input” box (e.g if before the drivability package installation the remaining interval was 3400km, type “34”, that is 3400/100).



90. Click “Apply”

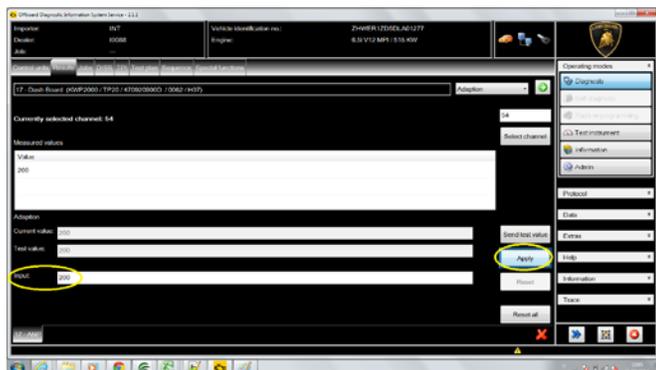


91. Select the channel “54”.





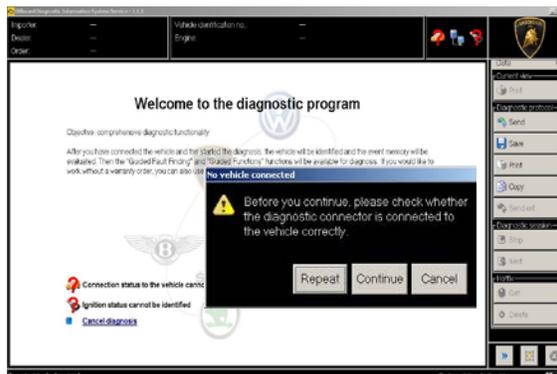
92. Insert the days till the next service in the “Input” box (e.g. 200 = 200 days) and click “Apply” button.



Now, the service interval values are restored as in the example figure of page3. The diagnosis tool can be closed.

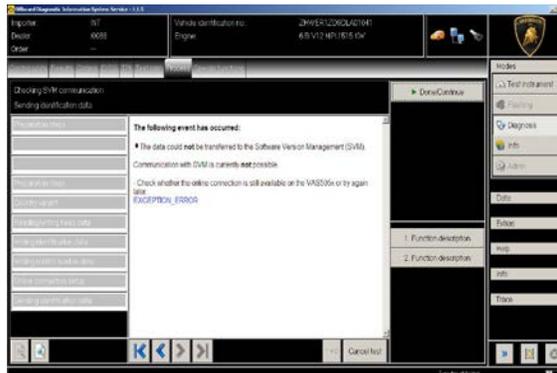
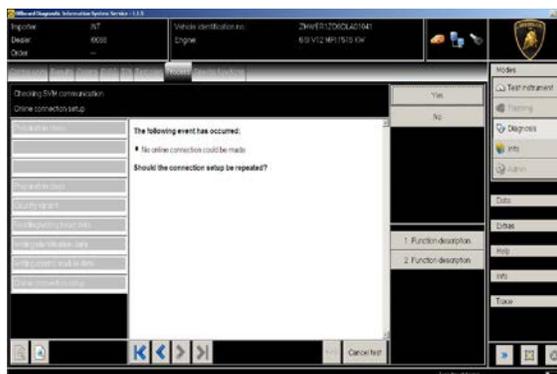
Trouble shooting

- A. If the error message regarding the VAS5054 interface and the 2 icons for status of on board connection and key on are shown as in the picture below:
 - Click “Cancel”;
 - Repeat the VAS5054 HW interface installation following the procedure (*) “VCI Manager v2.0”, by entering in the menu “Extras” on the right side and clicking on “Diagnostic interface”.



B. If one of the connection errors screens is shown as in the pictures below:

- it is not possible to establish a connection with the central server. Please check carefully that the diagnosis laptop is properly connected to the internet network and retry clicking “Yes” or “Done/Continue”.



C. If the loss of connection happens during the target/actual comparison.



- It is not possible to connect to central server, check the working connection of internet and retry by clicking “1”.



D. If the incorrect identification message is shown as in the picture below (error code: ODS1007E):

- be sure that your Geko account is valid;
- be sure that the label “Geko” is written on the token that you are using for the authentication;
- be sure the Password inserted is correct;
- click on Cancel and perform the application test (see document “ODIS_Checking_ConnectionServer_SVM_2.0” (*)).



E. If the infrastructure error message is shown as in the picture below (error code: ODS9212E):

- be sure that your Geko account is valid
- be sure that the label “Geko” is written on the token that you are using for the authentication

- verify in ODIS settings you have “Internet” instead of “CPN” (see document “ODIS_Initial_Setup_2.0” (*))
- click on Cancel and perform the application test (see document “ODIS_Checking_ConnectionServer_SVM_2.0” (*))

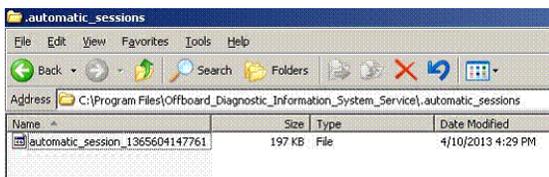


If the same error was present during the application test, try following procedure:

- quit ODIS;
- Enter the folder C:\Program Files\Offboard_Diagnostic_Information_System_Service\automatic_sessions on your diagnosis laptop;
- delete the only file present in that folder.
- re-Start ODIS Service under following conditions:
 1. Network connection available;
 2. ODIS connection set on “Internet”;
- Retry the application test and the SVM with your GeKO Token.



In the remote case there was still an error, retry the procedure with a second GeKO token, if available.





F. In the case the flash container is not detected (see figure):

- Make sure to be recently synchronized with Mirrorserver by checking the last date of Sync under:

<http://mirrorserver/welcome>

or under

http://IP_address/welcome

if you don't have previously defined the "mirrorserver" IP address alias.

- Make sure to be correctly connected with Mirrorserver.

Congratulations

You have successfully installed your MirrorServer/2 NOS-Box.

Testing the connection to the configured Provider Server. Please wait a moment, this takes some time ...

Configuration	
Base path	/var/www/desert
Provider URL	https://altair.mirrorserver2.net/deployment
Repository URL	https://altair.mirrorserver2.net/storage
Feedback URL	https://altair.mirrorserver2.net/health
Proxy	http://svc_blackbox?:@10.48.187.43:8080
Key file	/var/www/desert/certs/userkey.pem
Certificate	/var/www/desert/certs/usercert.pem
Tests	
Provider WebDAV access	OK (/deployment/)
Repository WebDAV access	OK (/storage/)
Feedback WebDAV access	OK (/health/)
Successful package downloads	5
Failed package downloads	0
Last Sync	28-09-14 at 22:42:15



NOTE:

(*) ODIS technical documentation can be retrieved on the Lamborghini web portal, under ODIS section → ODIS technical documentation.



IMPORTANT REMARK:

The documents to be mandatory attached to the claim are:

- Job order done;
- Diagnosis Protocol saved.

Failure to follow the procedures may lead to the rejection of the request.

Your Area Manager is at full disposal for further information.

Best regards

Customer Service