 HYUNDAI Technical Service Bulletin	GROUP AUTOMATIC TRANSMISSION	NUMBER 25-AT-001H
	DATE MAY 2025	MODEL(S) SANTA FE (TMA) SONATA (DN8/DN8A)
SUBJECT: TCU SOFTWARE UPDATE FOR 8DCT HP EOP SENSORLESS LOGIC		

Description: Certain Santa Fe (TMA) and Sonata (DN8/DN8A) vehicles equipped with 8-speed dual clutch transmissions (8DCT) may exhibit one of the DTCs listed below, related to the high pressure electric oil pump (HP EOP). Follow the procedures in this TSB to update the Transmission Control Unit (TCU) to the latest sensorless logic on affected vehicles, and then perform air bleeding and transmission learning.

HP EOP DTCs

DTC	Description
P1C2D03	HP EOP Motor Position Sensor
P1C2D1C	HP EOP Motor Position Sensor
P1C2E92	HP EOP Motor Control

Applicable Vehicles:



- 2021–2023MY Santa Fe (TMA) equipped with 8DCT
- 2021-2022MY Sonata (DN8/DN8A) equipped with 8DCT

GDS Information:

System	Event Number	Description
AT / Transmission	1125	TMa PE 2.5T 8DCT HP EOP SENSORLESS LOGIC UPDATE WHEN MOTOR MIL ILLUMINATE
	1126	DN8a N 2.5T 8DCT HP EOP SENSORLESS LOGIC UPDATE WHEN MOTOR MIL ILLUMINATE

(or use a later available event as listed in the GDS AT/Transmission Update screen if one is available.)

SST Information:

Tool Name	Tool Number	Figure	Remarks	Ordering Information
VCI 3	G0VHNNN06		VCI 3 comes with the 19-pin cable (P/N G1XDDCA020)	Website: https://hyundaiesentialtools.com/ Email: Hyundaitools@snapon.com Phone: 1-855-763-9199 Hours: 7 AM – 7 PM CST
VCI 2	G1XDDMN001			

Warranty Information:

Model	Op. Code	Operation	Op. Time	Causal Part	Nature Code	Cause Code
Santa Fe (TMA)	954A1F06	TCU Update + Air Bleeding + DCT Learning	0.8 M/H	Refer to applicable part on page 3 for appropriate model	W17	ZZ3
Sonata (DN8/DN8A)						

NOTE 1: Normal warranty applies.

NOTE 2: Submit claim on Claim Entry Screen as “Warranty” type.

NOTE 3: If a part is found in need of replacement while performing this TSB 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.

ROM ID Information:

System	Model	ECU Part Number	ROM ID	
			Old	New
AT / Transmission	Santa Fe (TMA) (w/ 2.5T & SBW)	954A1-2N250	VTMPT25XXX720NS0	VTMPT25XXX920NSC
			VTMPT25XXX720NS1	
			VTMPT25XXX730NS2	
			VTMPT25XXX800NS3	
			VTMPT25XXX800NS4	
			VTMPT25XXX800NS5	
			VTMPT25XXX832NS6	
			VTMPT25XXX900NS8	
			VTMPT25XXX900NSA	
			VTMPT25XXX920NSB	
			VTMPT25XXW900NS1	
			VTMPT25XXW920NS2	
	Sonata (DN8/DN8A) (w/ 2.5T & SBW)	954A1-2N060	VDN8T25XXX700NS0	VDN8T25XXX920NSE
			VDN8T25XXX700NS1	
			VDN8T25XXX720NS2	
			VDN8T25XXX720NS3	
			VDN8T25XXX720NS4	
			VDN8T25XXX730NS5	
			VDN8T25XXX800NS6	
			VDN8T25XXX832NS7	
			VDN8T25XXX832NS8	
			VDN8T25XXX900NSA	
			VDN8T25XXX900NSC	
954A1-2N061	954A1-2N061	VDN8T25XXW900NS0	VDN8T25XXW920NS3	
		VDN8T25XXW900NS1		
		VDN8T25XXW920NS2		

Service Procedure:

NOTICE

You must initially perform the GDS ECU update in Auto Mode.

- If the ECU update starts but then fails in Auto Mode, perform the update in Manual Mode to recover.

NOTICE

Ensure the vehicle's battery charge is **above 11.0 Volts** and the tablet's battery charge is **above 30%** before performing a software update to avoid the update from failing.

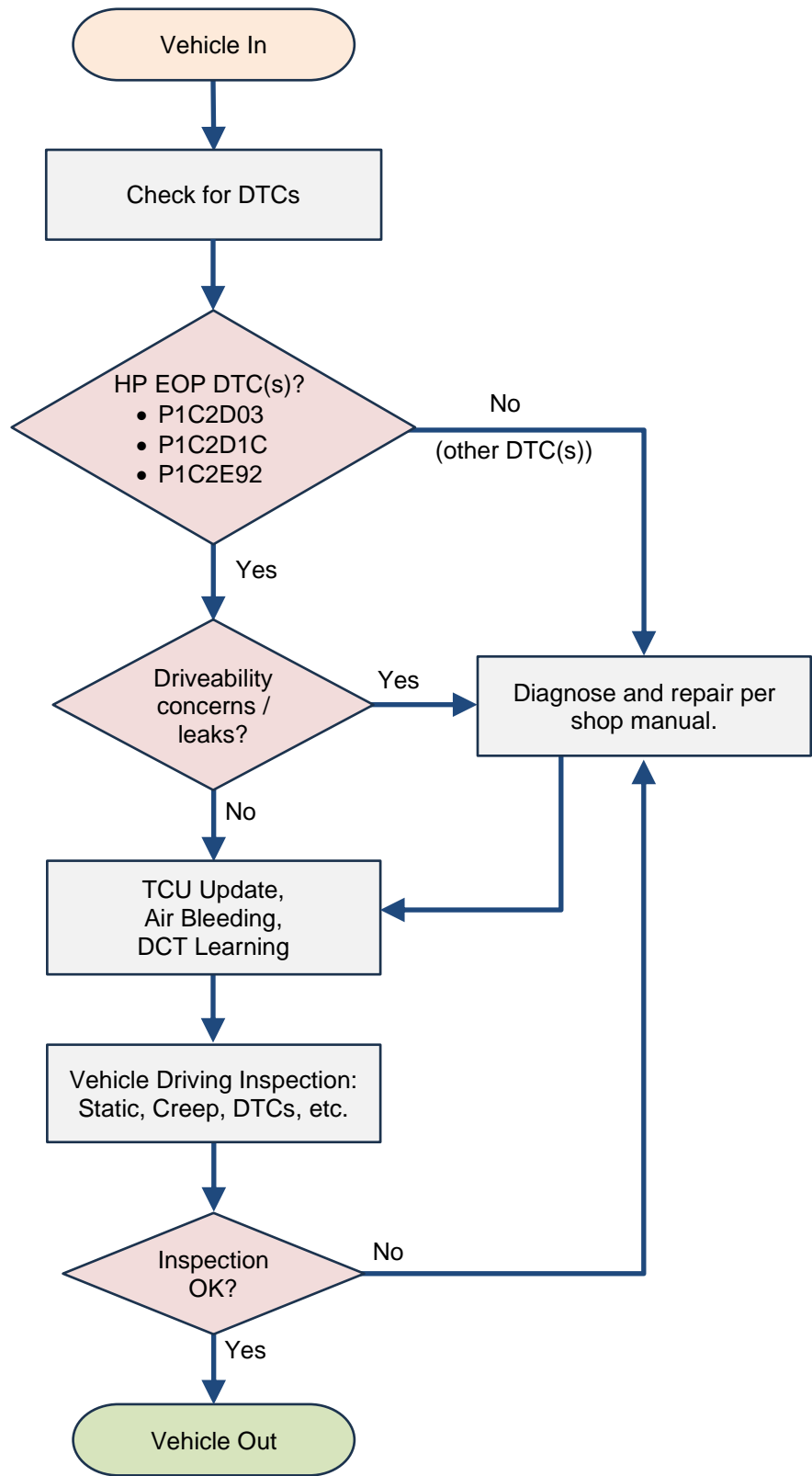
***i* Information**

- Turn **OFF** all lamps (do **NOT** leave head lamp switch in auto mode) and all accessories.
- Perform update with the ignition switch in the **ON** position.
- Do **NOT** disconnect any cables connected to the vehicle or scan tool during update.
- Do **NOT** start the engine during update.
- Do **NOT** turn **OFF** the ignition switch during update.

Table of Contents

- Service Procedure Flowchart 5
- ECU Update Procedure..... 6
- Air Bleeding Procedure 9
- DCT Learning Procedure 10
- Vehicle Driving Inspection 11

Service Procedure Flowchart

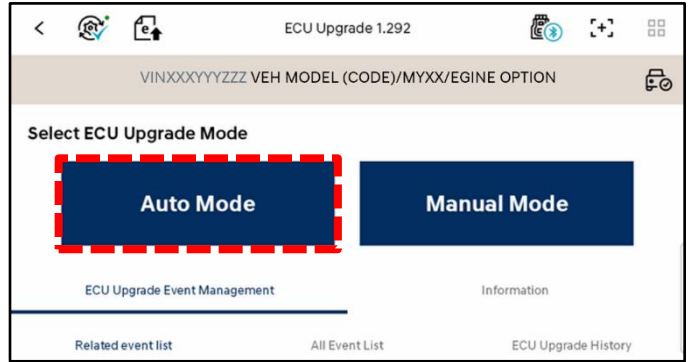


ECU Update Procedure

1. Perform the ECU update in **Auto Mode**.

i **Information**

Refer to **TSB # 25-GI-011H**, “**ECU Update Procedure for Tablet-Based GDS-Smart**”, for additional information.



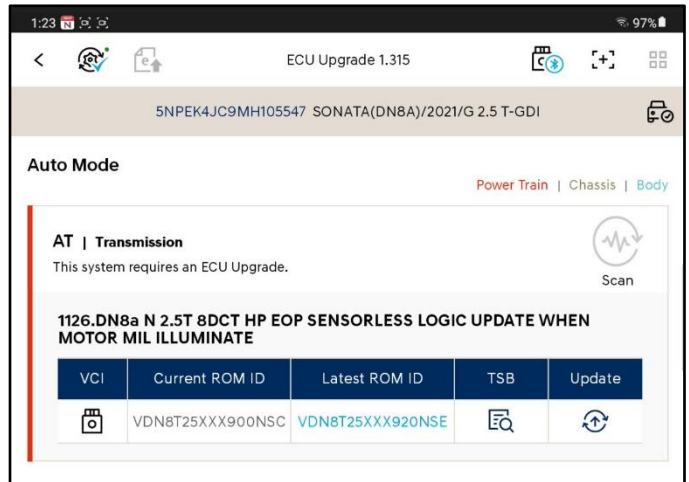
2. Verify the ROM ID by selecting the **AT / Transmission** system to scan the vehicle's current ROM ID.

NOTICE

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

NOTICE

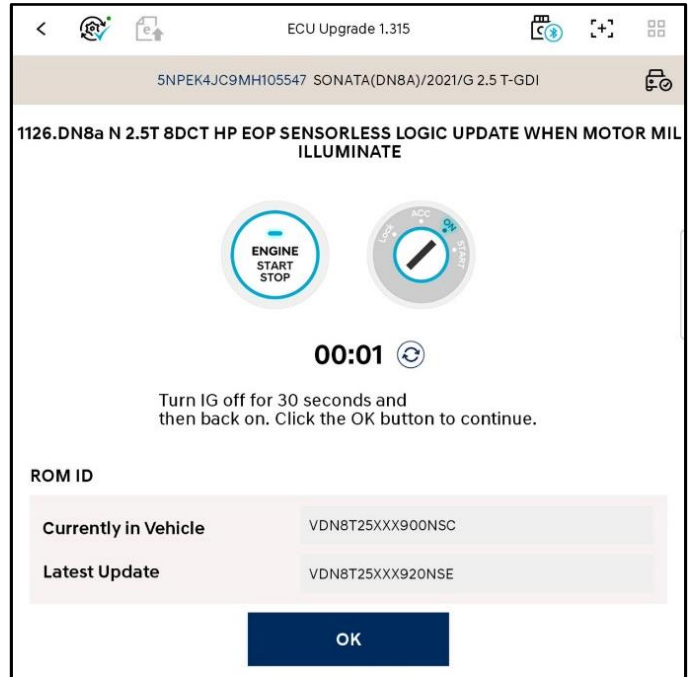
If the update fails, remove the power connector from the in-cabin fuse box for at least **5 seconds**. Alternatively, disconnect the negative (–) **12V** battery terminal, wait at least **5 seconds**. Reassemble and retry the update.



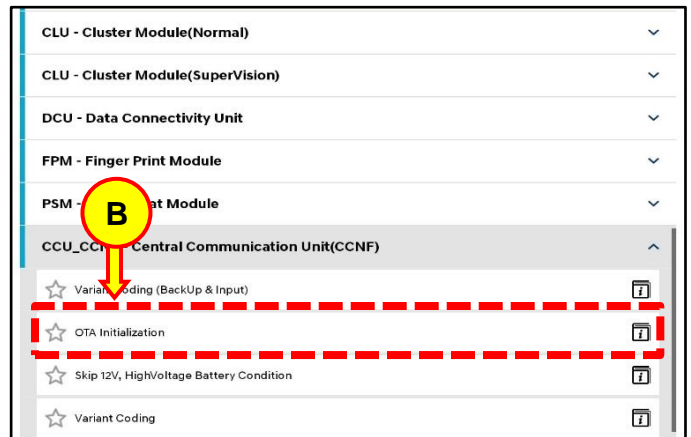
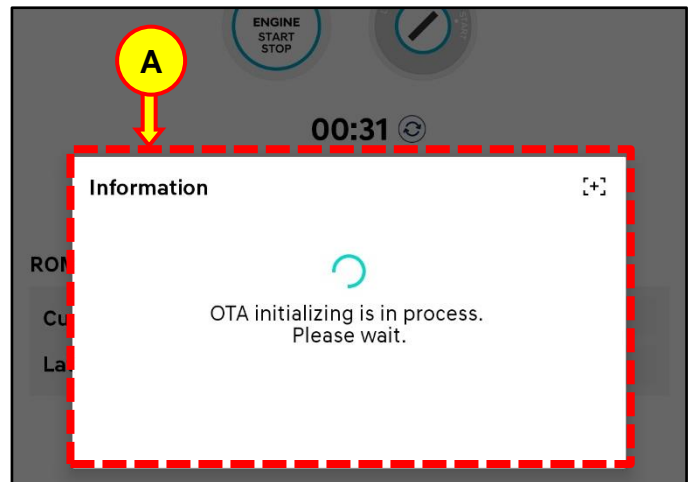
- After the ECU update process shows 100% complete, follow the prompts on the screen to cycle the ignition **OFF** for at least **10 seconds** to reset the control unit (certain models may take up to **30 seconds**).

i Information

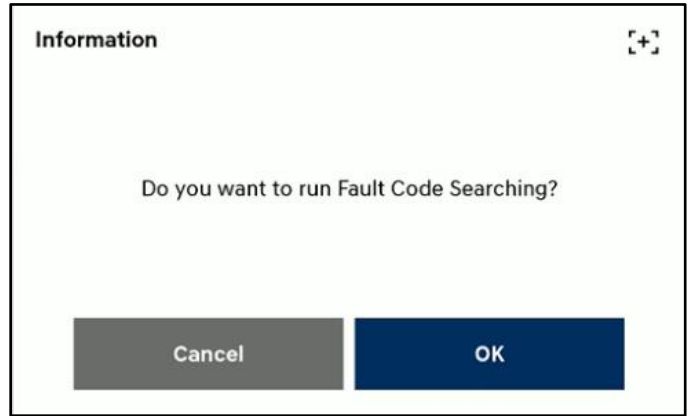
Use the **Refresh** button to reset the timer.



- OTA initialization (A) should perform automatically:
 - If OTA initialization performs automatically, then proceed with the service procedure.
 - If the OTA initialization process fails, complete it manually under: **S/W Management > CCU_CCNF - Central Communication Unit (CCNF) > OTA Initialization (B)**. Follow the instructions on the screen.



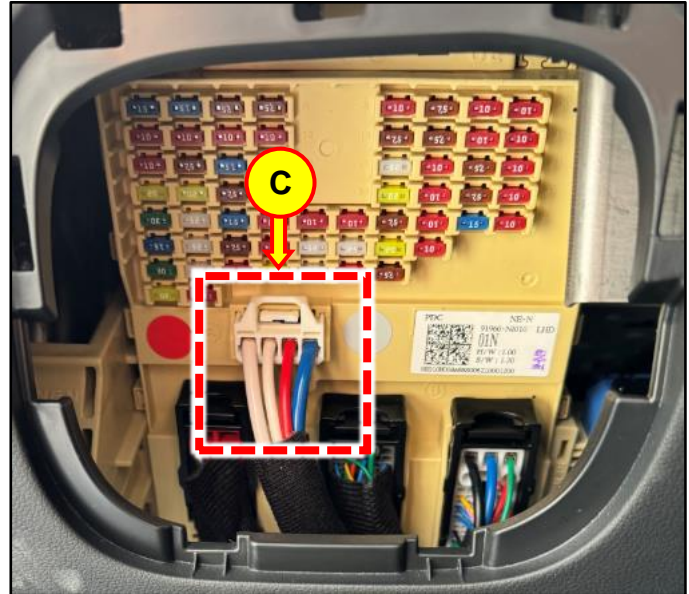
- Perform an **All Systems Fault Code** search and erase DTC history that had incidentally occurred from the ECU update.



- Remove the power connector (C) from the in-cabin fuse box for at least **5 seconds**, then reconnect it.

i Information

Alternatively, disconnect the negative (-) **12V** battery terminal, wait at least **5 seconds**, then reconnect it.



- Start the engine to confirm proper operation of the vehicle.
- Proceed to the **Air Bleeding Procedure** on the next page.

NOTICE

If the ECU update fails in Auto Mode, perform the update in Manual Mode using the password(s) below.

Manual Mode Password:

Event	ECM Menu	Password
1125	TMa PE 2.5T 8DCT 954A1-2N250	2250
1126	DN8a N 2.5T 8DCT 954A1-2N060	2060
	DN8a N 2.5T 8DCT 954A1-2N061	2061

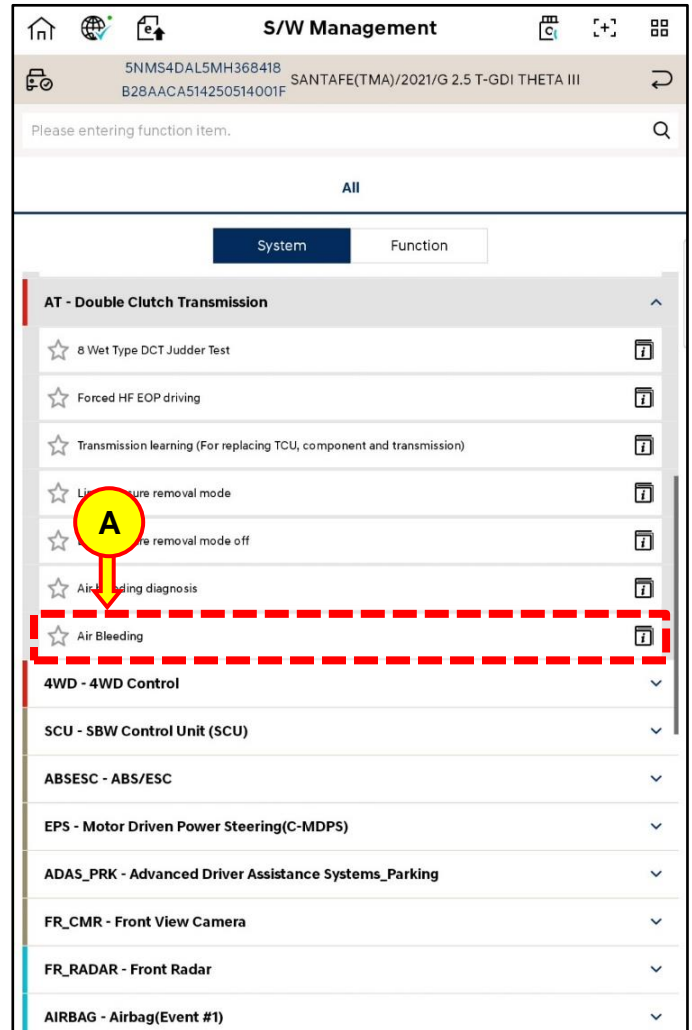
Air Bleeding Procedure

1. Confirm vehicle is set to the following parameters:
 - Vehicle stopped with transmission in Park (P).
 - Ignition switch **ON** (IG ON).
2. Connect GDS to the vehicle.

3. Under **S/W Management > Automatic Transaxle**, select **Air Bleeding (A)**.

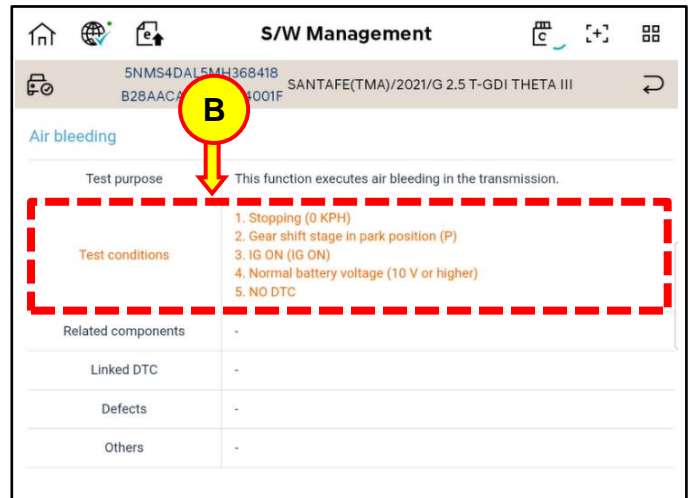
i Information

Do **NOT** operate any other functions while performing air bleeding.



- 4. Confirm the **Test conditions (B)** on the screen, then select **Run (C)**.

When air bleeding is complete, proceed to the **DCT Learning Procedure**.

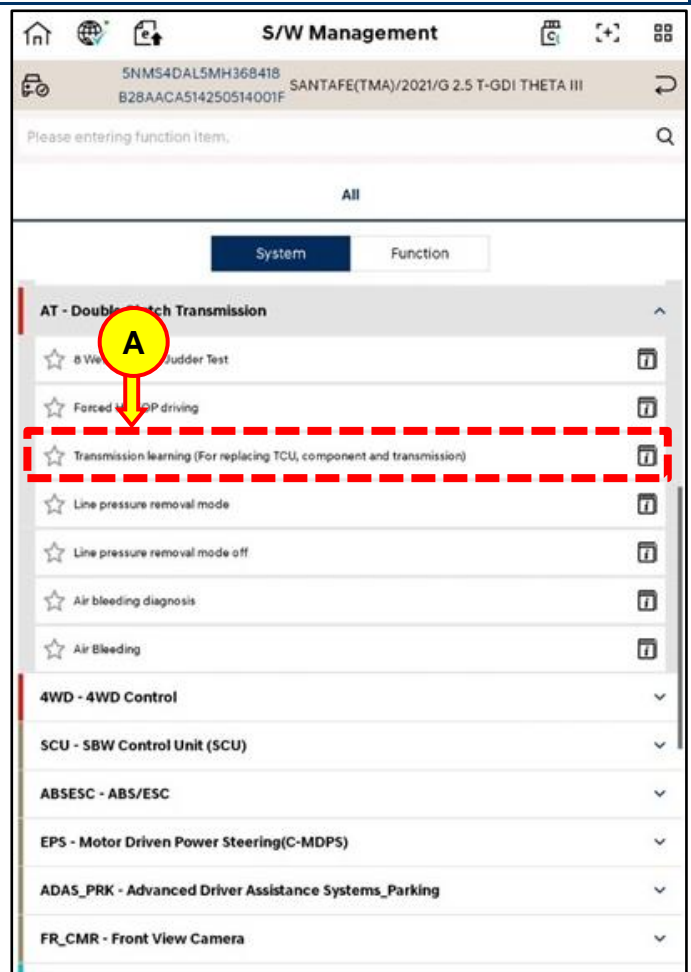


DCT Learning Procedure

- 1. Under **S/W Management > Automatic Transaxle**, select **Transmission learning (A)**.

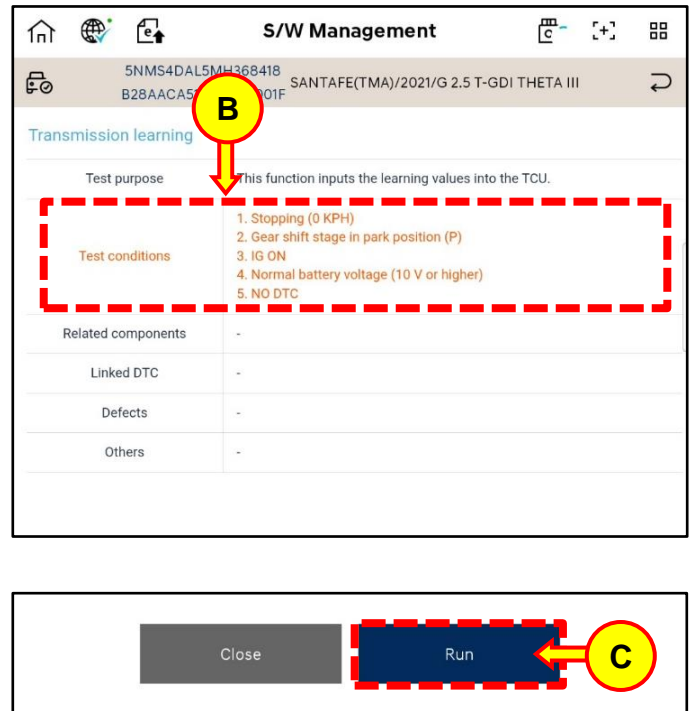
i Information

Do **NOT** operate any other functions while performing Transmission learning.



2. Confirm the **Test conditions (B)** on the screen, then select **Run (C)**.

Proceed to **Vehicle Driving Inspection**.



Vehicle Driving Inspection

1. Static test:
 - a) Vehicle ignition **ON**.
 - b) With brake pedal depressed, shift the gears as follows:
N > D/N > R/P > D/P > R
 - c) Confirm vehicle does **NOT** exhibit abnormal shock.
 - d) Repeat steps b and c above **3 times**.
2. Creep test:
 - a) Vehicle ignition **ON**.
 - b) With brake pedal depressed, shift gear from **P** to **D**.
 - c) With brake pedal depressed, shift gear from **P** to **R**.
 - d) Confirm that vehicle starts moving within **1-2 seconds**, without engine hesitation or juddering.
 - e) Repeat steps **b, c, and d** above **3 times**.
3. Check for DTCs and any concerns during the tests in steps 1 and 2, such as brake signal, gear tightening, hydraulic pressure, etc.
4. Diagnose and repair per shop manual. Replace the transmission if issues are found after a detailed inspection.