 HYUNDAI Technical Service Bulletin	GROUP CAMPAIGN	NUMBER 22-01-076H
	DATE SEPTEMBER, 2022	MODEL(S) Elantra (CN7, CN7a) Elantra Hybrid (CN7 HEV)
SUBJECT: ICU (INTEGRATED CENTRAL CONTROL UNIT) SOFTWARE UPDATE (SERVICE CAMPAIGN T8T)		

*** IMPORTANT**

***** Dealer Stock and Retail Vehicles *****

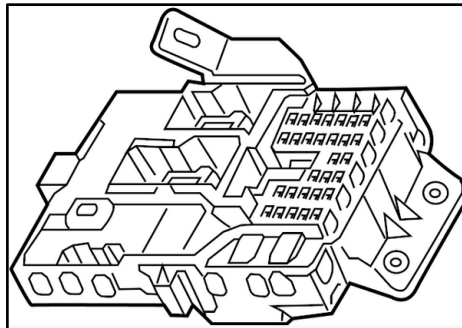
Dealers must perform this Service Campaign on all affected vehicles prior to customer retail delivery and whenever an affected vehicle is in the shop for any maintenance or repair.

Access the "Vehicle Information" screen (VIS) via WEBDCS to identify open campaigns.

Description: Some 2021 ~ 2022MY Elantra (CN7, CN7a, CN7 HEV) vehicles may exhibit a condition with multiple warning lights displayed on the instrument cluster and various symptoms; multiple DTCs (Diagnostic Trouble Code), reduction in power steering assist, and not able to shift out of Park. Possible DTCs set are:

- C181287 – CAN Time-out Gateway
- C181208 – CAN Time-out Gateway
- C180581 – LKAS CAN Signal Error
- C181887 – CAN Time-out BCA
- B109052 – TCU Missing Error

This bulletin provides the service procedure to update the ICU (Integrated Central Control Unit) software to resolve the conditions stated above.



Applicable Vehicles:

Certain 2021MY Elantra (CN7) vehicles produced from 9/12/2020 – 6/01/2021*.

Certain 2021~22MY Elantra (CN7a) vehicles produced from 9/25/2020 – 9/27/2021**.

Certain 2021~22MY Elantra Hybrid (CN7 HEV) vehicles produced from 12/15/2020 – 8/11/2021*.

*VIN starting with KMH

**VIN starting with 5NP

Warranty Information:

MODEL	OP. CODE	OPERATION	OP. TIME	CAUSAL PART	NATURE	CAUSE
Elantra/ Elantra Hybrid (CN7/CN7 HEV)	20D073R0	ICU Upgrade	0.3 M/H	91951-AA010 (CN7) 91950-BY110 (CN7 HEV)	I14	ZZ3
Elantra (CN7a)	20D073R1	ICU Upgrade	0.3 M/H	91950-AB060	I14	ZZ3

Note 1: Submit claim on Campaign Claim Entry Screen

Note 2: If a part that is not covered by this campaign is found in need of replacement while performing this campaign and the affected part is still under warranty, submit a separate claim using the same repair order. If the affected part is out of warranty, submit a Prior Approval request for goodwill consideration prior to performing the work.

ICU SOFTWARE UPDATE PROCEDURE

NOTICE

Check if the vehicle's software version is affected:

- Check the current version of the ICU ROM ID and compare it to the ROM ID information table listed below before attempting to perform the software update.

NOTICE

You must initially perform the GDS ICU Update in Auto Mode.

- Refer to the TSB **15-GI-001** for the tablet-based Mobile GDS ECU update procedures.
- If the ICU update starts but then fails in Auto Mode, perform the update in Manual Mode to recover. Go to page 9 to complete the update in Manual Mode.

NOTICE

- In the ECU Upgrade screen, select ICU as the system to update.

**SUBJECT: ICU (INTEGRATED CENTRAL CONTROL UNIT) SOFTWARE UPDATE
(SERVICE CAMPAIGN T8T)**

GDS INFORMATION:

EVENT INFORMATION	
MODEL	EVENT DESCRIPTION
Elantra (CN7)	"851.CN7 ICU LOGIC IMPROVEMENT"
Elantra (CN7a)	"852.CN7a ICU LOGIC IMPROVEMENT"
Elantra Hybrid (CN7 HEV)	"864.CN7 HEV ICU LOGIC IMPROVEMENT"

ROM ID INFORMATION TABLE:

MODEL	SYSTEM	ICU P/N	ROM ID	
			OLD	NEW
Elantra (CN7)	ICU	91950-AA010 ~ 91950-AA990 91951-AA010 ~ 91951-AA590	1.02	1.06
			1.03	
			1.04	
			1.05	
Elantra (CN7a)	ICU	91950-AB000 ~ 91950-AB060	4.02	4.04
			4.03	
Elantra Hybrid (CN7 HEV)	ICU	91950-BY010 ~91950-BY240	3.03	3.07
			3.04	
			3.05	
			3.06	

MANUAL MODE PASSWORD INFORMATION TABLE:

Event #	MENU	PASSWORD
#851 – CN7	CN7 ICU 91950/91951-AAXXX	5051
#852 – CN7a	CN7a ICU 91950 - ABXXX	5060
#864 – CN7 HEV	CN7 HEV ICU 91950-BY010~BY240	5019

SERVICE PROCEDURE:

CAUTION

Cautions During Control Unit Upgrade

- Confirm the vehicle's battery is above 12 volts. If the vehicle has been in storage for days, run the engine to assure an adequate battery charge state for reliable upgrade results.
- Turn off all lamps (Do not leave head lamp switch in auto mode) and all accessories (heater, A/C, blower, radio, seat warmer, defroster, etc.); do not allow the battery to be discharged during upgrade.
- Perform upgrade with the ignition switch in the ON position.
- Be careful not to disconnect any cables connected to the vehicle or scan tool during upgrade.
- Do not start the engine during upgrade.
- Do not turn off the ignition switch during upgrade.
- Do not touch the systems buttons (like 'BACK', 'HOME', 'etc.') while performing upgrade.

CONTROL UNIT UPGRADE PROCEDURE USING THE GDS-Mobile

1. GDS (Global Diagnostic System)-Mobile INSTALLATION PROCEDURE

1. Connect the VCI-II into the vehicle's DLC connector under the driver side instrument panel and check to turn the VCI-II on.

Before starting the update, make certain that the battery of the Table PC is sufficiently charged.

NOTICE

ECU upgrade function on GDS-Mobile is basically operating in wireless communication and Wi-Fi direct. Also, it is possible to be performing via USB cable between Tablet PC and VCI-II.

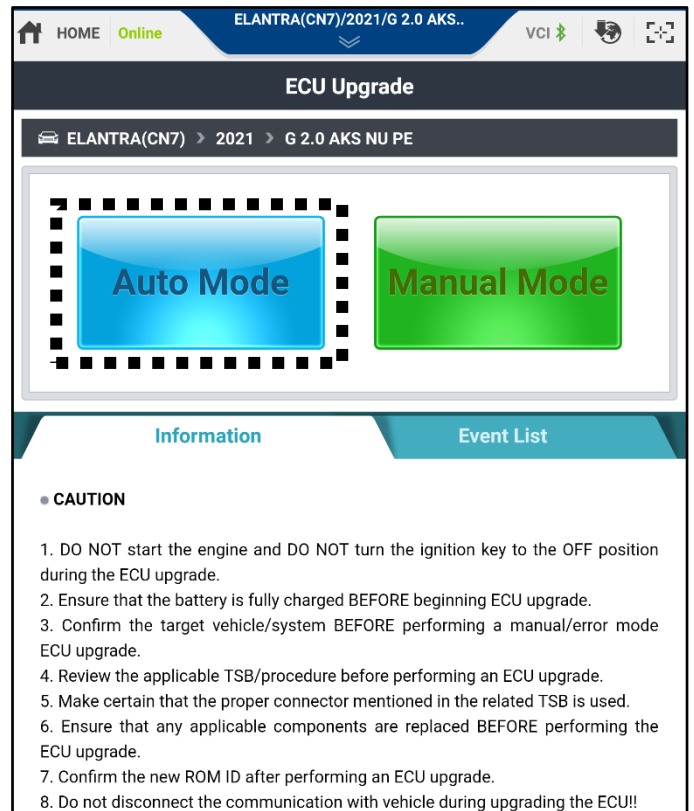
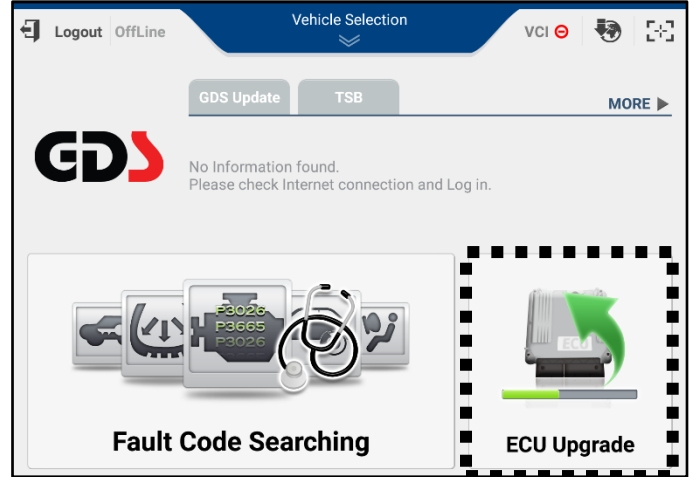


NOTICE

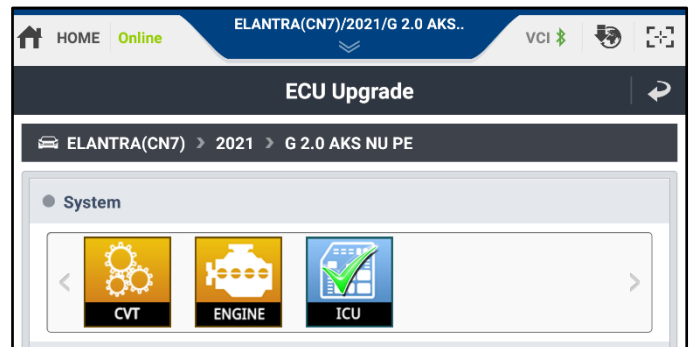
You must initially perform GDS-M ICU Update in Auto Mode.
If the ICU Update starts but then fails in Auto Mode, perform the update in Manual Mode to recover.

2. AUTOMATIC UPGRADE PROCEDURE USING THE GDS-MOBILE

- 2. Select ECU Upgrade on the initial screen after entering the vehicle information and select Auto Mode.



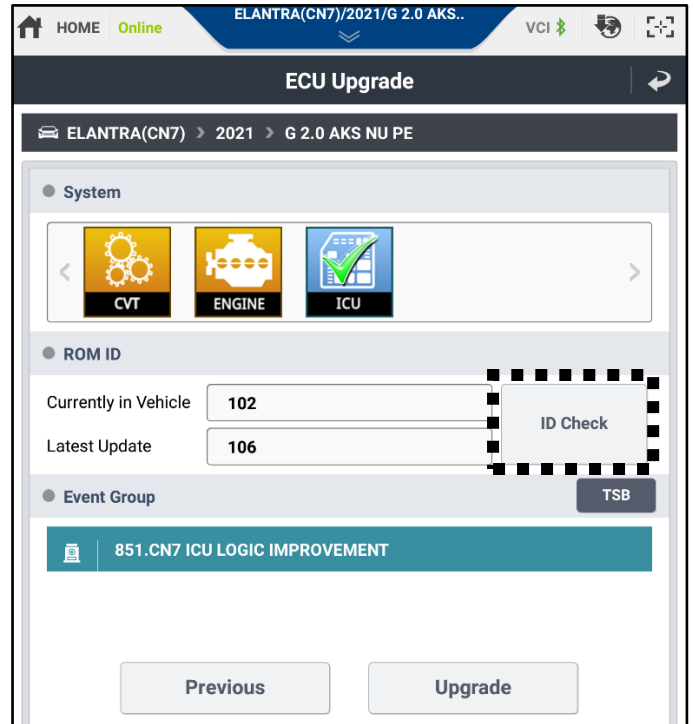
- 3. Select ICU system.



4. Select **ID Check** and GDS will read the current ROM ID in vehicle and check the newest upgrade event.

NOTICE

Check the current version of the ICU ROM ID and compare it to the ROM ID Information Table before attempting to perform the software update.

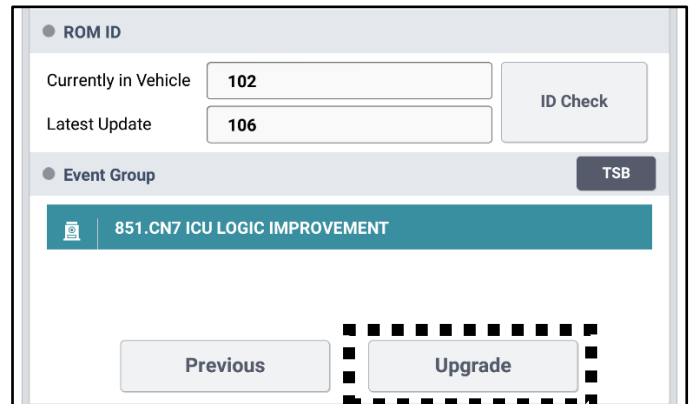


5. Select **Upgrade** after confirming correct Event is selected.

CN7: 851.CN7 ICU LOGIC IMPROVEMENT

CN7a: 852.CN7a ICU LOGIC IMPROVEMENT

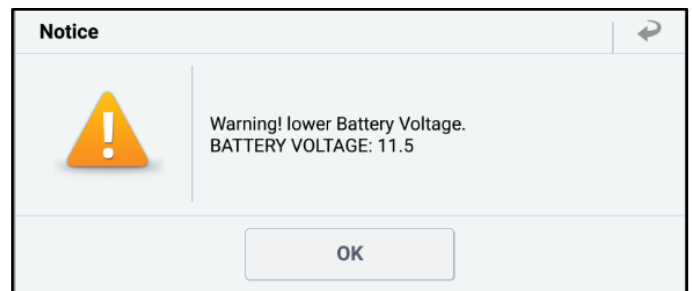
CN7 HEV: 864.CN7 HEV ICU LOGIC IMPROVEMENT



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.

NOTICE

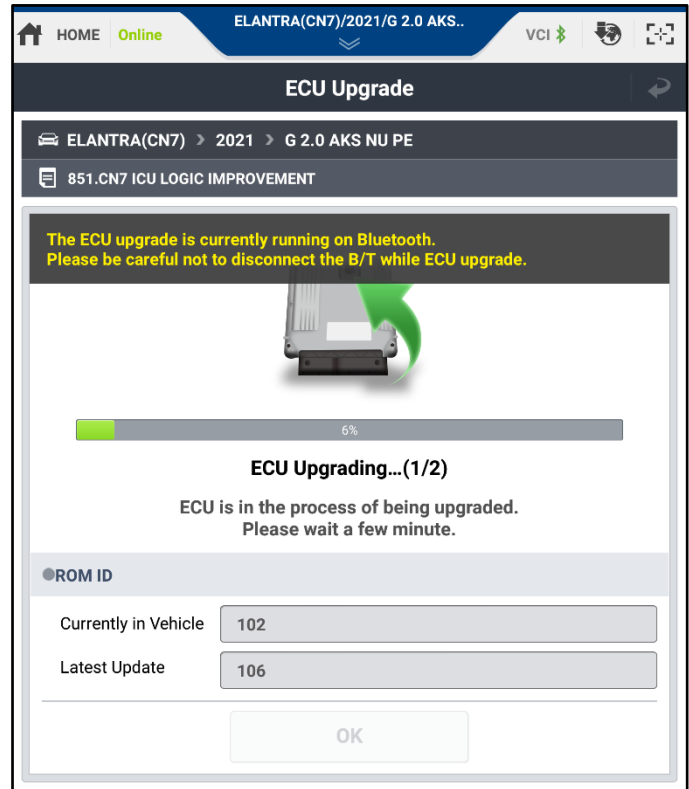
If battery voltage is below 12 voltages as below, click BACK and then run the engine to assure an adequate battery charge state for reliable upgrade results.



**SUBJECT: ICU (INTEGRATED CENTRAL CONTROL UNIT) SOFTWARE UPDATE
(SERVICE CAMPAIGN T8T)**

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

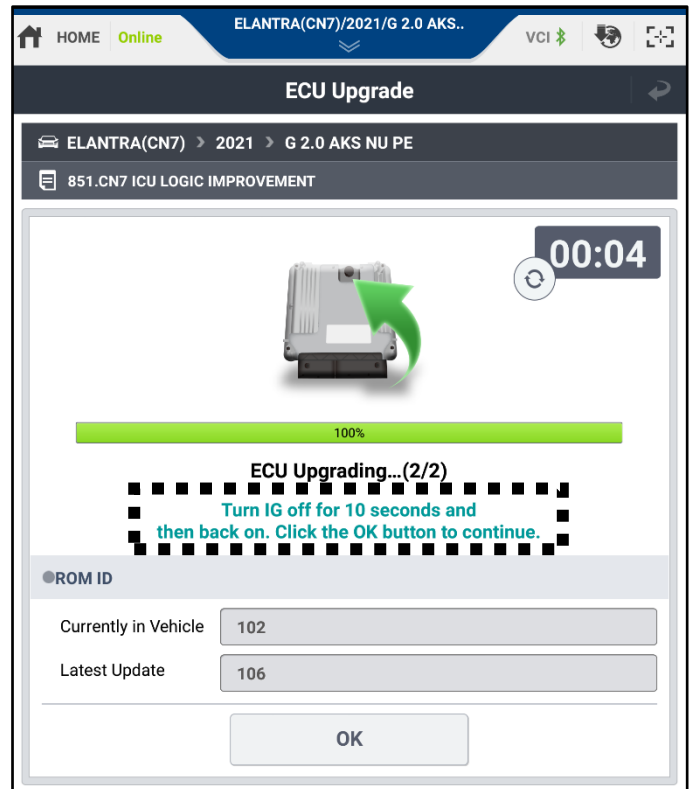
Upgrade (1/2) will occur until 100% is reached on the bar graph.



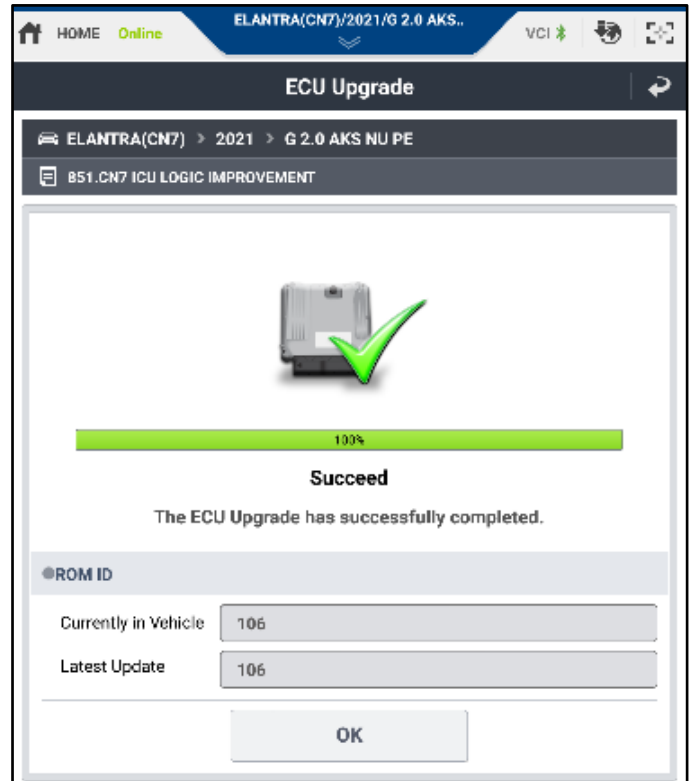
8. Upgrade (2/2) will begin, and the progress of the upgrade will appear in the bar graph.

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

When upgrade reaches 100%, follow GDS instructions to “Turn IG off for 10 seconds and then back on. Click the OK button to continue.”



9. Click **OK** on the final screen, which indicates upgrade is complete.



10. **After upgrade, remove power connector of indoor fuse box, and reconnect it after 5 seconds**

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

Start the engine to confirm proper operation of the vehicle.

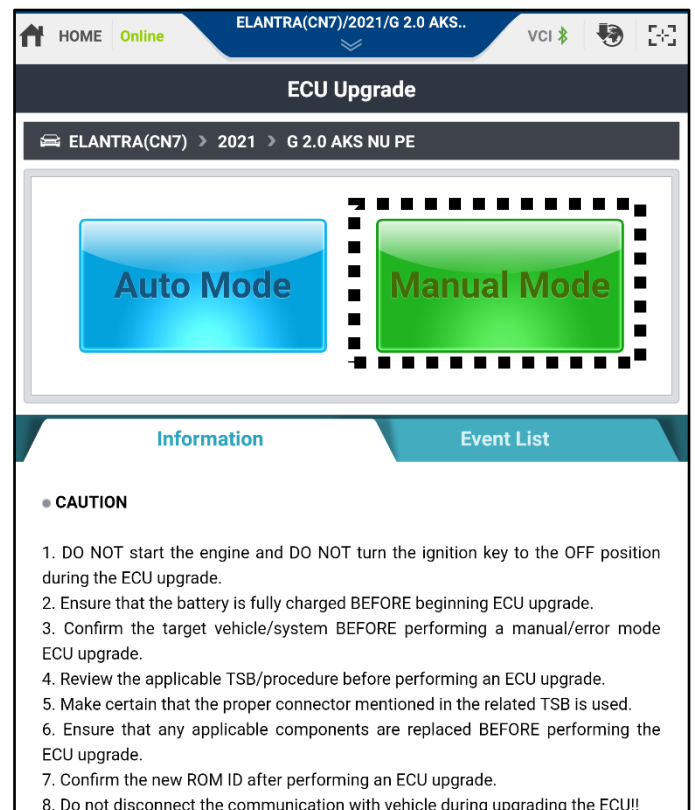
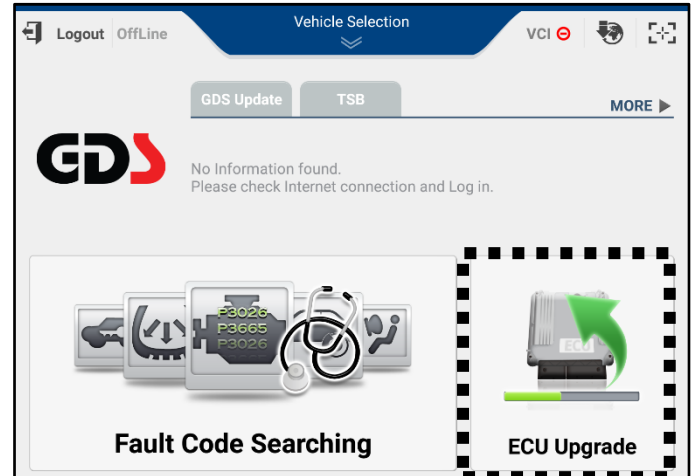


3. MANUAL UPGRADE PROCEDURE USING THE GDS-MOBILE

NOTE:

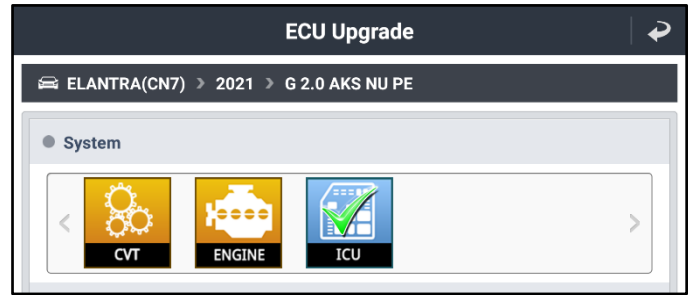
- The manual upgrade should be performed only when the automatic upgrade fails.
- If automatic upgrade fails, turn the ignition key off for about 10 seconds, place it back in the on position to reset the control unit before performing manual upgrade.

11. Select ECU Upgrade on the initial screen after entering the vehicle information and select Manual Mode.



SUBJECT: ICU (INTEGRATED CENTRAL CONTROL UNIT) SOFTWARE UPDATE (SERVICE CAMPAIGN T8T)

12. Select ICU system.

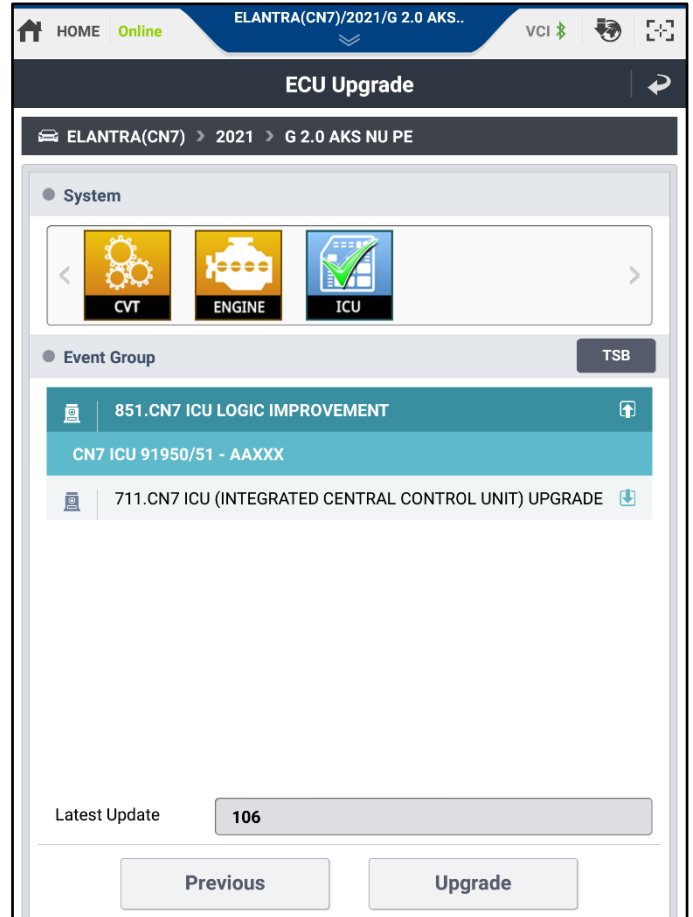


13. Check that the newest event with reference to the above ROM ID Information Table is selected and tab Upgrade.

CN7: 851.CN7 ICU LOGIC IMPROVEMENT

CN7a: 852.CN7a ICU LOGIC IMPROVEMENT

CN7 HEV: 864.CN7 HEV ICU LOGIC IMPROVEMENT



14. Enter the password from the below table then touch OK.

#851 - CN7

MENU	PASSWORD
CN7 ICU 91950/51 -AAXXX	5051

#852 - CN7a

MENU	PASSWORD
CN7a ICU 91950 - ABXXX	5060

#864 - CN7 HEV

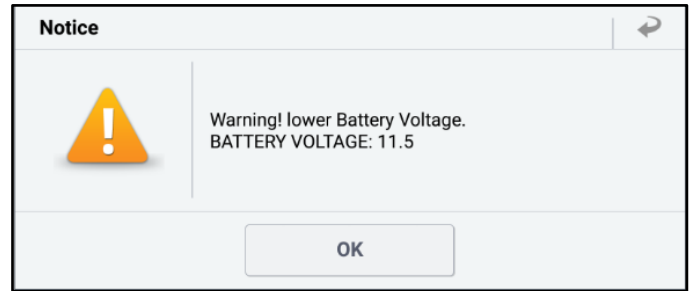
MENU	PASSWORD
CN7 HEV ICU 91950-BY010~BY240	5019

**SUBJECT: ICU (INTEGRATED CENTRAL CONTROL UNIT) SOFTWARE UPDATE
(SERVICE CAMPAIGN T8T)**

15. The vehicle battery voltage is checked to make sure it is at least 12 volts to ensure reliable upgrade results. Click OK if the results indicate voltage is OK.

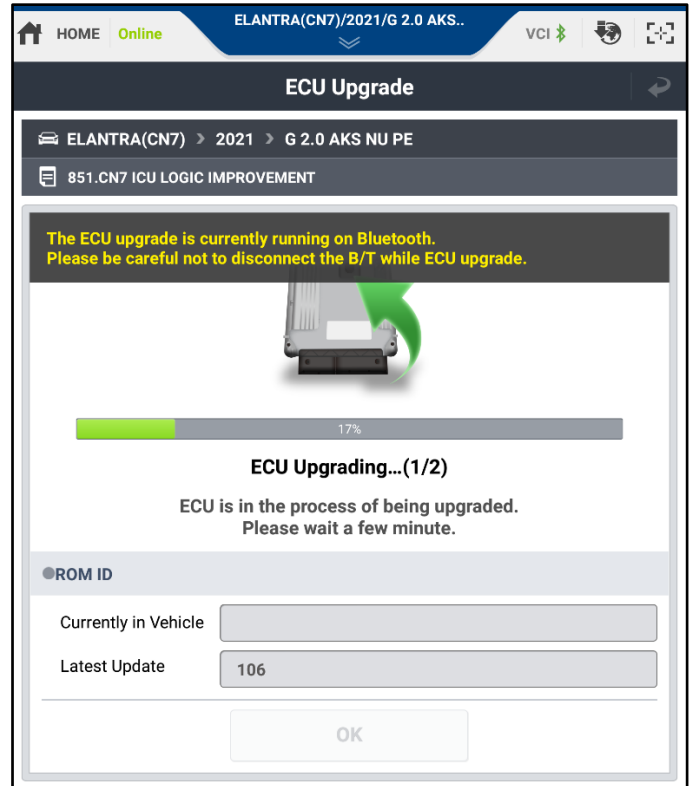
NOTICE

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.



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

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

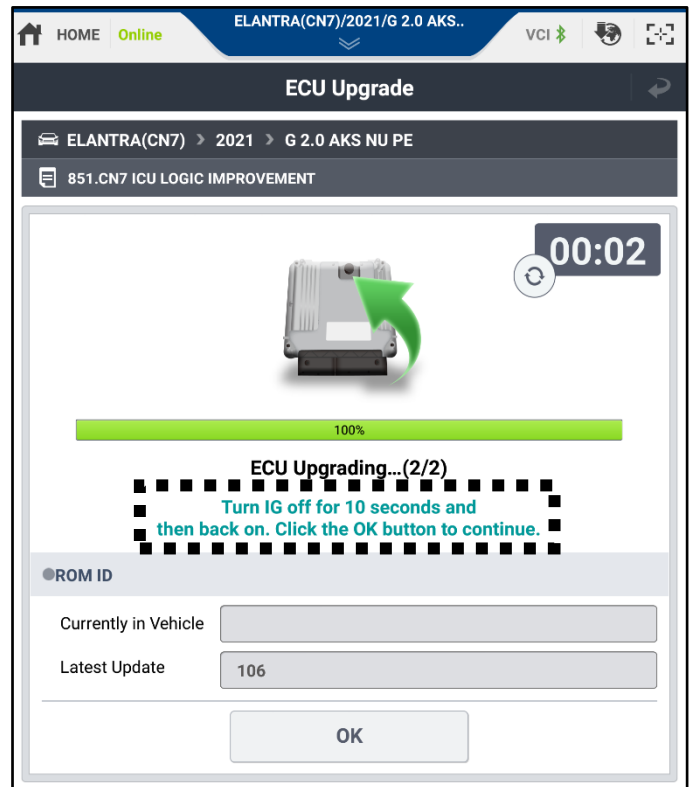


SUBJECT: ICU (INTEGRATED CENTRAL CONTROL UNIT) SOFTWARE UPDATE (SERVICE CAMPAIGN T8T)

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

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

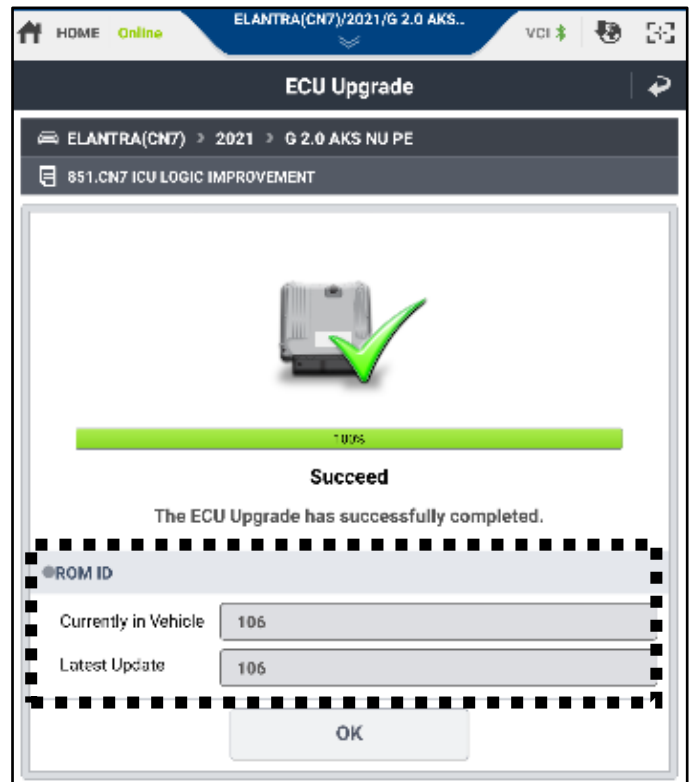
When upgrade reaches 100%, follow GDS instructions to “Turn IG off for 10 seconds and then back on. Click the OK button to continue.”



18. Click **OK** on the final screen, which indicates upgrade is complete.

NOTICE

Check the ICU ROM ID and compare it to the ROM ID Information Table to confirm latest ROM ID was updated.



**SUBJECT: ICU (INTEGRATED CENTRAL CONTROL UNIT) SOFTWARE UPDATE
(SERVICE CAMPAIGN T8T)**

19. **After upgrade, remove power connector of indoor fuse box, and reconnect it after 5 seconds**

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

Start the engine to confirm proper operation of the vehicle.

