



NEW ECU VALIDATION NEEDED AFTER REPLACING CERTAIN CONTROL MODULES

MODEL

G05 (X5)	G15 (8 Series Coupe)
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SITUATION

With introduction of the new Headunit HU-H3 (MGU Media Graphics Unit) we have a new way protection mechanism against tampering.

If one or more of the following components MGU, TCB Telematic Communication Box (ATM-02), RSE Rear Seat Entertainment or KOMBISP18 instrument cluster needs to be replaced the secure connection between them must be re-established.

In order to re-establish the connection, an electronic certificate must be created from the BMW backend and imported into the Vehicle.

CAUSE

After the replacement of one of the mentioned Modules the Control Module needs a valid certificate in order to communicate with the other Modules.

CORRECTION

With introduction of ISTA 4.14.1x the certificates can be created in manual steps. (See attachment)

PROCEDURE

Refer to attachment.

ATTACHMENTS

View PDF attachment [B090218 Attachment](#).

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New protection against tampering - control unit encoding

In G05, G15 and subsequent vehicles, the HU-H3 (formerly MGU), TCB, RSE and instrument cluster control units are linked together. This should prevent tampering with vehicles.

If one or more of the components are exchanged, the connection must then be re-established.

In order to re-establish the connection, an electronic certificate must be created in a BMW backend and imported into the vehicle.

The manual process is described below:

1. Select the exchanged control unit in the "After Replacement" tab and then calculate the measures plan.

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ Maintenance	Troubleshooting	Service functions	Software update	Control Unit Replacement	Vehicle modification	
Before Replacement	After Replacement					
Short name	Description	Replaced				
ACSM	Crash safety module	<input type="checkbox"/>				
AHM	Trailer module	<input type="checkbox"/>				
AL	Active steering	<input type="checkbox"/>				
AMPT	Top HiFi amplifier	<input type="checkbox"/>				
BDC	Body Domain Controller	<input type="checkbox"/>				
CON	Controller	<input type="checkbox"/>				
DDE	Digital diesel electronics	<input type="checkbox"/>				
DSC	Dynamic Stability Control	<input type="checkbox"/>				
EDC	Vertical Dynamics Management	<input type="checkbox"/>				
EGS	Electronic transmission control	<input type="checkbox"/>				
FHC	Electronic ride height control	<input type="checkbox"/>				
Hint: To finalize the replacement of the already installed ECU, select the corresponding control unit.						
						Display measures plan

Then ISTA will automatically include the control unit validation in the measures plan.

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Hit list	Test plan	Programming plan				
Measures plan	Final report					
Type	Planned actions	Origin	State			
Pre-/Postprocessing						
ABL	Delete fault memory	System	<input type="checkbox"/>			
ABL	Ethernet port configuration (ENS)	System	<input type="checkbox"/>			
ABL	Head unit: Initialisation of stored ethernet communication	System	<input type="checkbox"/>			
ABL	Initialisation of component protection for the head unit	System	<input type="checkbox"/>			
ABL	Run the Power-down command	System	<input type="checkbox"/>			
ABL	Update online services	System	<input type="checkbox"/>			
ABL	Validating control units after control unit exchange	System	<input checked="" type="checkbox"/>			
UPD	SVT update	System	<input type="checkbox"/>			
UPD	Write of I-Level	System	<input type="checkbox"/>			
UPD	Write of vehicle order	System	<input type="checkbox"/>			
UPD	Write of vehicle profile	System	<input type="checkbox"/>			
Back	Display operations report	Execute service function	Reject measures plan	Calculate measures plan	Execute measures plan	

2. If ISTA cannot carry out automatic validation, a warning about the absence of control unit validation is displayed.

Control unit validation after control unit exchange

Warning!

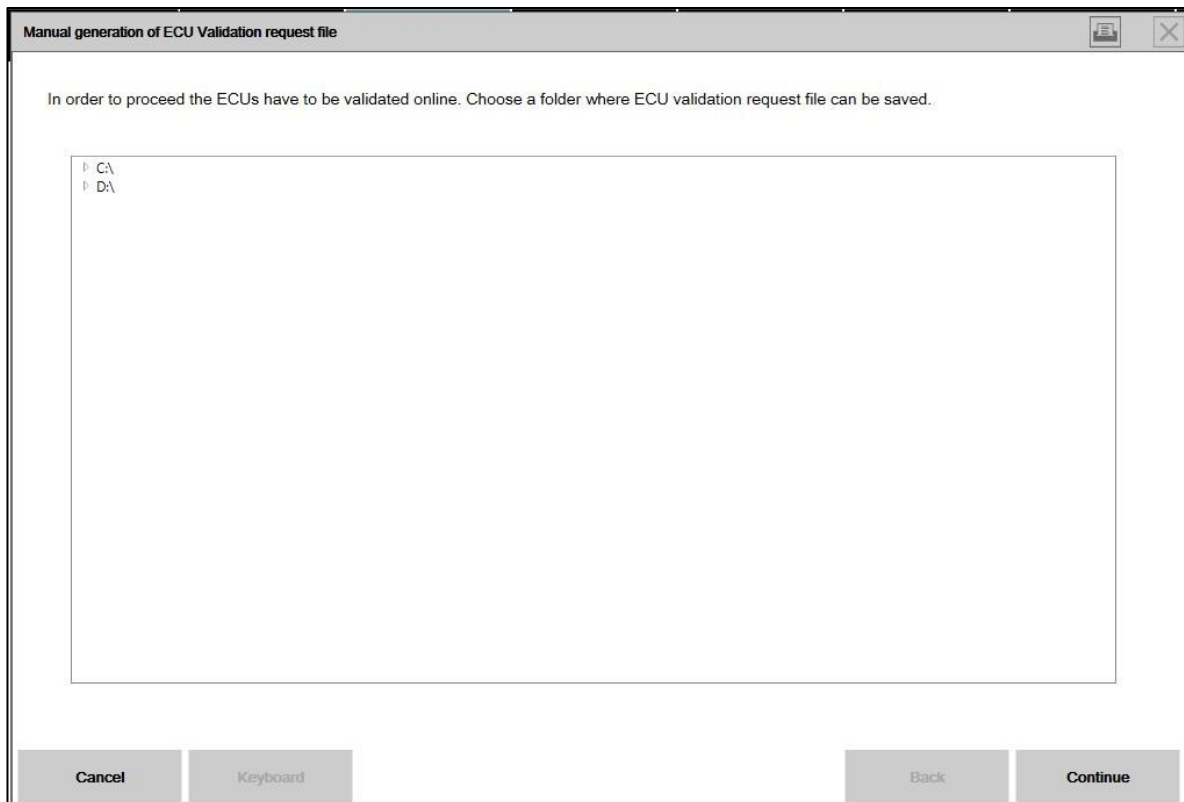
Automatic control unit validation is not possible or has failed.

Control unit validation after control unit exchange is required!

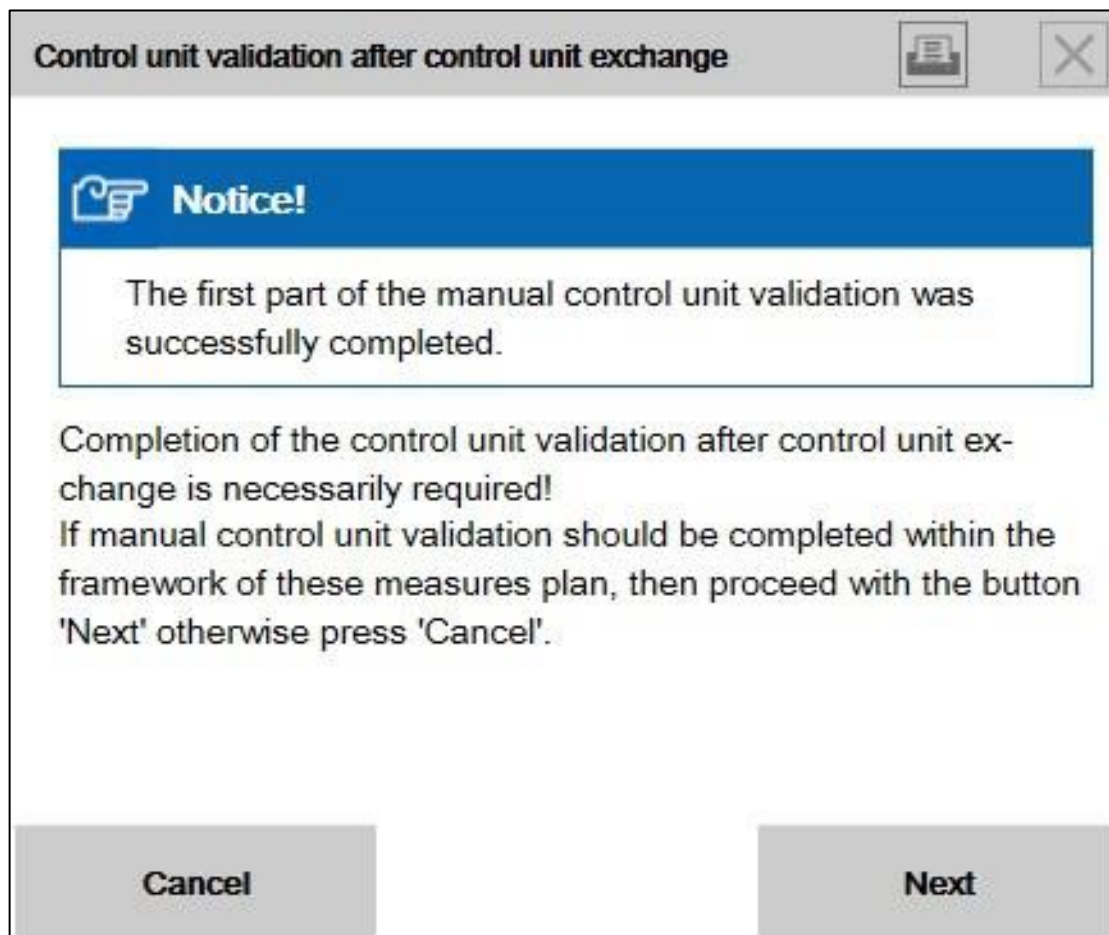
The procedure is as follows:
If the control unit validation should still be manually carried out within the framework of these measures plan , then proceed with the button 'Next' otherwise press 'Cancel'.

Cancel Next

3. By clicking on the "Next" button, ISTA generates the required **ValidationRequest_VIN_xxx.json** file and opens a file dialogue to save it. The file will be loaded via DCSnet later.



4. ISTA displays a note confirming that the file was successfully saved. At this point, you can exit the process using the "Cancel" button. After processing the measures plan, the session can be closed.



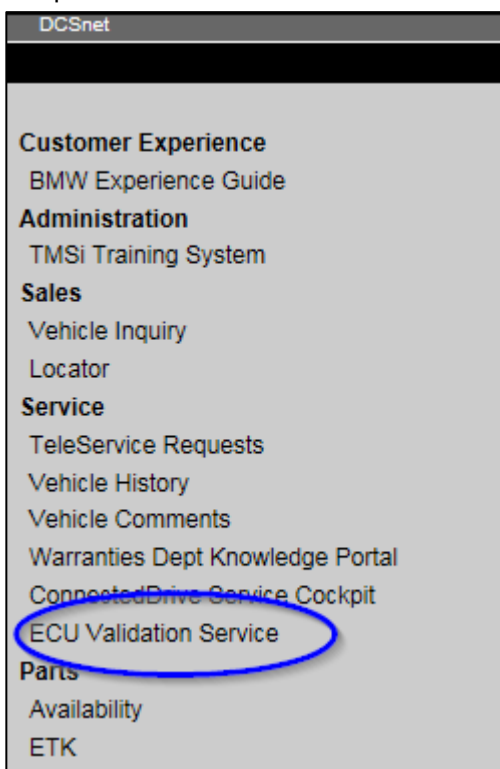


The vehicle must not be handed over to the customer without successful control unit validation.

Various vehicle functions are not available without control unit validation, corresponding fault memories are set.

DCSnet

5. Open DCSnet and select "ECU Validation Service" under "Service".



6. Upload the previously downloaded `ValidationRequest_VIN_xxx.json` file

7. After a few seconds, a new `ValidationRequest_VIN_xxx_response.json` file will be offered for downloading. This is subsequently required by ISTA.

Start a new ISTA session

8. In order to import the json file, select "ECU Validation" in the "Additional Software" tab.

Operations	Vehicle information	Vehicle management	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ maintenance	Troubleshooting	Service functions	Software update	Control Unit Replacement	Vehicle modification	
Comfort	Advanced	Additional software				

Designation ▲	Selection
ECU Validation	<input type="checkbox"/>
Enabling of navigation maps	<input type="checkbox"/>
HDD-Update (update of navigation maps / entertainment data)	<input type="checkbox"/>

Display measures plan

9. In order to import the validated file, select "Import control unit validation file manually" and confirm with "OK".

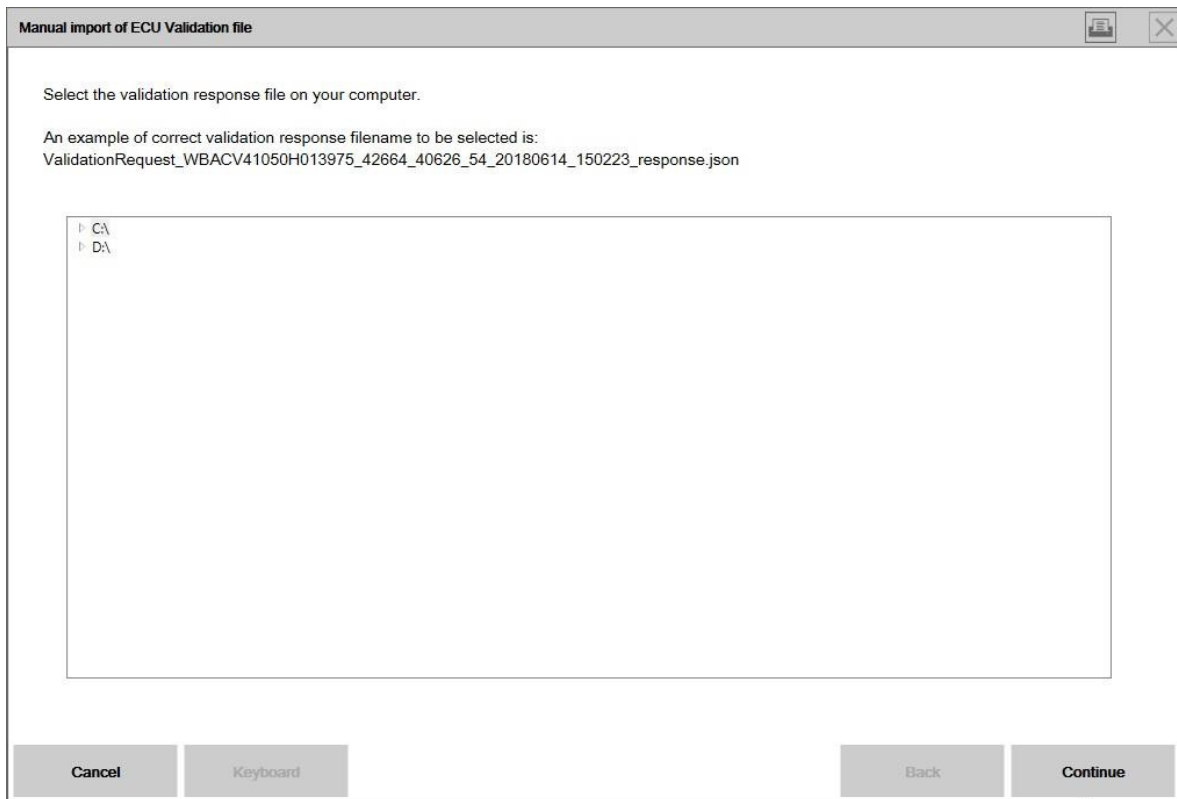
Operations	Vehicle	Service plan	Favourites	Workshop/ Operating fluids	Measuring devices
Repair/ maintenance	Control unit validation				
Comfort	Select an application case				
	Generate control unit validation file manually				
	Import control unit validation file manually				

Designation	Selection
HDD-Update (update of navigation maps / entertainment data)	<input type="checkbox"/>
Enabling of navigation maps	<input type="checkbox"/>
Initialisation of head unit	<input type="checkbox"/>
Control unit validation	<input checked="" type="checkbox"/>

Cancel OK

Display measures plan

10. Select the file ValidationRequest_VIN_XXX_response.json in the file dialogue and confirm with "Continue".



11. The file is written into the vehicle and checked.



Finally calculate the diagnosis test plan and work through the detected service functions.