 <b>HYUNDAI</b> <b>Technical Service Bulletin</b>	GROUP <b>CAMPAIGN</b>	NUMBER <b>23-01-002H</b>
	DATE <b>JANUARY, 2023</b>	MODEL(S) <b>Sonata (DN8, DN8a)</b>
<b>SUBJECT:</b> ICU (INTEGRATED CENTRAL CONTROL UNIT) SOFTWARE UPDATE (SERVICE CAMPAIGN T9O)		

**\* IMPORTANT**

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 via WEBDCS to identify open campaigns.

**Description:** Some 2021 ~ 2022MY Sonata (DN8/DN8a) vehicles with N-Line trim may not engage Forward Collision Avoidance Assist – Junction Turning (FCA-JT) due to omitted logic.

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

**Applicable Vehicles:**

Certain 2022MY Sonata (DN8) vehicles with N-Line trim produced from 02/24/2022 – 7/02/2022\*.  
 Certain 2021~22MY Sonata (DN8a) vehicles with N-Line trim produced from 10/14/2020 – 2/12/2022\*\*.

\*VIN starting with KMH

\*\*VIN starting with 5NP

**Warranty Information:**

MODEL	OP. CODE	OPERATION	OP. TIME	CAUSAL PART	NATURE	CAUSE
Sonata (DN8)	20D151R0	ICU Upgrade	0.3 M/H	91907-L1940	I14	ZZ3
Sonata (DN8a)	20D151R1	ICU Upgrade	0.3 M/H	91950-L0140	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.

#### GDS INFORMATION:

EVENT INFORMATION	
MODEL	EVENT DESCRIPTION
Sonata (DN8/DN8a)	"883.DN8 / DN8a N-Line ICU UPGRADE (FCA-JT)"

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(SERVICE CAMPAIGN T90)**

**ROM ID INFORMATION TABLE:**

EVENT	MODEL	TRIM	MY	SYSTEM	ICU P/N	ROM ID	
						OLD	NEW
#883	Sonata (DN8/ DN8a)	N Line Only	21MY	ICU	91950-L0090 91950-L0100 91950-L0110 91950-L0120 91950-L0130 91950-L0140 91950-L0150 91950-L0160	5.03 5.04 5.05 5.06	5.07
			22MY		91950-L0170 91950-L0180 91950-L0190 91950-L0200 91950-L0250 91950-L0260 91950-L0270 91950-L0280 91907-L1860 91907-L1870 91907-L1880 91907-L1890 91907-L1930 91907-L1940 91907-L1950 91907-L1960	5.10 5.11 5.12 5.20	5.21

**MANUAL MODE PASSWORD INFORMATION TABLE:**

Event #	MENU	PASSWORD
#883 – 21MY DN8/DN8a (N-Line)	DN8 / DN8a N-Line ICU 21MY 91950-L0090~L0160	0160
#883 – 22MY DN8/DN8a (N-Line)	DN8 / DN8a N-Line ICU 22MY 91950-L0170~200/250~280, 91907-L1860~890/930~960	1960

**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.

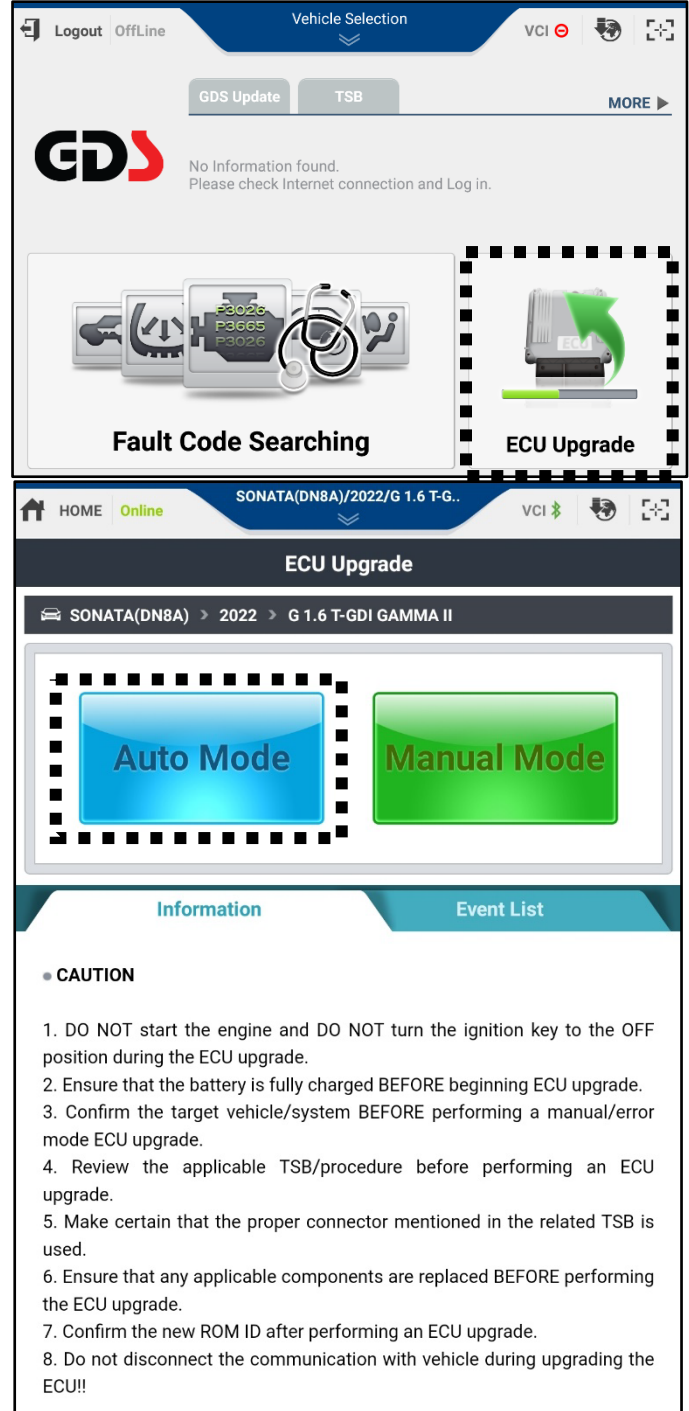


**NOTICE**

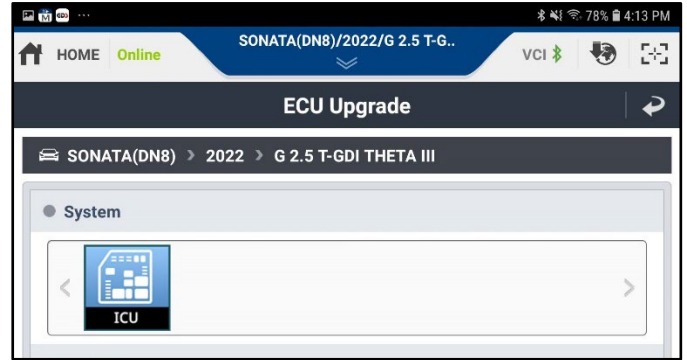
**You must initially perform GDS-M ICU Update in Auto Mode.**  
If the ICU Update starts but then fails in Auto Mode, perform the update in Manual Mode to recover.

## 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.



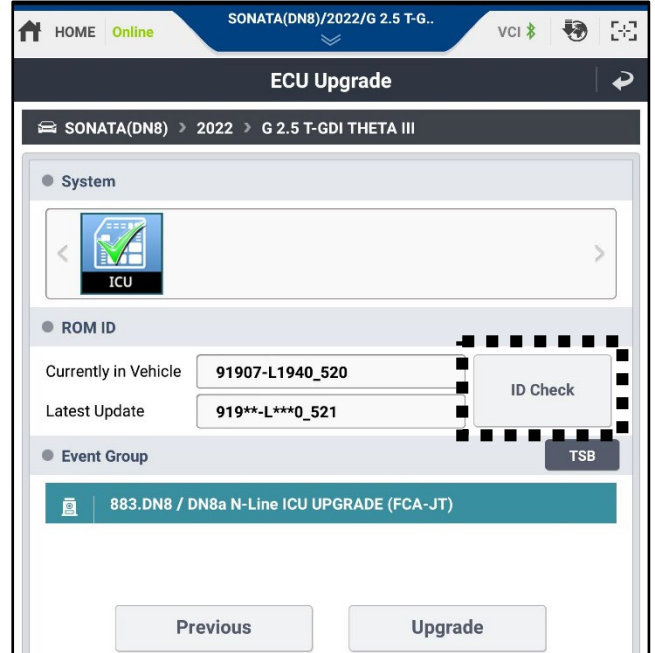
3. Select ICU system.



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.

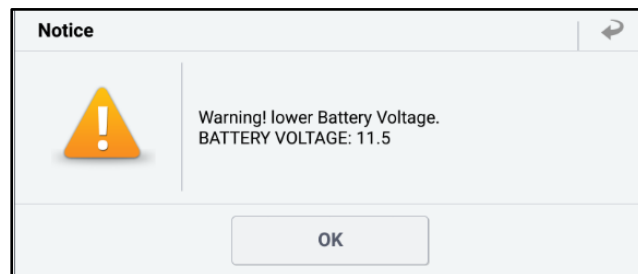
**"883.DN8 / DN8a N-Line ICU UPGRADE (FCA-JT)"**



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.

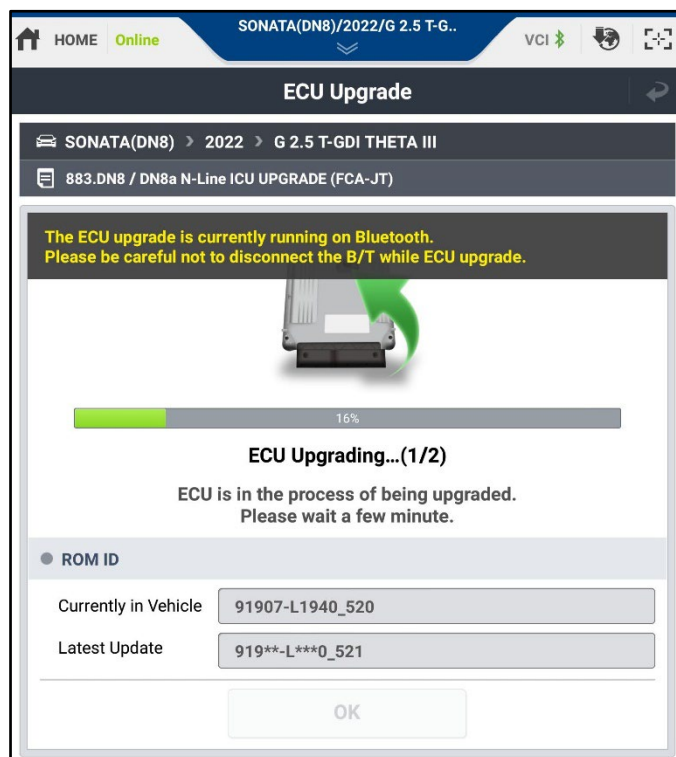
**NOTICE**

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.



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.

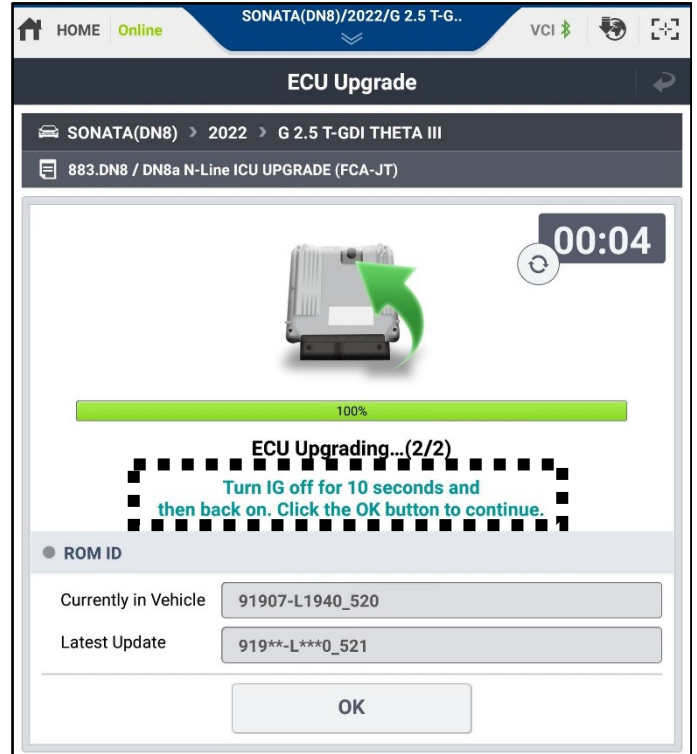


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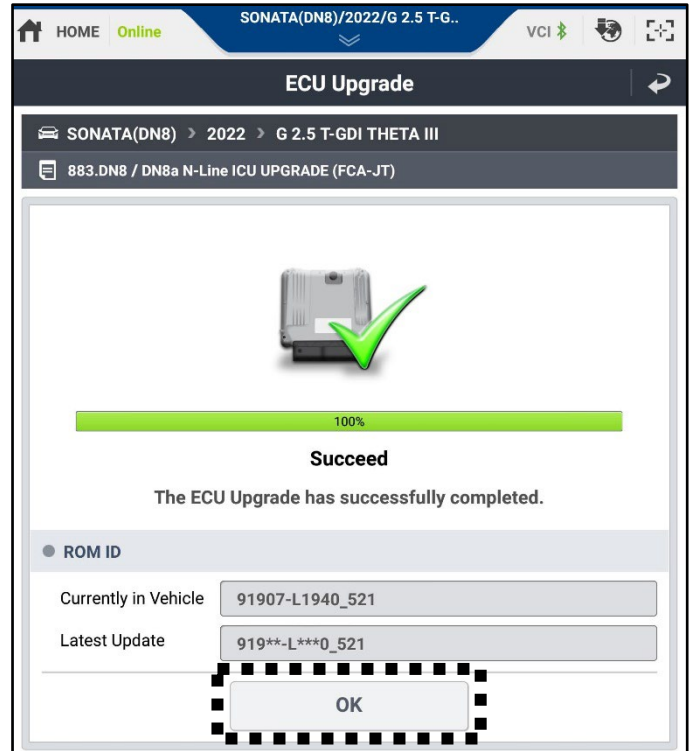
8. Upgrade (2/2) will begin, and the progress of the upgrade will appear in the bar graph.

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.”



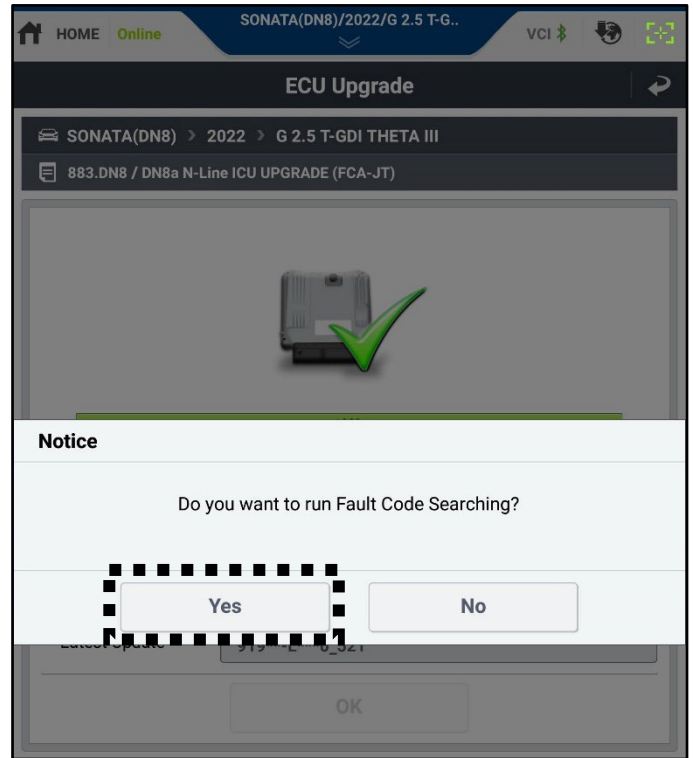
9. Click **OK** on the final screen, which indicates upgrade is complete.





10. 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.

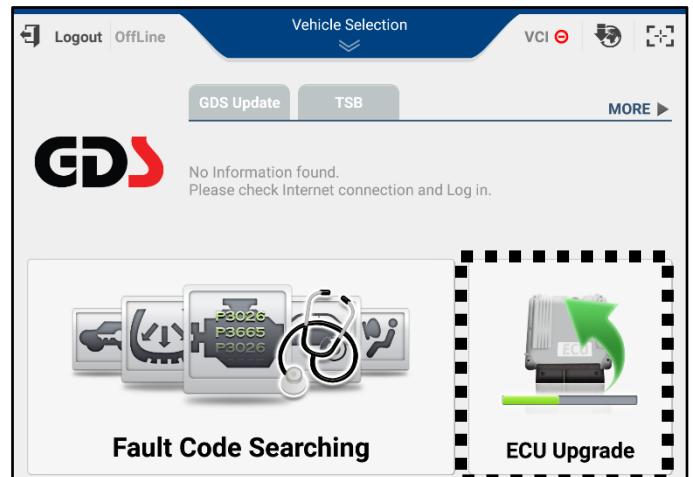


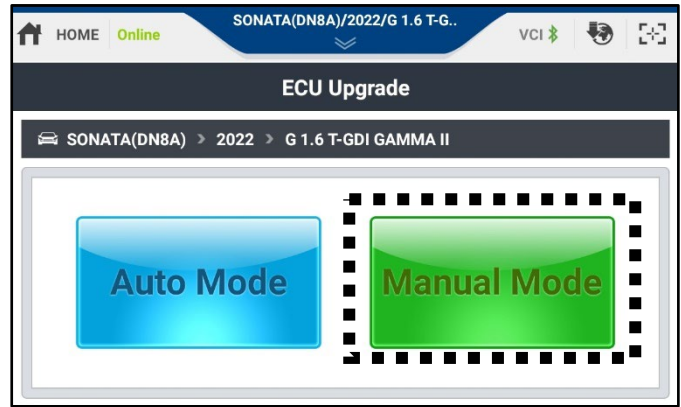
### 3. MANUAL UPGRADE PROCEDURE USING THE GDS-MOBILE

#### NOTE:

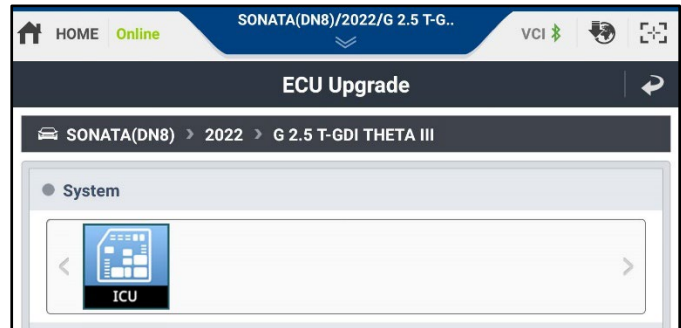
- The manual upgrade should be performed only when the automatic upgrade fails.
- If automatic upgrade fails, turn the ignition key off for about 10 seconds, place it back in the on position to reset the control unit before performing manual upgrade.

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



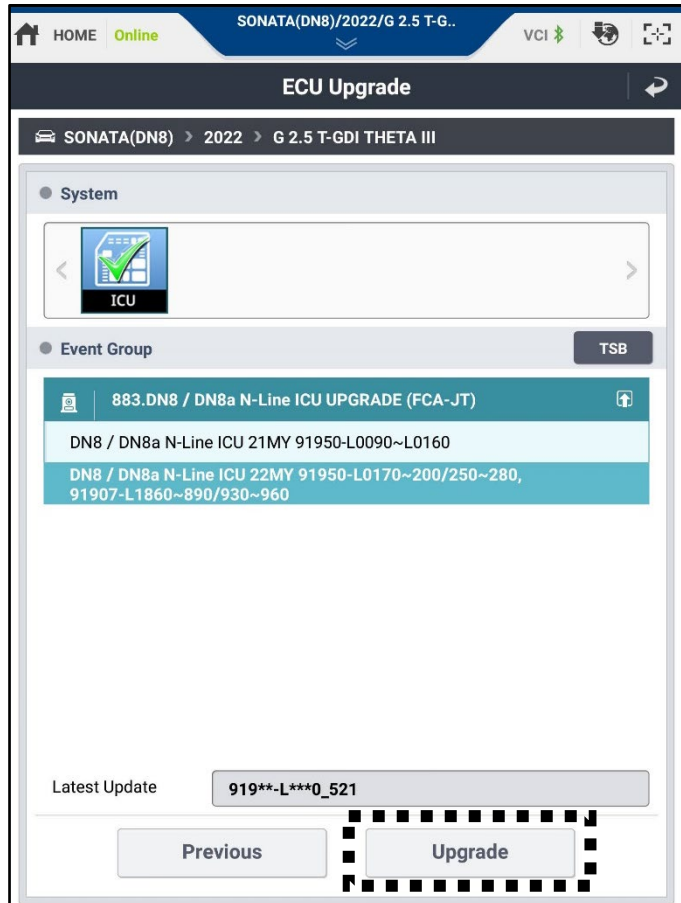


12. Select ICU system.



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

**“883. DN8 / DN8a N-Line ICU Upgrade (FCA-JT)”**

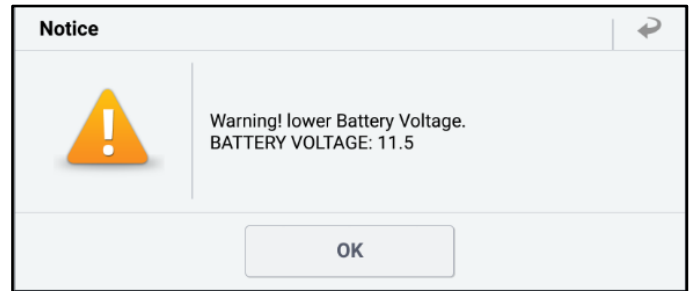


14. Enter the password from the below table then touch OK.

**#883 – DN8/DN8a N Line**

MENU	PASSWORD
DN8 / DN8a N-Line ICU 21MY 91950-L0090~L0160	0160
DN8 / DN8a N-Line ICU 22MY 91950-L0170~200/250~280, 91907-L1860~890/930~960	1960

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.

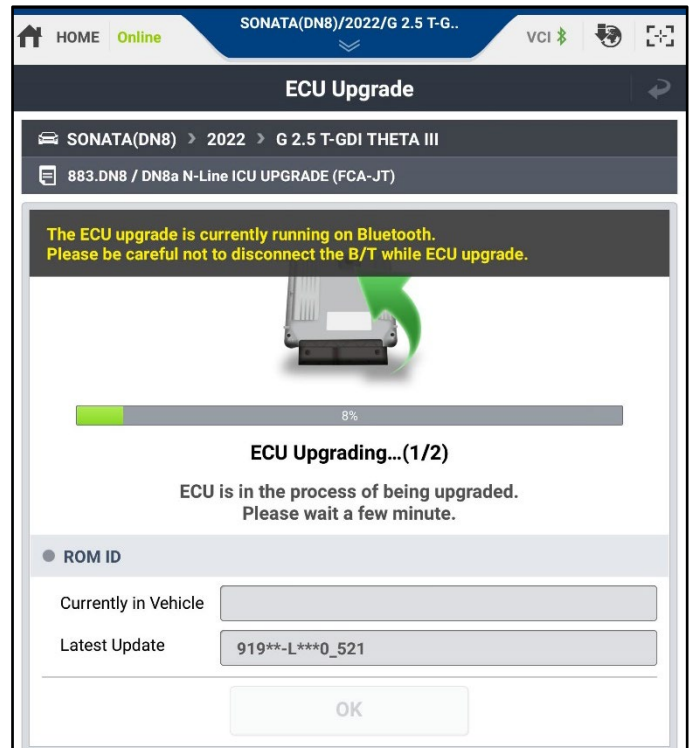


**NOTICE**

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.

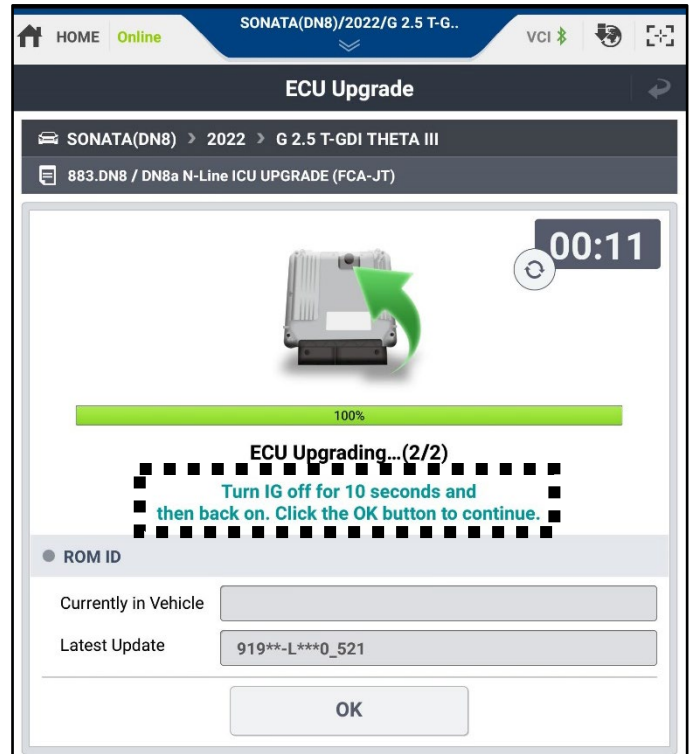


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17. Upgrade (2/2) will begin, and the progress of the upgrade will appear in the bar graph.

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

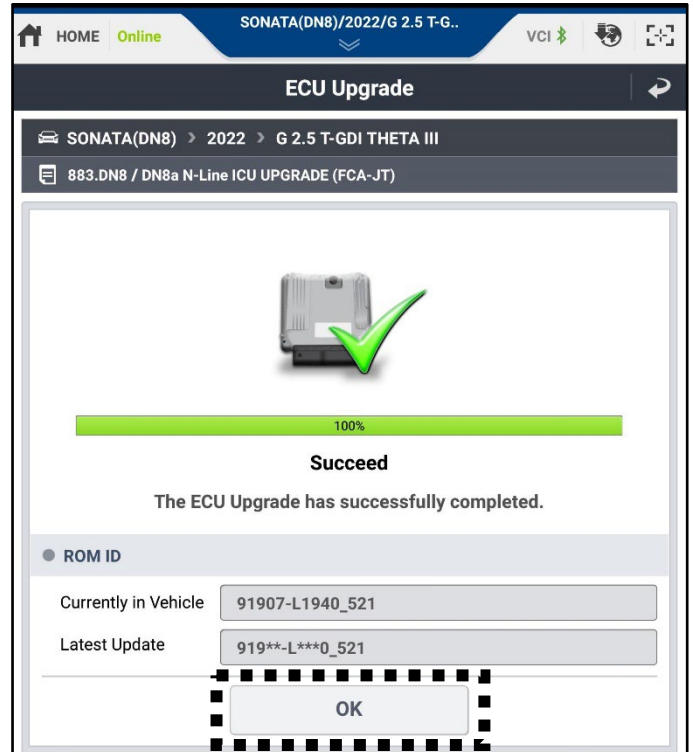
When upgrade reaches 100%, follow GDS instructions to “Turn IG off for 10 seconds and then back on. Click the OK button to continue.”



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.



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19. 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.

