

**Campaign code:**

L73X-R.02.19.

**Campaign Name:**

Engine and Gearbox sw update.

**Model:**

Aventador S.

**Model year:**

From MY17 to MY19.

**Special or Limited editions:**

All.

**Markets:**

All markets except Japan, China, Taiwan.

**VIN identification:**Form HLA05555 to [KLA08984](#).

**Important:** before starting with the repair, log to the Warranty portal and check through VIN Info:

- Before executing this campaign verify if the car is in the VIN list of campaigns "L73X-R.01.17" or "L73X-R.02.18". If yes, please execute first the campaigns "L73X-R.01.17" or "L73X-R.02.18".
- The vehicle is effectively involved by these bulletin instructions; some cars may not be included even when they are in the VIN range.
- The procedure identified by a letter (e.g. A, B or C....etc. whose differences are explained below in this bulletin), taking care to order and use the parts corresponding to the assigned procedure.

**Example**

Code	Type	Description	Bulletin	Proc.
LXX-A.XX.XX		CAMPAIGN NAME		B

**NOTE:**

*Procedure A will be available only when the instructions require to carry out a preliminary control to determine whether or not a vehicle needs to be updated.*

**Network information notice.**

In the course of continuous product monitoring and internal tests, Automobili Lamborghini S.p.A has determined that in under certain driving conditions (accelerator pedal released in the idle approach to a stop) present an engine stall event without warning. In some conditions, the engine management software doesn't assure the idle minimum revs in order to maintain the engine running with consequent possible engine stall.

**Solution for the network:**

Update the car as indicated in the following instructions.

- Operation B - Engine and Gearbox sw update

**Replacement parts:****IMPORTANT!**

*When the VIN is entered in the LIASS system, the specific operation to be performed on that vehicle will be specified. On the basis of the operation displayed on LIASS, please order one of the following*



codes associated with the operations concerned, where suggested:

**Operation B:** Engine and Gearbox sw update

P/N	Description	Q
n/a	n/a	n/a

**Management of replaced parts:**

Store properly and tagged the parts replaced with bar code form for their identification during Area Manager visits.

**Labor:**

- Operation B: 1 hour

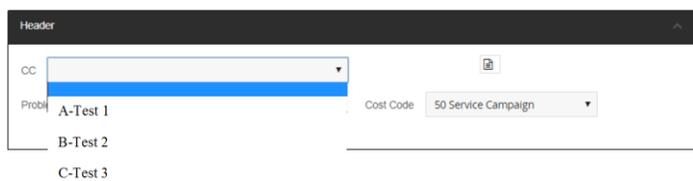
**Bulletins superseded:**

None.

**Warranty instructions:**

To claim the reimbursement log into the warranty system management on the Lamborghini Portal and consults the manual "W.Claim" available on the portal for the download .

Select the desired campaign and go on with the claim insertion, read carefully the windows message content and choose the option button corresponding to the operation performed .



On the base of the chosen option the reimbursement will be:

- **OPTION B:** Engine and Gearbox sw update



**WARNING!**

Attach all documents generated during the work

carried out as evidence of the work itself, for instance workshop orders, diagnostic protocols etc. If one or more of these is missing it may lead to a rejected re-imbursement request.

Fill out the Service and Recall Campaign section in the warranty booklet, which is shown in the figure below.

**Tools/Material necessary**

Code	Description	Q



**IMPORTANT:**

Before executing this campaign verify if the car is in the VIN list of campaigns "L73X-R.01.17" or "L73X-R.02.18". If yes, please execute first the campaigns "L73X-R.01.17" or "L73X-R.02.18".

**Preliminary operations:**

1. Ensure you have recently synced with the Mirror server by checking the last synchronization date:  
<http://mirrorserver/maintenance/diagnosis.py>  
 or by directly entering the Btac-box IP address:  
[http://\[IP\\_address\]/maintenance/diagnosis.py](http://[IP_address]/maintenance/diagnosis.py)



if you have not previously set the IP alias of the mirror server.

(e.g.  
<http://12.34.567.890/maintenance/diagnosis.py>)



**IMPORTANT:**

Make sure that the last synchronization was performed after December 19, 2019.

**MS/2 Diagnosis**

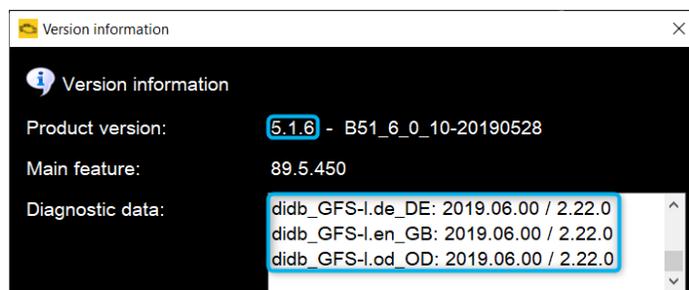
Configuration	
Base path	/var/www/desert
Provider URL	https://altair.mirrorserver2.net/deployment
Repository URL	https://altair.mirrorserver2.net/storage
Feedback URL	https://altair.mirrorserver2.net/health
Proxy	not used
Key file	/var/www/desert/certs/userkey.pem
Certificate	/var/www/desert/certs/usercert.pem
Tests	
Local file/directory permissions	OK
Disk space	OK
Provider reachable	OK (altair.mirrorserver2.net)
Repository reachable	OK (altair.mirrorserver2.net)
Feedback reachable	OK (altair.mirrorserver2.net)
Provider WebDAV access	OK (https://altair.mirrorserver2.net/deployment)
Repository WebDAV access	OK (https://altair.mirrorserver2.net/storage)
Feedback WebDAV access	OK (https://altair.mirrorserver2.net/health)
Successful package downloads	8
Failed package downloads	0
Last Sync	19/12/18 21:00:57



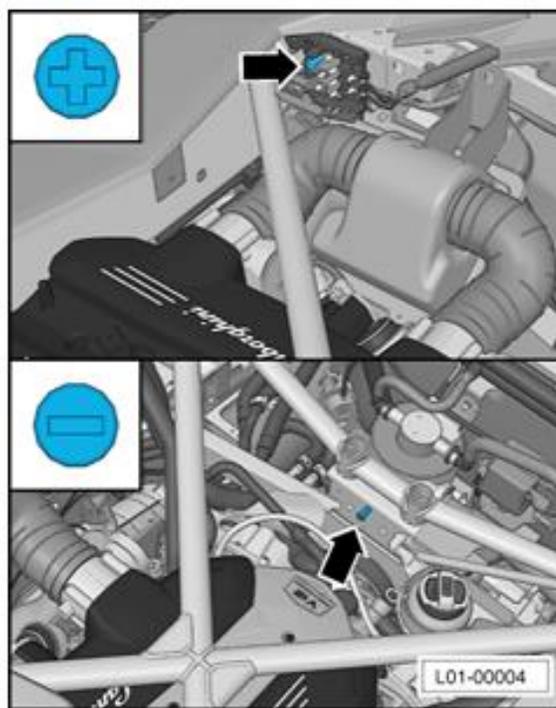
**NOTE:**

The instructions contained in this bulletin are based on the ODIS diagnosis software updated to version 5.1.6 and the Lamborghini 2.22.0 or later database

(refer to information bulletin BI.27.19 and make sure that ODIS Service is properly updated on the laptop).



- It is essential that you connect an appropriate battery charger to the charge points available in the engine hood. Please refer to the following figure.





**Work instructions:**

The updating procedure described here includes the following steps:

- I. **Engine and Gearbox sw update;**
- II. **Gearbox ECU setup;**
- III. **Fault memory deletion;**
- IV. **Engine reset adaption values;**



**IMPORTANT:**

*Do not perform other types of activity on the car while executing the campaign.  
 Before starting the campaign, delete and resolve any errors that may be present.*

*Carrying out the procedure incorrectly implies unsolvable damage to the control unit and resulting replacements.*



**NOTE:**

*Ensure the key On during the entire procedure for updating the various listed systems. Start a diagnostic session with ODIS Service and keep the diagnostic interface connected to the OBD socket. Do not close the ODIS program or use it for other purposes.*

**I. Engine and Gearbox sw update**

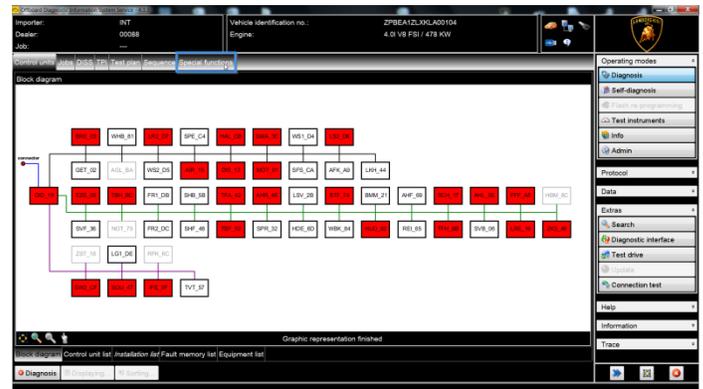
Refer to the procedure in the workshop manual regarding "Implementation of an SVM code".



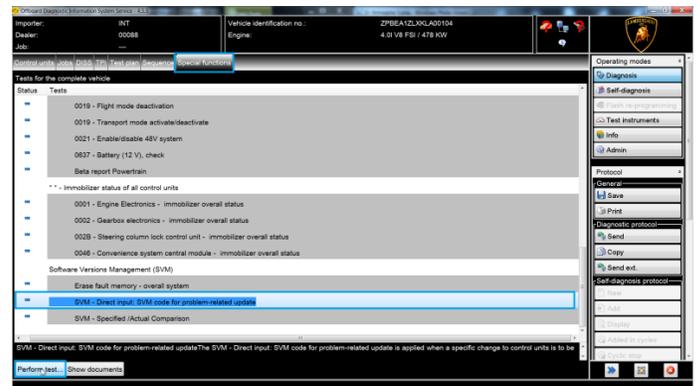
**IMPORTANT:**

*Improper use of this function can cause damage to the ECUs.*

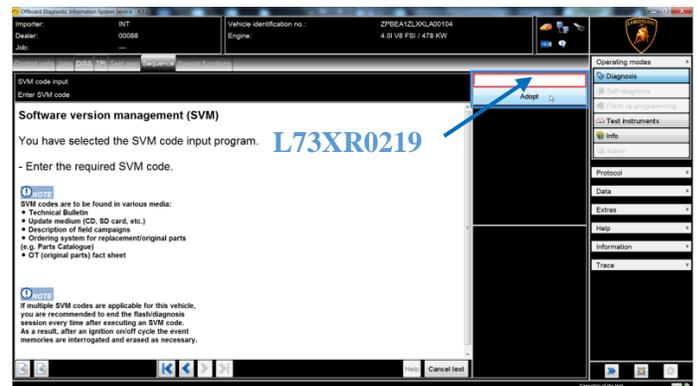
1. To start the procedure to execute an SVM code, select the "Special functions" card in ODIS.



2. Click on "SVM-Direct input: SVM for problem-related update" and then on "Perform test".

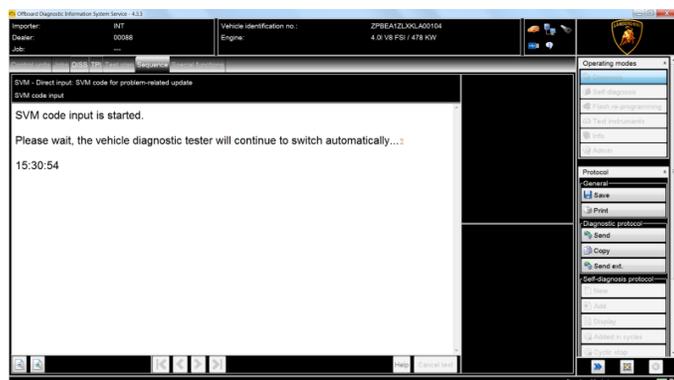


3. Enter the campaign code "L73XR0219" in the appropriate space at the top right and click "Adopt".





4. The SVM code entered is again displayed in the dialog box. If the entered code is correct, click on "Yes". Otherwise click on "No" to cancel the SVM procedure.
5. Wait for data to be acquired from all the control units. This operation requires a few minutes.

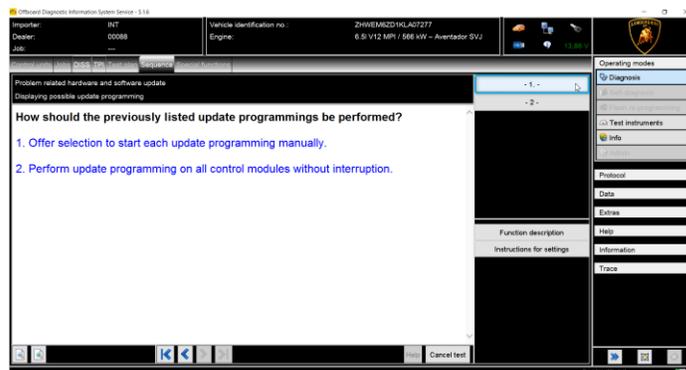


6. To run the SVM function and access the Lamborghini servers, you must have a valid GeKo account. Ensure that the laptop is correctly connected to the Internet. Enter your GeKo username in the "User name" field and the PIN 1324 + the 6-digit code currently displayed on the GeKo token in the "Password" field.



Click "Adopt" to confirm.

7. The SVM function will automatically continue with identification of the control units in the vehicle.
8. During the execution of the SVM function, please click on the first button to choose the ECU selective update.

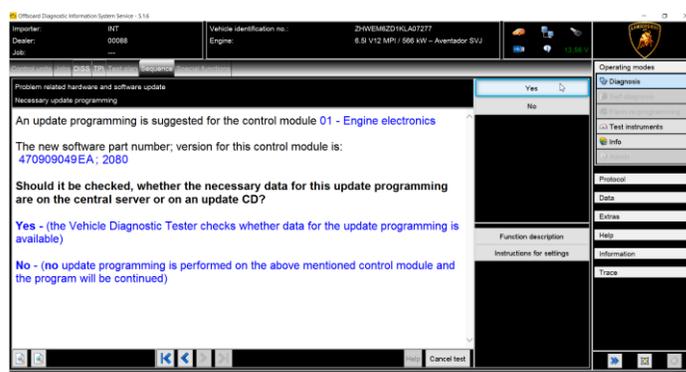


9. When the Engine sw update is proposed, it is necessary to accept the update. Please click on the button "Yes".



**IMPORTANT:**

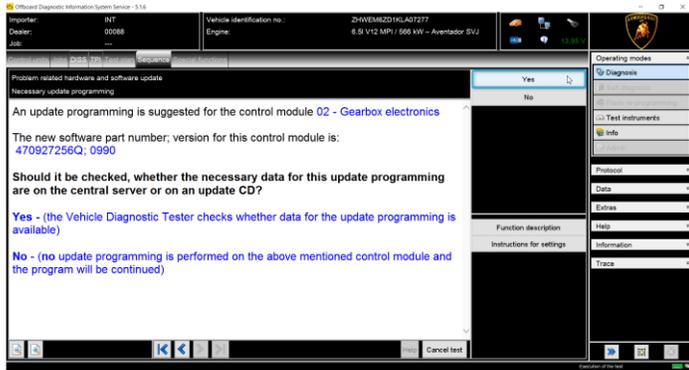
The following images are used for example.



10. If the Gearbox sw update:

a. **is not proposed:** it is necessary to follow the steps until **19**, jumping the section "II - Gearbox ECU setup" and executing directly the section "**III - Engine reset adaption values**";

b. **is proposed:** please click on "Yes" and execute all the steps without jumping any section.

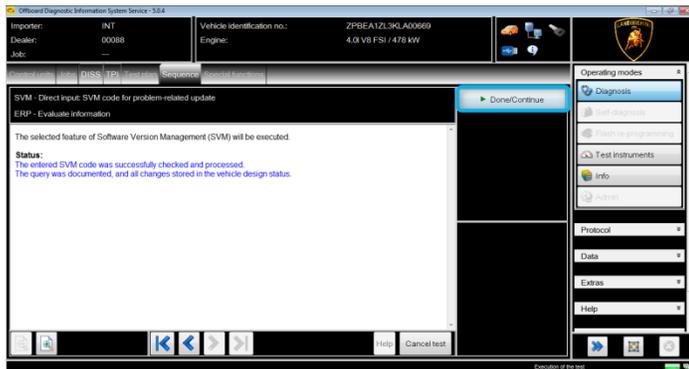


11. It might become necessary to perform one or more of the following operations in the SVM procedure:

- Coding;
- Parameterization;
- Calibration.

To perform these actions, it is usually necessary to click on "Done/Continue" where requested and to follow the instructions directly provided on the ODIS dialog screens.

12. Click "Done/Continue" until the O1 Engine and O2 Gearbox updating procedure is completed.

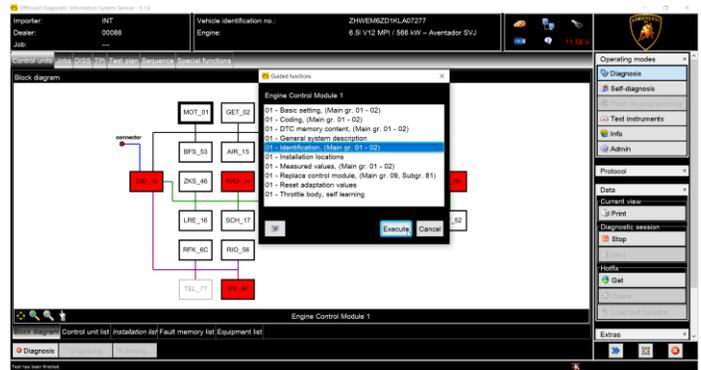


13. Click "Done/Continue".

14. Switch the key OFF for a few seconds.

15. Switch the key ON.

16. Select the function "O1 - Identification" from the "Guided functions" of control unit O1 (MOT\_01).



**IMPORTANT:**

The following image is an example.

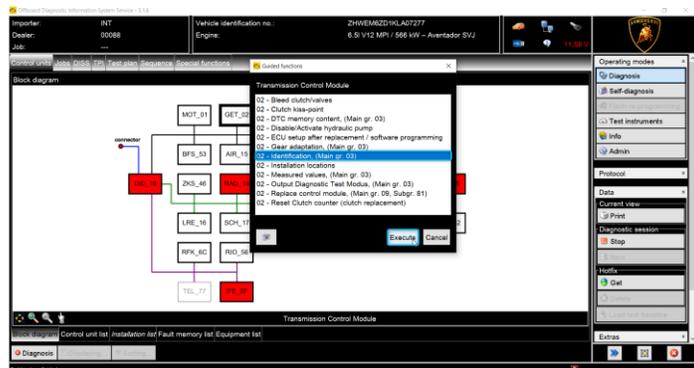


17. Check that Software P.N. and Software version installed are consistent with the "Table of reference for control unit O1" below.

Table of reference for control unit O1		
Software Part Number	SW version	Market
470909049EA	2080	EU, GB, Scandinavia, Sweden, Russia, Australia, New Zealand, South Africa, India, Hong Kong, Macao, Singapore, Philippines, Indonesia, Mexico, Thailand, Chile, Vietnam, Azerbaijan
470909049CQ	2084	USA, Canada, Brazil
470909049CN	2002	Arabia, Dubai
470909049CS	2005	South Korea

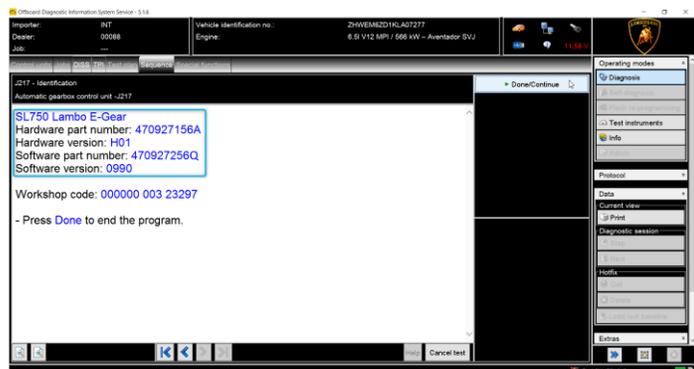


18. Select the function "02 - Identification" from the "Guided functions" of control unit 02 (GET\_02).



**IMPORTANT:**

The following image is just an example.



19. Check that Software P.N. and Software version installed are consistent with the "Table of reference for control unit 02" below.

**Table of reference for control unit 02**

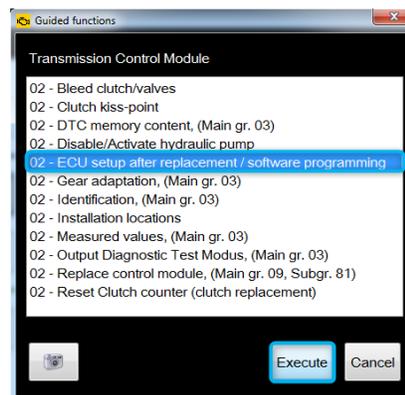
Software Part Number	SW version	Market
470927256Q	0990	EU, GB, Scandinavia, Sweden, Russia, Australia, New Zealand, South Africa, India, Hong Kong, Macao, Singapore, Philippines, Indonesia, Mexico, Thailand, Chile, Vietnam, Azerbaijan
470927256Q	0990	USA, Canada, Brazil
470927256H	0986	Arabia, Dubai
470927256H	0986	South Korea

**II. Gearbox ECU setup**

20. Go to Control Unit tab to select the gearbox ECU GET\_02 guided function:

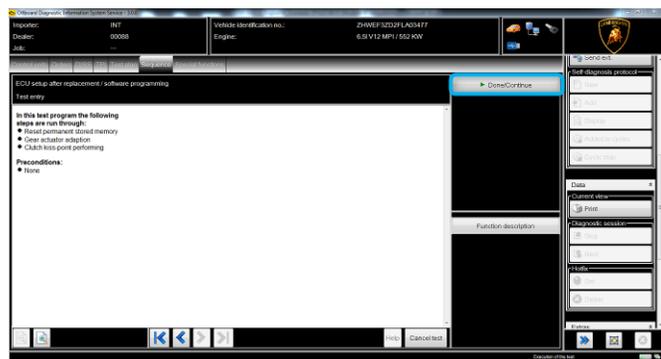
**"02 - ECU setup after replacement / software programming"**

Click "Execute".

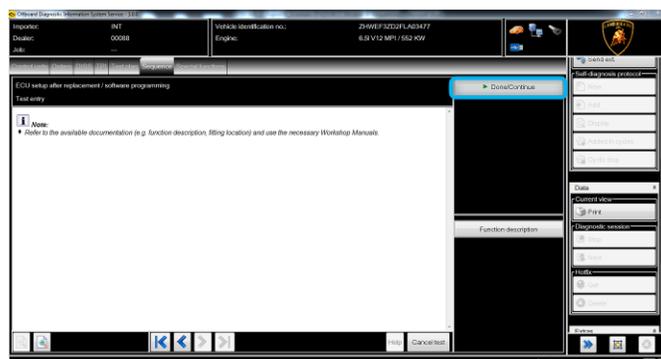




21. Click "Done/Continue".



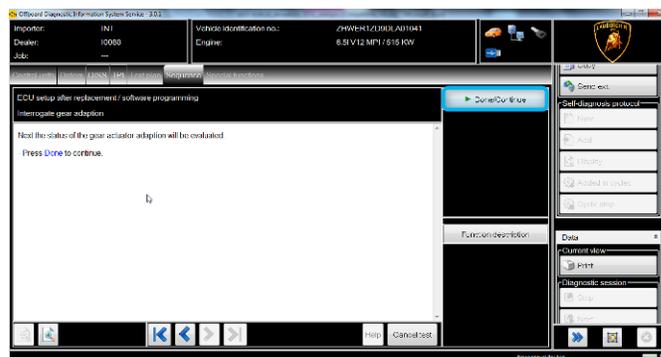
22. Click "Done/Continue".



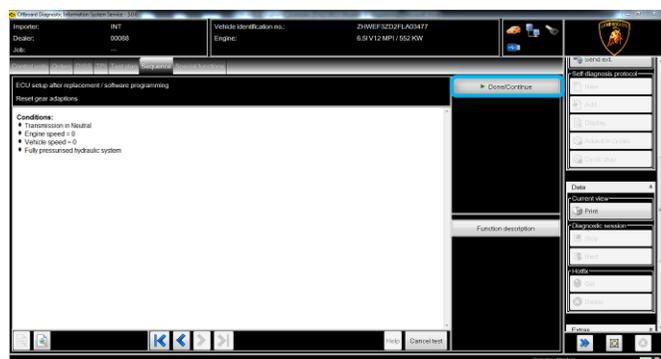
23. Click "No"



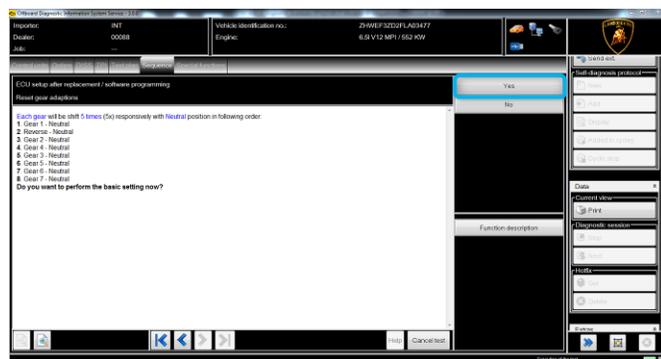
24. Click "Done/Continue".



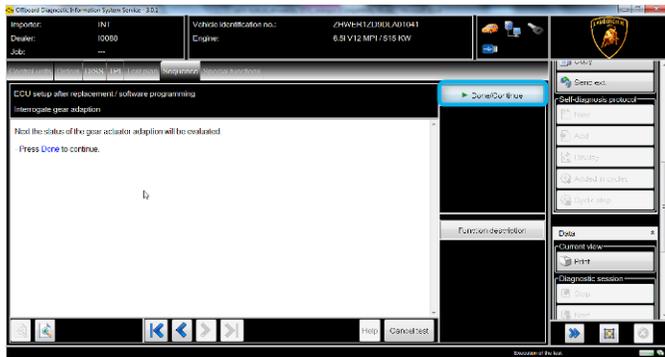
25. Read the conditions to perform the test and click "Done/Continue".



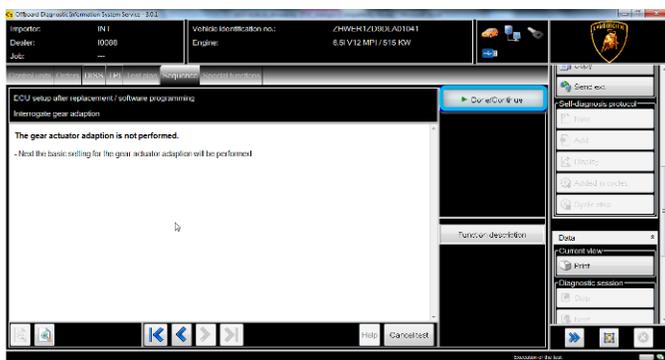
26. Click "Yes" to start the basic setting.  
 You can check on the instrument cluster the gear shifting.



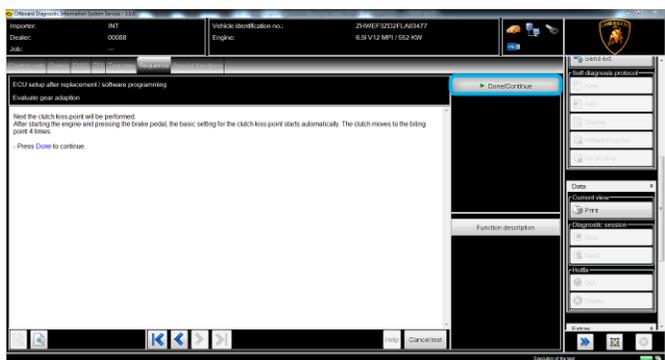
27. Click "Done/Continue" to evaluate the gear actuator adaption.



28. Click "Done/Continue".



29. Click "Done/Continue" to perform the clutch kiss point test.

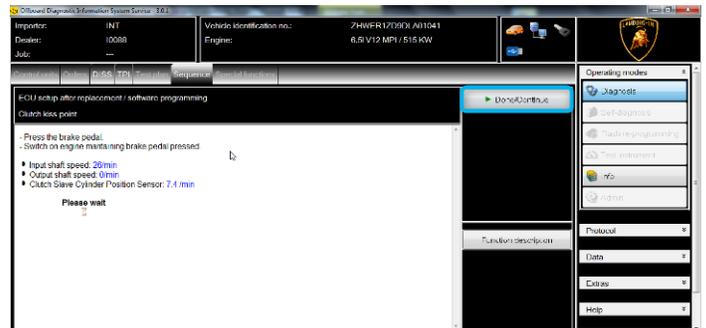


30. Press the brake pedal and start the engine. Keep the brake pedal pressed until the end of the basic setting. (approx. one minute).

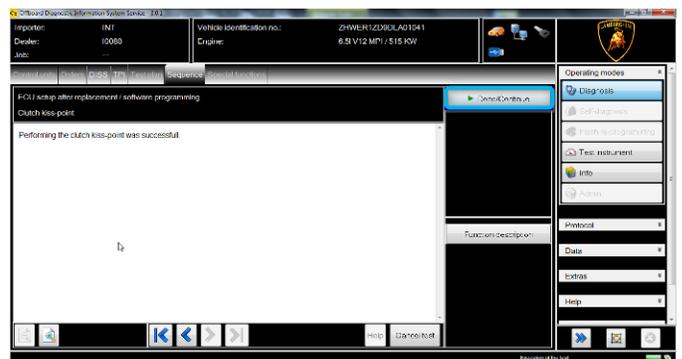
If you cannot turn the engine ON:

- Turn the key off;
- Disconnect the diagnosis interface;

- Wait at least for one minute before turning the key on again;

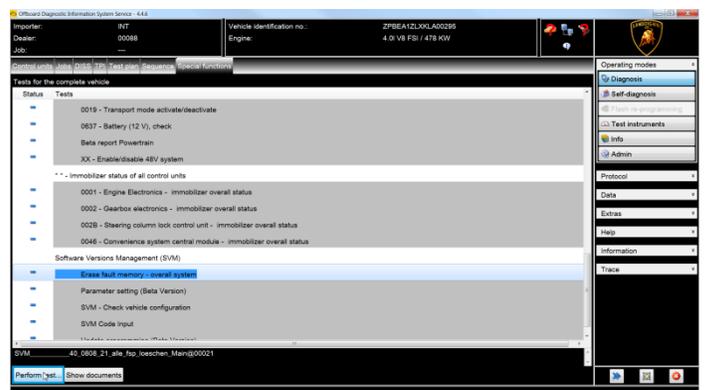


31. Click "Done/Continue" to end the test.



### III. Fault memory deletion

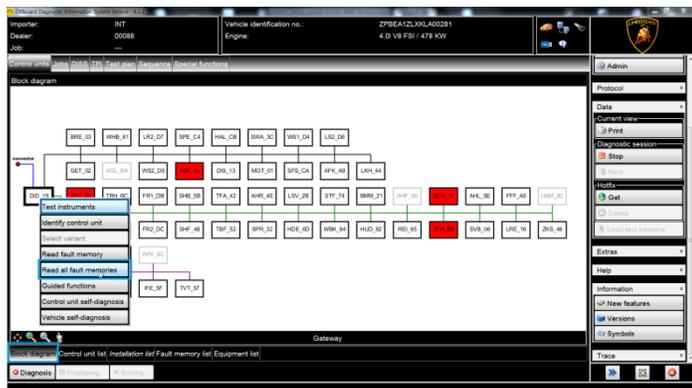
32. Select the "Special Functions" card and then "Erase fault memory - overall system" in order to delete all stored faults.





The complete guide for deleting faults is available in the workshop manual, chapter **"10.00.B-Deleting the data in the fault memory of control units"**.

**33.**Go back to the "Block diagram" card and select "Read all fault memories" from one of the vehicle's control units in order to update the display of the faults present after deletion.



### IMPORTANT:

Solve any faults still present by performing the functions listed in the "Test plan". Perform the procedure "II. Fault memory deletion" again until all faults are fully removed from the vehicle's control units.

## IV. Engine reset adaption values

**34.**Go back to the Control Unit tab and select the Engine ECU MOT\_01 guided function:

### "01 - Reset adaptation values"

Click "Execute" to start the procedure to reset the adaptation values.

**35.**Follow the instructions shown on the ODIS dialog screens and make sure the activation conditions are respected:

- Key ON;
- Engine OFF;
- No faults stored in the Engine ECU memory.

**36.**If the procedure has not been performed successfully:

- Turn ignition OFF;
- Wait at least for one minute before turning ignition ON again;
- Repeat the procedure from step 29.

**37.**Go back to the Control Unit tab (block diagram or list view) to select the Engine ECU MOT\_01 guided functions. Select:

"01 - Throttle body, self-learning"

Click "Execute" to start the self-learning procedure.



### IMPORTANT:

*Make sure that air conditioning is OFF.*

**38.**Start the engine at idle speed, the self-learning is an automatic procedure which is activated when engine water and oil temperature reach 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.



Once the conditions are met (water and oil temperature above 90°C) the "Throttle body - Self learning enabling conditions flag" switches from 0 to 1 indicating the beginning of the self-learning procedure.

39. Evaluate the ignition advance values, must be inside the range  $[-3^{\circ}, 3^{\circ}]$ . Switch the engine OFF and press "Done/Continue" to exit the program.

If these values were out of the range, restart the procedure from step 32, leaving ignition Key OFF for at least one minute.

#### **/\* Saving a diagnostic protocol \*/**

40. Save the Diagnostic protocol as described in the chapter "**10.00.H-Saving the diagnostic protocol**" when the procedure described in this document is completed.



#### **IMPORTANT:**

*The Diagnostic Protocol must be attached to the Corresponding Warranty Request (to enter the request on the web portal, refer to the W.Claim manual which you can consult in the Warranty section of the portal).*

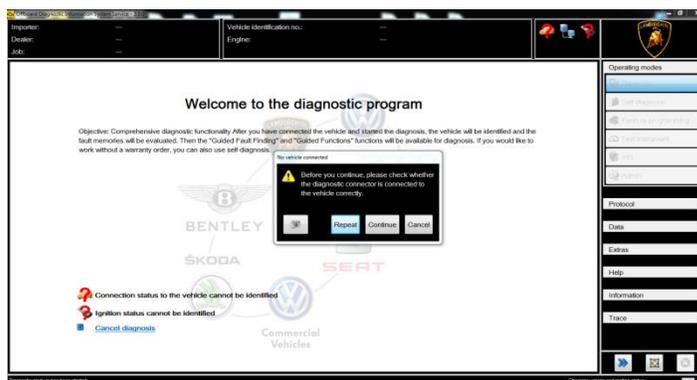
#### **Troubleshooting:**

- i. If the following error screen is displayed, abort the guided function by clicking on "Cancel Test" and contact Technical Support.



- ii. If an error is displayed that regards the hardware interface, and the "connection to vehicle" and "key state" icons appear as shown in the figure below:

- Click "Cancel"
- Repeat installation of the interface VAS5054/6154/6154A per the instructions in procedure (\*) "VCI Manager v2.0", selecting the right-hand "Extras" menu in ODIS and clicking on the "Diagnostic interface" button.

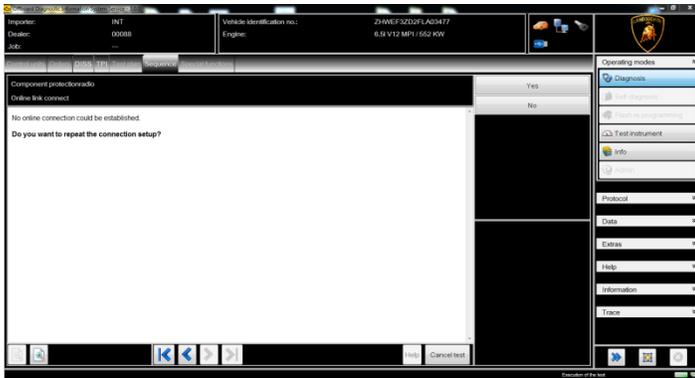


- iii. If one of the following connection errors is displayed like in the following example screenshots:

- It is not possible to connect to the central server; check that your laptop is correctly connected to the Internet and re-

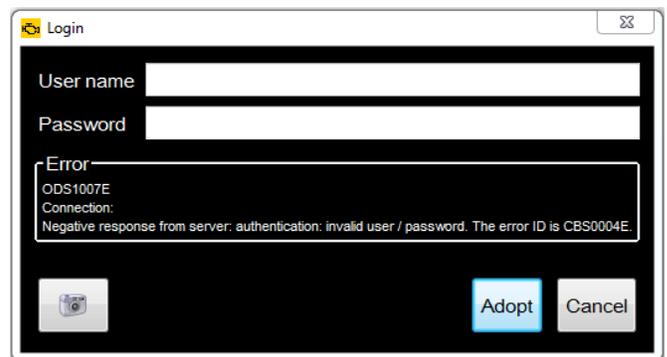


try by clicking on “Yes” or “Done/Continue”, as appropriate.



v. If the authentication error as shown in the following screenshot is displayed (error code: ODS1007E):

- Ensure you have a valid GeKo user account;
- Ensure that the “Geko” label is printed on the token you are using;
- Ensure you have entered the correct password;
- Click on “Cancel” and run the application test (see document “ODIS\_ControlloConnessione\_Server\_SVM\_2.0”(“)).



iv. If the connection is dropped during the course of the target/actual comparison during the SVM procedure:

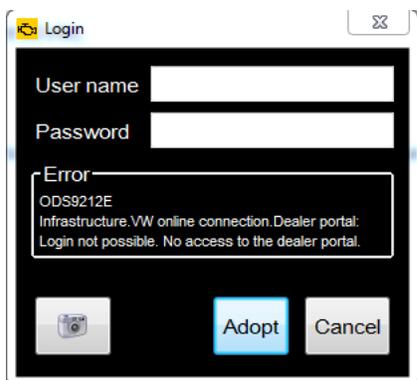
- It is not possible to connect to the central server; check that your laptop is correctly connected to the Internet and retry by clicking on “1”.

vi. If the infrastructure error as shown in the following screenshot is displayed (error code: ODS9212E):

- Ensure you have a valid GeKo user account;
- Ensure that the “Geko” label is printed on the token you are using;



- Check that the Internet is set in ODIS settings and not CPN (see document "Set-up\_Iniziale\_ODIS\_2.0" (\*));
- Click on "Cancel" and run the application test (see document "ODIS\_ControlloConnessione\_Server\_SVM\_2.0" (\*)).



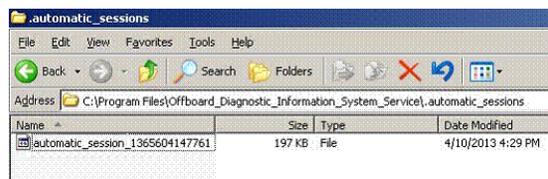
vii. If the same error type should reoccur during the application test, try the following procedure:

- Exit ODIS;
- Browse to the folder C:\Program Files (x86)\Offboard\_Diagnostic\_Information\_System\_Service\automatic\_sessions on your diagnostic laptop;
- Delete the only file which will be in the folder;
- Restart ODIS Service, ensuring that:
  1. You have a network connection;
  2. The ODIS connection is set to Internet;
- Run the connection test again, and perform the SVM again with your GeKo Token.



**IMPORTANT:**

*If the error occurs again, repeat the procedure and try with a second GeKo token, if available.*



**NOTE(\*\*)**

*All ODIS technical documentation can be viewed on the Lamborghini web portal, in the corresponding ODIS section.*



**IMPORTANT:**

*The documents which must be provided with the warranty request are:*

- Produced Repair Order
- **Saved Diagnostic Protocol with BETA report.**

*Failure to follow these procedures could lead to the request being rejected.*