 TSB & SI Local	Model	TUCSON(NX4) (ALL) , TUCSON hybrid(NX4 HEV) (ALL) , TUCSON PHEV(NX4 PHEV) (ALL) , SANTA CRUZ(NX4A OB) - For Mexico (ALL) , TUCSON(NX4A) (ALL) , TUCSON(NX4m) (ALL)
	Group	Body Electrical System (92)
	TSB No.	HCE25-92-E770-NX4 OB PE/NX4 PE/NX4 PE HEV/NX4 PHEV/NX4a PE/NX4m PENX4
Subject DCU UPGRADE - NX4 OB PE/NX4 PE/NX4 PE HEV/NX4 PHEV/NX4a PE/NX4m PE DCU LOGIC IMPROVEMENT - (OTA) (Ethernet)	TSB Type	Service Action
	Published	2025-09-05
Description		

NOTE : The OP code of this TSB can only be used if the OTA update fails and needs to be updated by GDS.

This bulletin provides information related to the DCU (DATA CONNECTIVITY UNIT) software engancement (OTA) for NX4 OB PE/NX4 PE/NX4 PE HEV/NX4 PHEV/NX4a PE/NX4m PE vehicles.

- Symptom: SW operation logic error (DCU internal timer initialization logic not implemented)

Applicable Vehicles

- Model: NX4 OB PE/NX4 PE/NX4 PE HEV/NX4 PHEV/NX4a PE/NX4m PE
- Applicable area : U.S.A,Puerto Rico,Guam,A. Samoa,Saipan,Canada.

[NOTE]

- A fully charged 12V aux. battery is required and please proceed after connecting additional battery chargers for update.

- To verify the vehicle is affected, be sure to check the version of the vehicle's control unit ROM ID with reference to the ROM ID Information Table mentioned below before attempting to upgrade the control unit software.

- Remember the current ROM ID before upgrade, just in case manual ECU upgrade would be performed.

- If the upgrade fails, please remove the power connector or the battery (-) connector from the indoor fuse box for at least 5 seconds and reassemble it to retry the upgrade.

[NOTE]

- To upgrade DCU systems, It needs to connect ECI (Ethernet Communication Interface) module to GDS-M/Smart.

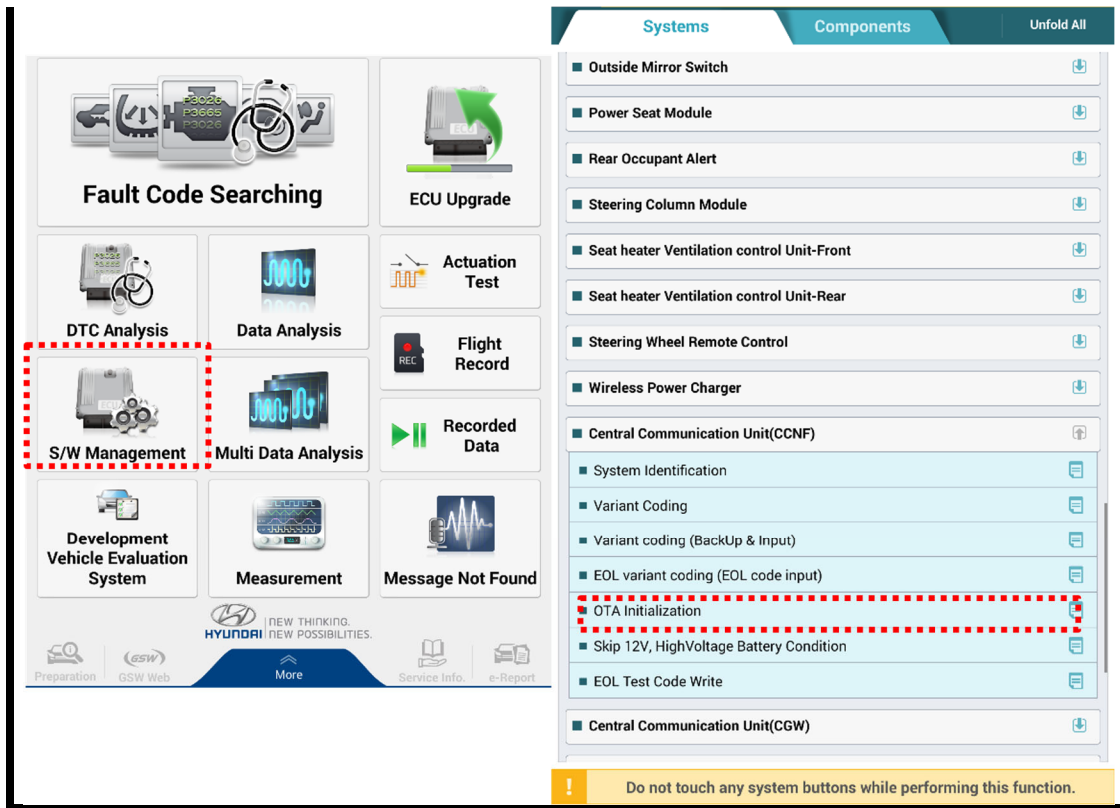
No.	SYSTEM	UPGRADE TOOL
1	DCU	GDS-Smart + ECI (Ethernet Communication Interface)

[NOTE]

- After the upgrade is completed, the OTA initialization process is performed automatically.


If it fails, OTA initialization must be performed manually.

GDS-M/S



1. Connect the GDS-M.
2. Select the 'S/W Management'
3. Select the 'Central Communication Unit (CCNF)' and 'OTA Initialization'
4. Follow the instructions on the screen.

- Remove and reconnect the power connector or battery (-) terminal in the indoor fuse box for at least 5 seconds after the OTA initialization operation, and then check and erase if there is a fault code.

LOCATION OF POWER CONNECTOR	PROCEDURE
	<ol style="list-style-type: none"> 1) After completing the upgrade, make sure to initialize OTA. 2) Indoor fuse box cover open /battery negative terminal. 3) Remove the power connector or the battery negative terminal. 4) Wait for at least 5 seconds. 5) Reconnect the power connector or reconnect the battery (-) terminal.

6) Check if there is a fault code and erase it.

Parts Information

■ ROM ID Information table

VEHICLE	SYSTEM	P/No	ROM ID	
			OLD	NEW
NX4 OB PE/NX4 PE/NX4 PE HEVNX4 PHEV//NX4a PE/NX4m PE	DCU	96510-N9130	120.CA.011509.011509 120.CA.011606.011606 120.CA.011646.011646 120.CA.011951.011951	120.CA.012054.012054

Operation Code And Time

VEHICLE	OP CODE	OP NAME	OP TIME	NATURE	CAUSE
NX4 PE HEV (US, US territory)	50D219R0	DCU UPGRADE	0.4 M/H	W11	ZZ3
NX4 PE HEV (Canada)	50D220R0	DCU UPGRADE	0.4 M/H	W11	ZZ3
NX4 PE (US, US territory)	50D236R0	DCU UPGRADE	0.4 M/H	W11	ZZ3
NX4 PE	50D237R0	DCU UPGRADE	0.4 M/H	W11	ZZ3

Service Procedure

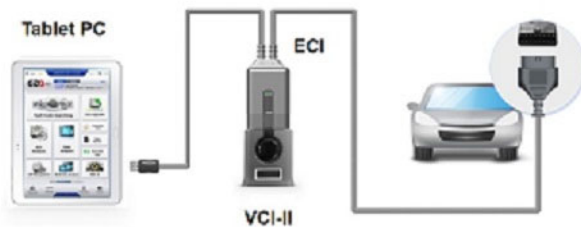
■ CAUTIONS DURING CONTROL UNIT UPGRADE

1) Make sure the vehicle's battery has reasonable charge. If the vehicle has been in storage for days, run the engine to assure an adequate battery charge state for reliable upgrade results.

- 2) Turn off all lamps (Do not leave head lamp switch in auto mode.) and all accessories (including heater, A/C, blower, radio, seat warmer, defroster, etc.), do not allow the battery to be discharged during upgrade.
- 3) Perform upgrade with the ignition switch in the ON position.
- 4) Be careful not to disconnect any cables connected to the vehicle or scan tool during upgrade.
- 5) Do not start the engine during upgrade.
- 6) Do not turn off the ignition switch during upgrade.

■ CONTROL UNIT UPGRADE PROCEDURE USING THE GDS-Mobile

1. GDS (Global Diagnostic System)-Mobile & ECI (Ethernet Communication Interface) INSTALLATION PROCEDURE



- 1) Connect the ECI (Ethernet adapter) DLC cable to the OBD connector of the vehicle.
- 2) Connect the VCI-II DLC cable to the ECI.
- 3) Select the appropriate tablet cable (C-type, 5-pin) to the ECI.
- 4) Connect the cable to the tablet PC.

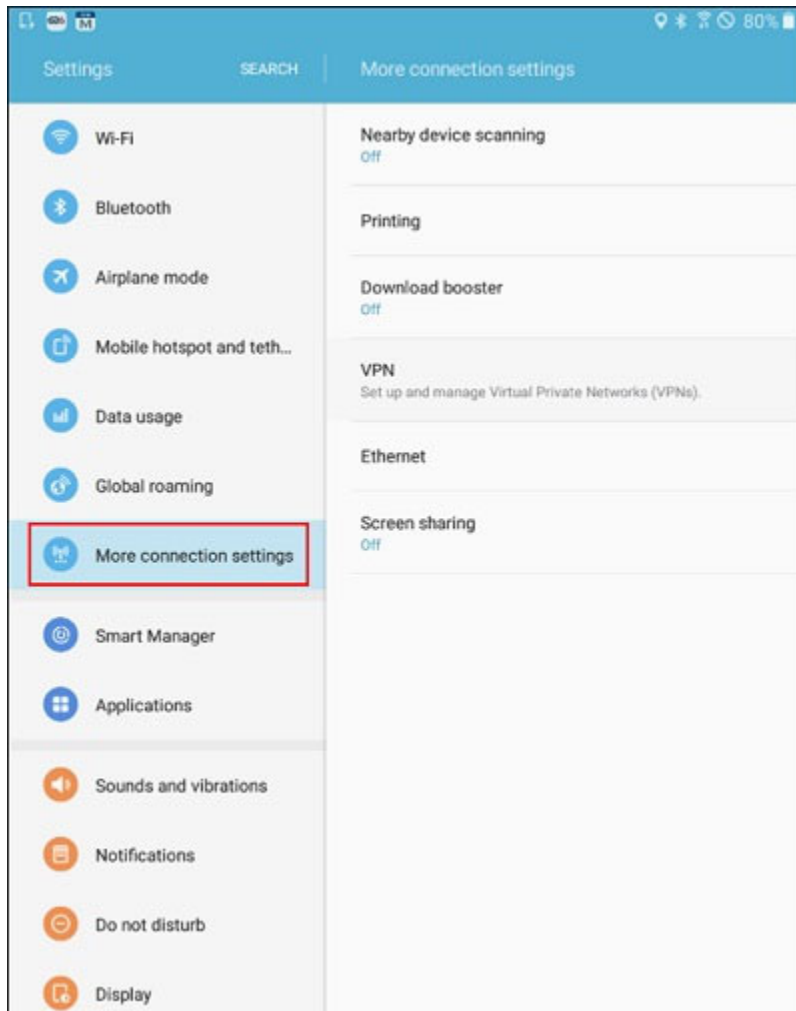
[NOTE]

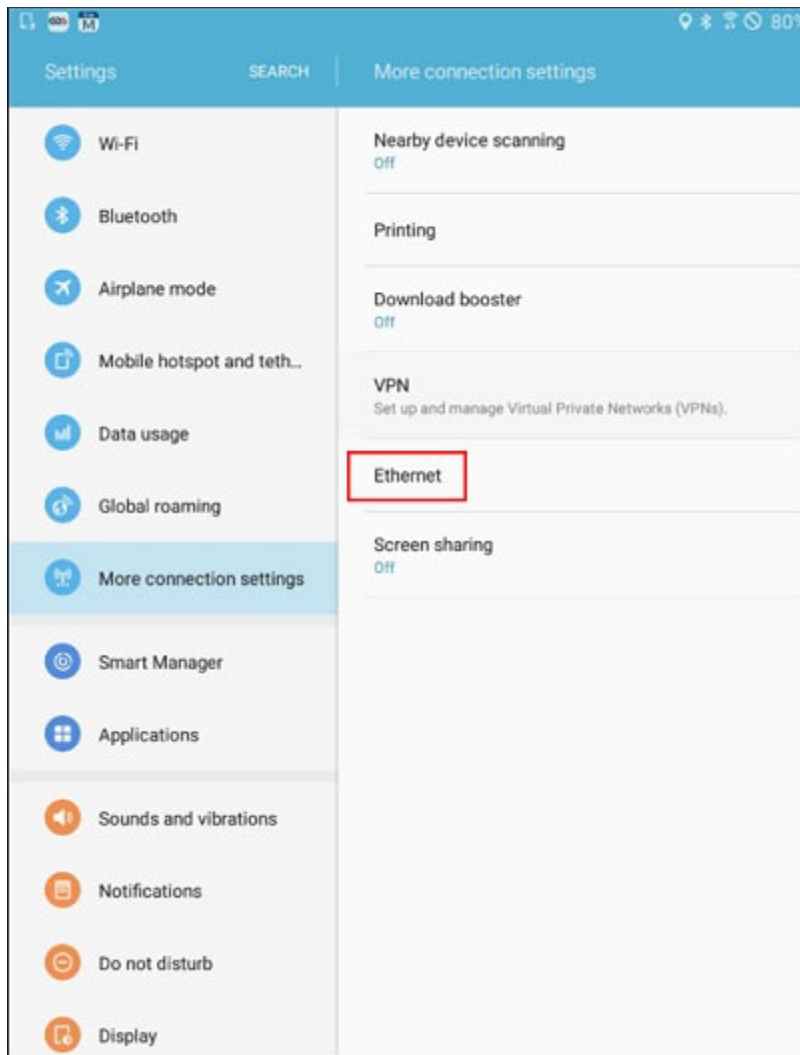
- The connection between the VCI-II and tablet PC is wireless, whereas the tablet PC is connected to the vehicle through the ECI (Ethernet adapter).

Make sure that the tablet PC is has enough battery before upgrading the ECU.

2. Configuring Ethernet communication on the tablet PC

- 1) Connect the ECI (Ethernet adapter) to the GDS-Mobile.
- 2) Configure IP to connect the Ethernet (needed once for initial connection).
- 3) Tablet settings > Connections(optional) > More connection settings > Ethernet (Menu name and location may differ depending on tablet PC).





*Ethernet menu may not appear on screen if tablet does not support Ethernet.

*If Ethernet is not active on screen, restart the tablet PC and check cable connections.

1) Select fixed IP when Ethernet is active on screen.

2) Enter IP address 10.0.128.0

3) Enter netmask 255.0.0.0

4) Enter DNS address 8.8.8.8

5) Enter router 10.0.128.0

6) Save

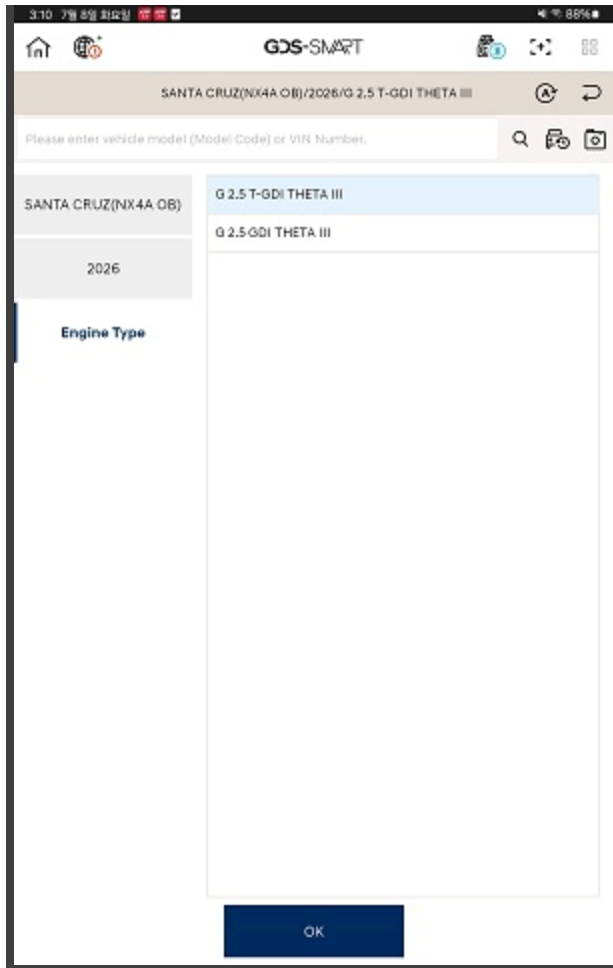
3. AUTOMATIC UPGRADE PROCEDURE USING THE GDS-MOBILE / GDS Smart

- 1) Select ECU Upgrade on the initial screen after entering the vehicle information.
- 2) Select Auto Mode and then tab the system.
- 3) Read information and tab ID check.
- 4) The GDS-Mobile will read the current ROM ID in vehicle and check the newest upgrade event.
- 5) Select the upgrade event,

5-1) "1296.NX4 OB PE/NX4 PE/NX4 PE HEV/NX4a PE/NX4m PE DCU LOGIC IMPROVEMENT (CA)"

5-2) "1297.NX4 OB PE/NX4 PE/NX4 PE HEV/NX4a PE/NX4m PE DCU LOGIC IMPROVEMENT (NA)"

**#.NX4 OB PE/NX4 PE/NX4 PE HEV/NX4a PE/NX4
PHEV/NX4m PE (GDS-Smart)**



6) The vehicle battery voltage is checked to make sure it is at least 12 voltages to assure reliable upgrade results. Click OK if the results indicate voltage is ok.

[NOTE]

- If battery voltage is below 12 voltages as below, click BACK and then run the engine to assure an adequate battery charge state for reliable upgrade results.



7) Upgrade (1/2) will begin and the progress of the upgrade will appear on the bar graph.

8) Upgrade (1/2) will occur until 100% is reached on the bar graph.

9) Upgrade (2/2) will begin and the progress of the upgrade will appear in the bar graph.

10) Upgrade(2/2) will occur until 100% is reached on the bar graph. Turn the ignition key off for 30 seconds, place it back in the key on position and then tab OK to continue according to information displayed on the screen.

11) Tab OK on the final screen, which indicates upgrade is complete.

12) After the upgrade is completed, the OTA initialization process must be carried out.

Connect the GDS-M. -> Select the 'S/W Management' -> Select the 'Central Communication Unit (CCNF)' and 'OTA Initialization' -> Follow the instructions on the screen.

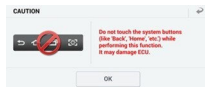
13) Remove and reconnect the power connector and battery (-) terminal in the indoor fuse box for at least 5 seconds after the OTA initialization operation, and conduct a self-diagnosis to check if there is a fault diagnosis code that occurred during the upgrade and erase it.

14) Check if any incidental Diagnostic Trouble Codes(DTC) have been created by the upgrade and clear the DTC(s) present.

15) Start the engine to confirm proper operation of the vehicle.

[CAUTION]

- Do not touch the system buttons(like 'BACK', 'HOME', 'etc.') while performing upgrade.
- Do not start the engine.



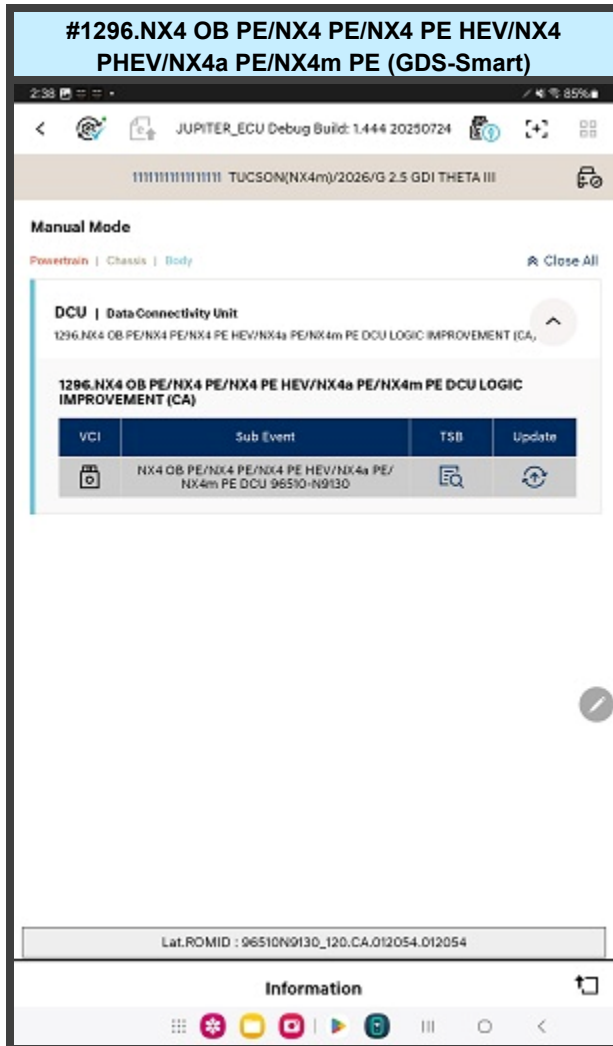
3. MANUAL UPGRADE PROCEDURE USING GDS-MOBILE/ GDS Smart

[NOTE]

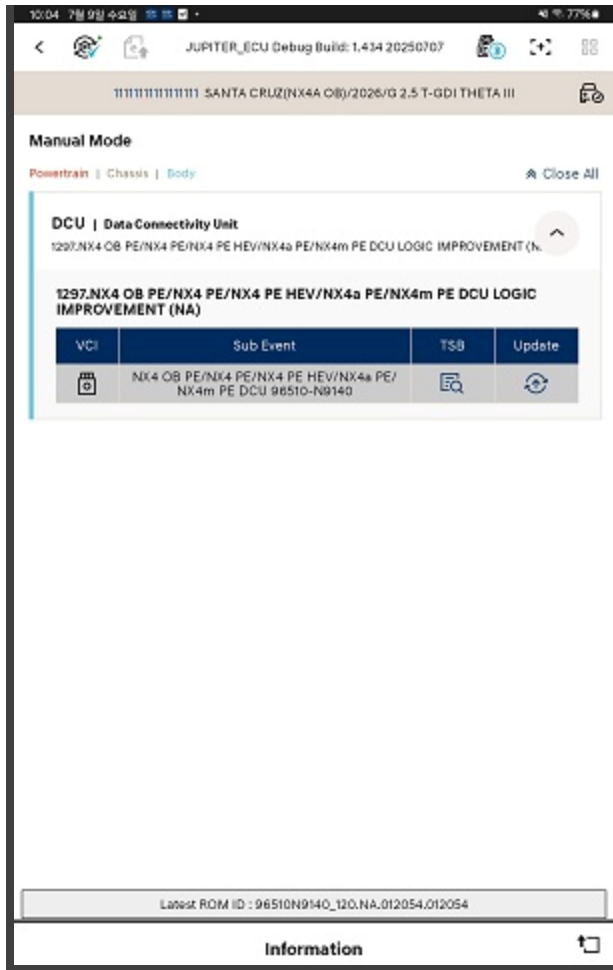
- The manual upgrade should be performed only when the automatic upgrade fails.
- If automatic upgrade fails, turn the ignition key off for about 10 seconds, place it back in the on position to reset the control unit before performing manual upgrade.

1) Within the upgrade screen, select Manual Mode, then select upgrade event.

2) Select the control unit part number with reference to the above ROM ID Information Table and tab OK.



#1297.NX4 OB PE/NX4 PE/NX4 PE HEV/NX4 PHEV/NX4 PHEV/NX4a PE/NX4m PE (GDS-Smart)



3) Enter the password from the below table then touch OK.

#1296.

MENU	PASSWORD
NX4 OB PE/NX4 PE/NX4 PE HEV/NX4a PE/NX4m PE DCU 96510-N9130	0319

#1297.

MENU	PASSWORD
NX4 OB PE/NX4 PE/NX4 PE HEV/NX4a PE/NX4m PE DCU 96510-N9140	2419

4) The vehicle battery voltage is checked to make sure it is at least 12 voltages to assure reliable upgrade results. Click OK if the results indicate voltage is ok.

[NOTE]

- If voltage is below 12 voltages as below, click BACK and then run the engine to assure an adequate battery charge state for reliable upgrade results.



5) Upgrade (1/2) will begin and the progress of the upgrade will appear on the bar graph.

6) Upgrade (1/2) will occur until 100% is reached on the bar graph.

7) Upgrade (2/2) will begin and the progress of the upgrade will appear in the bar graph.

8) Upgrade(2/2) will occur until 100% is reached on the bar graph. Turn the ignition key off for 30 seconds, place it back in the key on position and then tab OK to continue according to information displayed on the screen.

9) Tab OK on the final screen, which indicates upgrade is complete.

10) After the upgrade is completed, the OTA initialization process must be carried out.

Connect the GDS-M. -> Select the 'S/W Management' -> Select the 'Central Communication Unit (CCNF)' and 'OTA Initialization' ->Follow the instructions on the screen.

11) Remove and reconnect the power connector or battery (-) terminal in the indoor fuse box for at least 5 seconds after the OTA initialization operation, and conduct a self-diagnosis to check if there is a fault diagnosis code that occurred during the upgrade.

12) Check if any incidental Diagnostic Trouble Codes(DTC) have been created by the upgrade and clear the DTC(s) present.

13) Start the engine to confirm proper operation of the vehicle.