



GROUP	MODEL
Safety Recall Campaign	2021-2022MY K5 (DL3a) and Sorento (MQ4a)
NUMBER	DATE
SC250 (Rev 1, 12/15/2022)	December 2022

SAFETY RECALL CAMPAIGN

SUBJECT: **8-SPEED DCT (DTC P1C2D03) INSPECTION /
REPLACEMENT / LOGIC IMPROVEMENT (SC250)**

NOTICE

This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.

This bulletin provides the procedure to inspect and, if necessary, replace the transmission on certain 2021-2022 Sorento (MQ4a) vehicles produced from October 26, 2020 through August 25, 2022 and certain K5 (DL3a) vehicles produced from November 16, 2020 through August 12, 2022, equipped with a 2.5L T-GDI / 8-speed dual clutch transmission (DCT). Also, this bulletin provides the procedure to improve the transmission control unit (TCU) logic with updated software on the subject vehicles. The electric oil pump within the 8-speed dual-clutch transmission (DCT) may experience an internal fault due to a quality deviation issue at the supplier. As a result, the subject vehicle may set a diagnostic trouble code (DTC) P1C2D03. This condition will cause the malfunction indicator lamp (MIL) to illuminate and a "stop safely immediately" message on the instrument cluster as well as audible chimes. If this condition occurs, the vehicle can be driven normally for 20-30 seconds before complete loss of motive power due to disengagement of the transmission drive gears occurs. Loss of motive power increases the risk of a crash. Follow the procedure outlined in this publication to scan the TCU and confirm if DTC P1C2D03 is stored. If the DTC is not stored, apply the improved logic to the 'TCU' system using the KDS ECU Upgrade function as described in this bulletin. If DTC P1C2D03 is stored, then replace the transmission and apply the improved logic to the 'TCU' system using the KDS ECU Upgrade function as described in this bulletin. For confirmation that the latest reflash has been applied to a vehicle you are working on, verify the ROM ID using the table on page 4 of this bulletin.

DTC Description:

P1C2D03: HP EOP Motor Position Sensor

NOTICE

There is no charge to the vehicle owner for this repair. Under applicable law, you may not sell or otherwise deliver any affected vehicle until it has been repaired pursuant to the procedures set forth in this bulletin.

To assure complete customer satisfaction, always remember to refer to WebDCS Warranty Coverage (validation) Inquiry Screen (Service → Warranty Coverage → Warranty Coverage Inquiry) for a list of any additional campaigns that may need to be performed on the vehicle before returning it to the customer.

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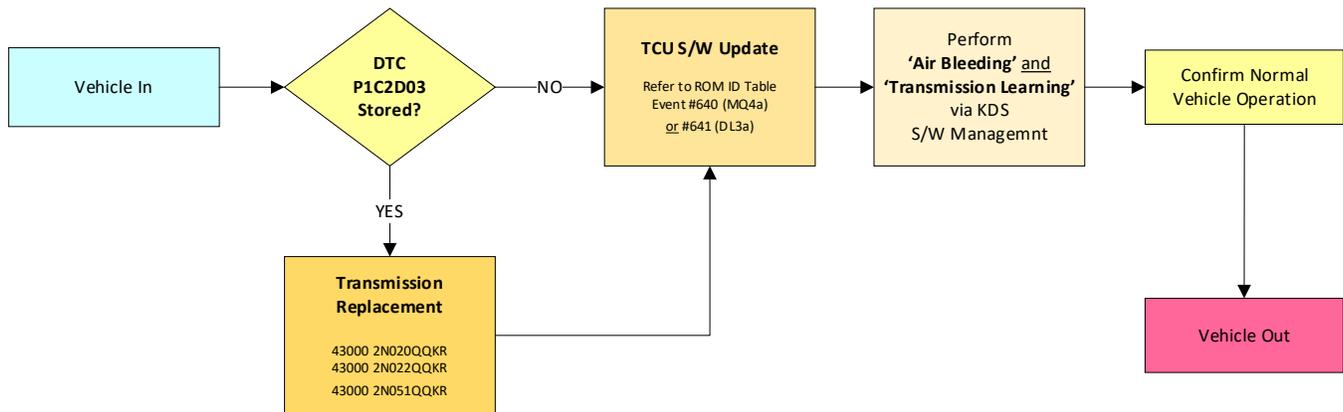
Inspection Procedure:

Using KDS, scan TCU for DTC P1C2D03:

If DTC is stored, replace the DCT assembly and update A/T System software.

If DTC is not stored, update A/T System software only.

After A/T System S/W update is completed, perform Air Bleeding and Transmission Learning procedure via KDS.

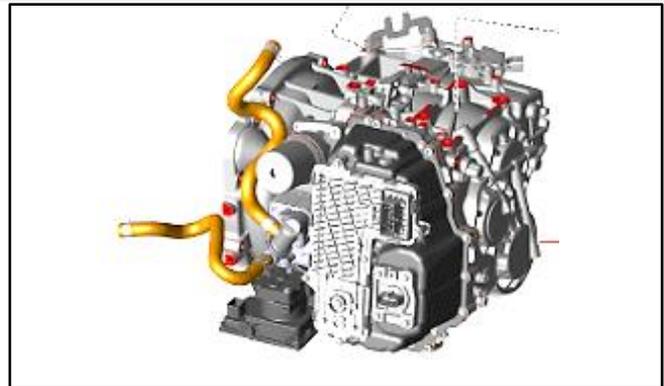


ⓘ IMPORTANT

A [Vehicle Diagnosis Number \(VDN\)](#) must be created with DTC P1C2D03 listed above, prior to DCT assembly replacement. If a VDN is not created, Parts Ordering and Warranty claim submission issues **WILL** occur. **Once the repair is performed, SC250 is complete. Any subsequent or follow-up concerns must be addressed according to normal Service/Warranty Guidelines.** Any claims for replacement parts are subject to Warranty review and chargeback.

Replacement Procedure:

1. Replace the Dual Clutch Transmission (DCT) Assembly by referring to "2.5 T-GDI Theta III → DCT (Dual Clutch Transmission) System → DCT (Dual Clutch Transmission) → Repair procedures" in the applicable Shop Manual on KGIS.
2. Proceed to update the TCU software by referring to the 'ECU Upgrade Procedure' outlined on pages 3 through 8, including performing Air Bleeding and Transmission Learning procedure via KDS.



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ECU Upgrade Procedure:

To correct this condition, the ECU should be reprogrammed using the KDS download, as described in this bulletin.

Upgrade Event Name
640. MQ4a 8DCT GEAR SHIFT & LEARNING LOGIC IMPROVEMENT
641. DL3a 8DCT GEAR SHIFT & LEARNING LOGIC IMPROVEMENT

NOTICE

- Confirm a fully charged battery (12.3 volts or higher is necessary) is used or utilize a fully charged jump starter box connected to the battery.
- **Ensure the KDS GDS is sufficiently charged at 60% or higher prior to reflash.**
- All ECU upgrades must be performed with the ignition set to the 'ON' position unless otherwise stated.
- **Damaged VCI II units should not be used and promptly replaced.**
- Be careful not to disconnect the VCI-II connected to the vehicle during the ECU upgrade procedure.
- **DO NOT start the engine during ECU upgrade.**
- DO NOT turn the ignition key 'OFF' or interrupt the power supply during ECU upgrade.
- **When the ECU upgrade is completed, turn the ignition 'OFF' and wait 10 seconds before starting the engine.**
- ONLY use approved ECU upgrade software designated for the correct application.

IMPORTANT

It is recommended to ALWAYS check the Electronic Parts Catalog (EPC) to locate the ECU Part Number respective to Auto/Manual Mode ROM IDs. DO NOT reference the parts label affixed to the ECU.

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NOTICE

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the applicable model is equipped with an immobilizer  security system. Failure to follow proper procedures may cause the PCM to become inoperative after the upgrade and any claims associated with this repair may be subject to chargeback.

ROM ID INFORMATION TABLE:

Upgrade Event #640 (MQ4a), #641 (DL3a)

Model	Engine	TM	Type	ECU P/N	ROM ID	
					Previous	NEW
MQ4a	Theta 2.5TGDI	8DCT	SBC	954A0 2N180 954A1 2N180	WMQ4T25XXX700NS0 WMQ4T25XXX700NS1 WMQ4T25XXX720NS2 WMQ4T25XXX720NS3 WMQ4T25XXX720NS4 WMQ4T25XXX730NS5 WMQ4T25XXX800NS6 WMQ4T25XXX800NS7 WMQ4T25XXX800NS8 WMQ4T25XXX832NS9 WMQ4T25XXX900NSB	WMQ4T25XXX900NS D
DL3a				954A0 2N300 954A1 2N300 954A2 2N000	WDL3T25XXX720NS0 WDL3T25XXX720NS1 WDL3T25XXX730NS2 WDL3T25XXX800NS3 WDL3T25XXX832NS4 WDL3T25XXX900NS6	WDL3T25XXX900NS8

To verify the vehicle is affected, be sure to check the Calibration Identification of the vehicle's ECM ROM ID and reference the Information Table as necessary.

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NOTICE

Prior to performing the ECU upgrade, be sure to check that the KDS is fully charged.

1. Connect the VCI-II to the OBD-II connector, located under the driver's side of the instrument panel.

NOTICE

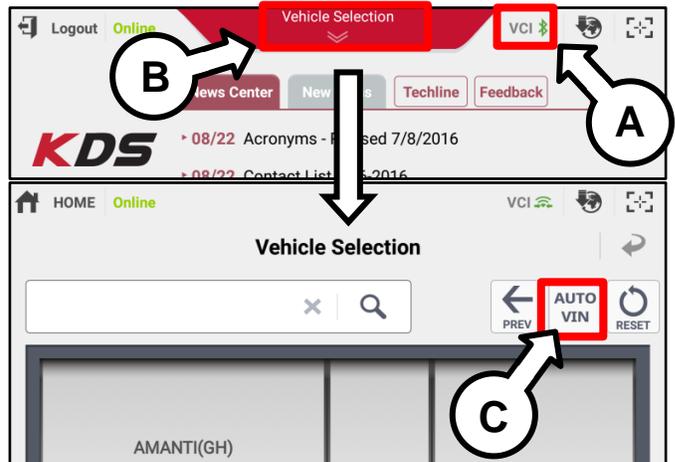
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



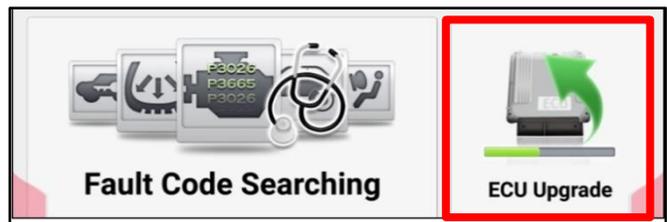
2. With the ignition ON, turn ON the KDS tablet. Select 'KDS' from the home screen.



3. Confirm communication with VCI (A) and then configure the vehicle (B) using the 'AUTO VIN' (C) feature.



4. Select 'ECU Upgrade'.



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- The KDS will check the server for recently uploaded Events and then automatically download Upgrade Event #640 (MQ4a) or #641 (DL3a).

NOTICE

The vehicle must be identified in Vehicle Selection to download an Event for that vehicle.

After the download is complete, the program will shut down to install. Please wait until the program restarts.

Event	Status
271.QF 2.4GDI DTC P0171,P0420 LOGIC IMPROVEMENT	Downloading
273.TF 2.4GDI DTC P0171,P0420 LOGIC IMPROVEMENT	Ready

36%

Do not touch any system buttons while performing this function.

KDS screenshot shown above is for demonstration purposes only. Events shown in screenshot are not applicable to this bulletin.

- Select Auto Mode.

CAUTION

Do NOT attempt to perform a Manual Mode upgrade UNLESS Auto Mode fails. Always follow the instructions given on the KDS in either Auto or Manual mode.



- Select 'A/T' and then select 'Upgrade'.

The KDS will check the server for recently uploaded Events and then automatically download Upgrade Event #640. MQ4a 8DCT Gear Shift & Learning Logic Improvement or #641. DL3a 8DCT Gear Shift & Learning Logic Improvement (per the applicable model)

- The ECU upgrade will begin and the progress of the upgrade will appear on the bar graph. Upgrade part (1/2) (E) will download the upgrade event to the VCI-II. Upgrade part (2/2) (F) will upgrade the ECU.

CAUTION

Do not touch the system buttons (like 'Back', 'Home', 'etc.') while performing ECU Upgrade.

E

23%

ECU Upgrading...(1/2)

ECU is in the process of being upgraded. Please wait a few minute.

F

6%

ECU Upgrading...(2/2)

ECU is in the process of being upgraded. Please wait a few minute.



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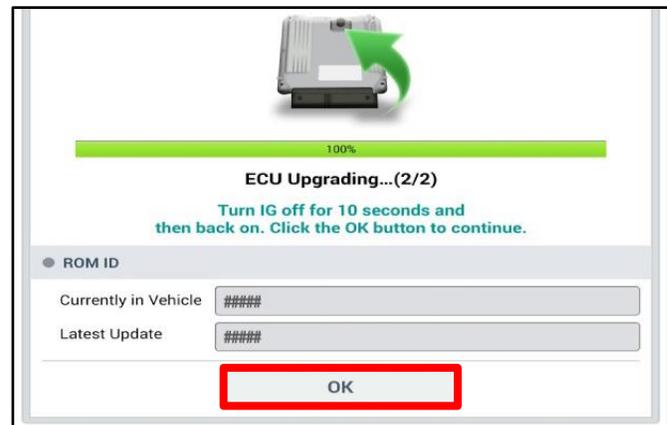
9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select 'OK' and restart the from step 4.

NOTICE

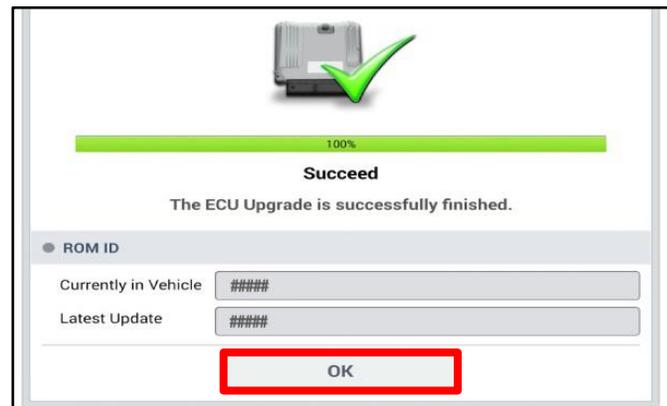
If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.



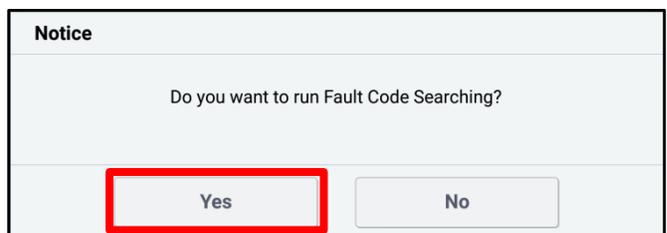
10. When instructed on the KDS, turn the ignition OFF for ten (10) seconds then back on. Select 'OK' to continue.



11. Once the upgrade is complete, select 'OK' to finalize the procedure.



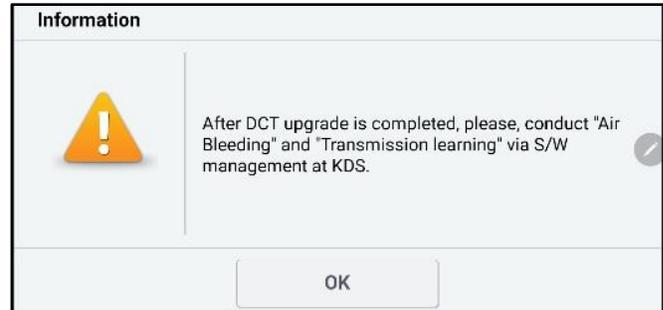
12. When prompted, select 'YES' to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade.



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13. After TCU S/W update is completed, perform 'Air Bleeding' and 'Transmission Learning' procedure(s) via KDS.



14. Start the engine to confirm normal operation of the vehicle.

Manual Upgrade Procedure:

NOTICE

The manual upgrade should ONLY be performed if the automatic upgrade fails.

If the automatic upgrade fails, turn the ignition 'OFF' for about 10 seconds then place it back in the 'ON' position to reset the control unit BEFORE performing manual upgrade.

See table below for 'Manual Mode' passwords.

Manual Mode ECU Upgrade Passwords

Menu	Password
MQ4a Theta 2.5T 8DCT (SBC) : 954A0/A1-2N180	2180
DL3a Theta 2.5T 8DCT (SBC) : 954A0/A1-2N300	2000

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the TCU system under the System selection menu. Select **Upgrade Event #640 (MQ4a) or #641 (DL3a)** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID Information Table on page 3, and select **OK**.
4. Enter the appropriate password from the Manual Mode password table above and select **OK**.
5. The upgrade will begin and the progress of the upgrade will appear on the bar graph.
6. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Select **OK**.
7. Once the upgrade is complete, select **OK** to finalize the procedure.
8. When prompted, select **YES** to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade.
9. Start the engine to confirm proper operation of the vehicle.

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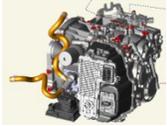
AFFECTED VEHICLE RANGE:

Model	Production Date Range
Sorento (MQ4a)	October 26, 2020 to August 25, 2022
K5 (DL3a)	November 16, 2020 to August 12, 2022

REQUIRED TOOL:

Tool Name	Figure	Comments
KDS		Kia Diagnostic System

REQUIRED PART:

Model	Drive Type	Part Name	Part Number	Figure	Qty.
Sorento (MQ4a)	FWD	8-Speed DCT Assembly (Remanufactured)	43000 2N020QQKR		1
	AWD		43000 2N022QQKR		
K5 (DL3a)	FWD		43000 2N051QQKR		
ALL	ALL	75W Gear Oil	UM020 CH264		3
		Hyd. Control Oil	UM020 CH266		4



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WARRANTY INFORMATION:

N Code: N99 C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.	
DL3a	R	43000 2N051	0	(SC250) DTC Inspection + Logic Improvement (No DTC)	221A26R0	0.5 M/H	N/A	0	
MQ4a (FWD)		43000 2N020							
MQ4a (AWD)		43000 2N022							
DL3a (FWD)	R	43000 2N051	0	(SC250) DTC Inspection + 8DCT Replacement + Logic Improvement (w/DTC Stored)	221A26R1	4.2 M/H	43000 2N051QQKR	1	
							UM020 CH264	3	
							UM020 CH266	4	
MQ4a (FWD)	R	43000 2N020	0			221A26R2	4.5 M/H	43000 2N020QQKR	1
							UM020 CH264	3	
							UM020 CH266	4	
MQ4 (AWD)	R	43000 2N022	0			221A26R3	5.0 M/H	43000 2N022QQKR	1
							UM020 CH264	3	
							UM020 CH266	4	

Note: Refer to Warranty Bulletin 2022-44 for claim submission procedures. A [Vehicle Diagnosis Number \(VDN\)](#) must be created with DTC P1C2D03 listed above, prior to DCT assembly replacement. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. **Once the repair is performed, SC250 is complete. Any subsequent or follow-up concerns must be addressed according to normal Service/Warranty Guidelines.** Any claims for replacement parts are subject to Warranty review and chargeback.

NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference **SC250** when accessing the WebDCS system.