



GROUP	MODEL
ENG	2024-2025MY Multiple Models w/ 2.5GDI or 2.5T-GDI Theta III Engines
NUMBER	DATE
264	March 2026

TECHNICAL SERVICE BULLETIN

CUSTOMER ACTION: ECU LOGIC IMPROVEMENT FOR DTC P2B59F0 (CA2516)

SUBJECT:

This bulletin provides information to upgrade the Engine Control Unit (ECU) software on certain 2024-2025MY vehicles equipped with 2.5 GDI or 2.5 T-GDI Theta III engines listed in the table below. Affected vehicles may experience an illuminated malfunction indicator light (MIL) accompanied with DTC P2B59F0 which can set while driving. There are no drivability issues related to this DTC. Follow the procedure outlined in this publication to install the upgraded ECU software. Refer to [SST081](#) for software-upgrade instructions using the Kia Diagnostic System (KDS) tablet and VCI, and confirm the Upgrade Event Number/Name, ROM ID Information, and Manual Mode passwords (if applicable) on the applicable vehicle.

DTC Description:

P2B59F0 - Engine Coolant Flow Control Valve Control Circuit/Open

MY	Model	Production Date Range
2025	K5 (DL3)	February 20, 2024 to October 7, 2024
2024-2025	Sorento (MQ4a)	December 13, 2023 to November 12, 2024
2024-2025	Sportage (NQ5)	November 17, 2023 to March 20, 2025
2024-2025	Sportage (NQ5a)	January 8, 2024 to May 8, 2025

NOTICE

A Technical Service Bulletin is a field fix repair program without customer notification that may be performed during the warranty period.

This bulletin should only be performed when there is a valid customer complaint of MIL illumination accompanied by DTC P2B59F0.

Repair status for a VIN is provided on KDealer+ (Service → Warranty Coverage → Warranty Coverage Inquiry → Campaign Information).

Always refer to KGIS for the latest information. After logging in kdealer.com, the newest technical publications are listed in 'Service Releases' and has the latest service information that has been released.

Refer to [TSB SST081](#) for instructions to upgrade the 'ECU' system:

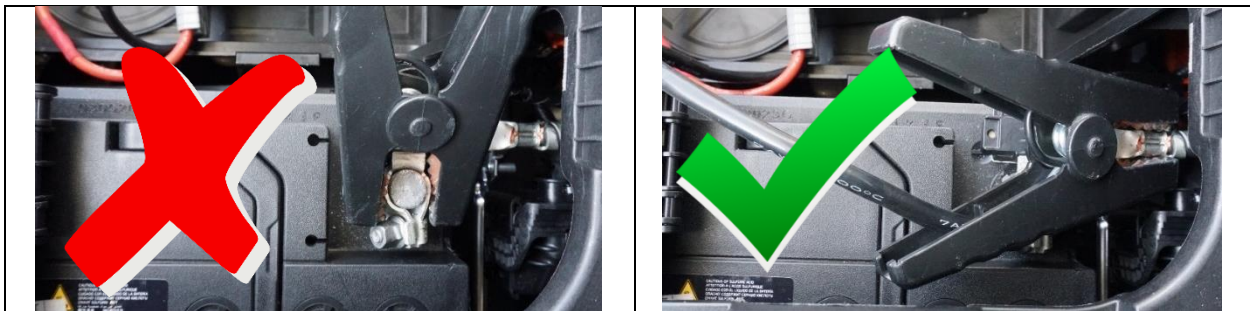
To correct this condition, the specified system module should be reprogrammed using KDS as described in this bulletin in 'Auto Mode'.

Upgrade Event Name
832.NQ5(a) THETA 2.5GDI MIL ON DTC (P2B59) Judgement Logic Improvement
857.DL3 PE 2.5TGDI ECU DTC (P2B59F0) Judgment Logic Improvement
887.MQ4a PE 2.5GDI PCU DTC (P2B59F0) Judgment 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.

[Connect the negative \(-\) terminal to the battery as shown below.](#)



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.

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ROM ID Information Table:

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.

Sportage (NQ5, NQ5a) Upgrade Event #832

Year	Model	System	IMMO 	ECU P/No.	ROM ID	
					Previous	New
24MY	Sportage (NQ5)	PCU	Yes	39100 2S506	NQFVD5GMAXXX1Q2A	NQFVD5GMAXXX1Q6A
				39100 2S507	NQFVD5GKAXXX1Q2A	NQFVD5GKAXXX1Q6A
				39100 2S508	NQFVD5GMJXXX1Q2A	NQFVD5GMJXXX1Q6A
				39100 2S509	NQFVD5GKJXXX1Q2A	NQFVD5GKJXXX1Q6A
25MY				39100 2S531	NQGVD5GMAXXX1Q4A	NQGVD5GMAXXX1Q6A
				39100 2S532	NQGVD5GKAXXX1Q4A	NQGVD5GKAXXX1Q6A
				39100 2S533	NQGVD5GMJXXX1Q4A	NQGVD5GMJXXX1Q6A
				39100 2S534	NQGVD5GKJXXX1Q4A	NQGVD5GKJXXX1Q6A
24MY	Sportage (NQ5a)	PCU	Yes	39100 2S527	NQFVN5GMAXXX1Q2A	NQFVN5GMAXXX1Q6A
				39100 2S528	NQFVN5GKAXXX1Q2A	NQFVN5GKAXXX1Q6A
				39100 2S529	NQFVN5GMJXXX1Q2A	NQFVN5GMJXXX1Q6A
				39100 2S530	NQFVN5GKJXXX1Q2A	NQFVN5GKJXXX1Q6A
25MY				39100 2S535	NQGVN5GMAXXX1Q4A	NQGVN5GMAXXX1Q6A
				39100 2S536	NQGVN5GKAXXX1Q4A	NQGVN5GKAXXX1Q6A
				39100 2S537	NQGVN5GMJXXX1Q4A	NQGVN5GMJXXX1Q6A
				39100 2S538	NQGVN5GKJXXX1Q4A	NQGVN5GKJXXX1Q6A


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.

K5 (DL3) Upgrade Event #857

Year	Model	System	IMMO 	ECU P/No.	ROM ID	
					Previous	New
24-25 MY	K5 (DL3)	PCU	Yes	39103 2S300	EXGWD5TMDCXX1Q4A	EXGWD5TMDCXX1Q6A

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.

Sorento (MQ4a) Upgrade Event #887

Year	Model	System	IMMO 	ECU P/No.	ROM ID	
					Previous	New
24MY	Sorento (MQ4a)	PCU	Yes	39104 2S100	MQFVN5GMFXXX1Q3A	MQFVN5GMFXXX1Q6A
				39104 2S101	MQFVN5GMGXXX1Q3A	MQFVN5GMGXXX1Q6A
25MY				391X4 2S104	MQGVN5GMFXXX1Q4A	MQGVN5GMFXXX1Q6B
				391X4 2S105	MQGVN5GMGXXX1Q4A	MQGVN5GMGXXX1Q6B

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.

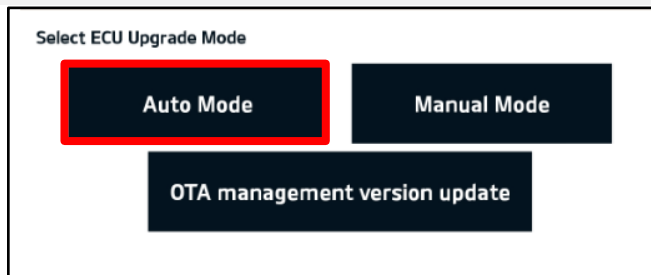
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ECU LOGIC IMPROVEMENT FOR DTC P2B59F0 (CA2516)

Software Information:

The required software must be installed by selecting the **'Auto Mode'** ECU Upgrade option.

Note: In some case, the 'Manual Mode' installation option may be required **ONLY** if the 'Auto Mode' function fails or is otherwise noted above.


 **NOTICE**

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 the manual upgrade.

'Manual Mode' passwords.

Event	Model	Menu	Password
#832	Sportage (NQ5)	NQ5 2.5GDI 2WD : 39100-2S506	2506
		NQ5 2.5GDI 2WD : 39100-2S507	2507
		NQ5 2.5GDI 4WD : 39100-2S508	2508
		NQ5 2.5GDI 4WD : 39100-2S509	2509
		NQ5 2.5GDI 2WD : 39100-2S531	2531
		NQ5 2.5GDI 2WD : 39100-2S532	2532
		NQ5 2.5GDI 4WD : 39100-2S533	2533
		NQ5 2.5GDI 4WD : 39100-2S534	2534
	Sportage (NQ5a)	NQ5a 2.5GDI 2WD : 39100-2S527	2527
		NQ5a 2.5GDI 2WD : 39100-2S528	2528
		NQ5a 2.5GDI 4WD : 39100-2S529	2529
		NQ5a 2.5GDI 4WD : 39100-2S530	2530
		NQ5a 2.5GDI 2WD : 39100-2S535	2535
		NQ5a 2.5GDI 2WD : 39100-2S536	2536
		NQ5a 2.5GDI 4WD : 39100-2S537	2537
NQ5a 2.5GDI 4WD : 39100-2S538	2538		
#857	K5 (DL3)	DL3 PE 2.5TGDI ECU ULEV IMMO/SMK : 39103-2S300	8082
#887	Sorento (MQ4a)	MQ4a PE 2.5GDI +IMMO/SMK : 39104-2S100	0302
		MQ4a PE 2.5GDI +IMMO/SMK : 39104-2S101	2620
		MQ4a PE 2.5GDI +IMMO/SMK : 391X4-2S104	6732
		MQ4a PE 2.5GDI +IMMO/SMK : 391X4-2S105	5539

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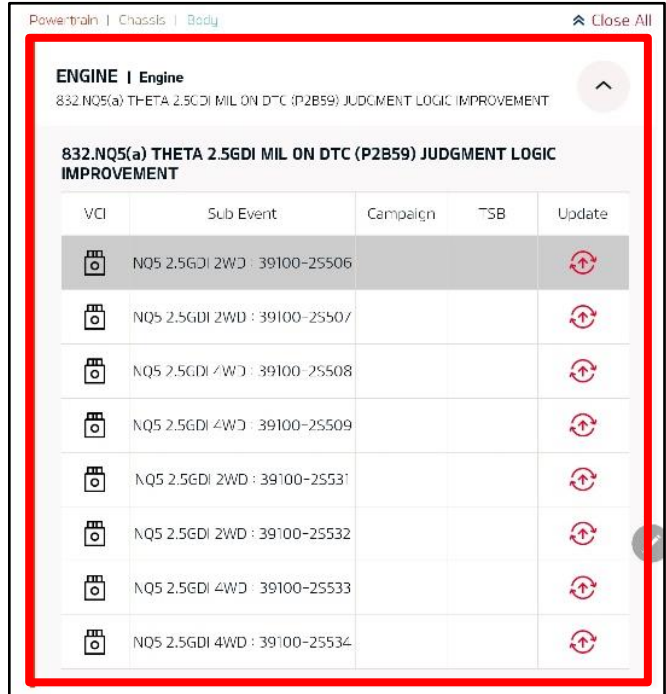
ECU LOGIC IMPROVEMENT FOR DTC P2B59F0 (CA2516)

UPGRADE EVENT Sportage (NQ5, NQ5a):

Select the applicable '832' system module and the Event Group.

- **832.NQ5(a) THETA 2.5GDI MIL ON DTC (P2B59) Judgement Logic Improvement**

Verify the affected vehicle Calibration Identification of the applicable ECU ROM ID and reference the Information Table on page 3 as necessary.

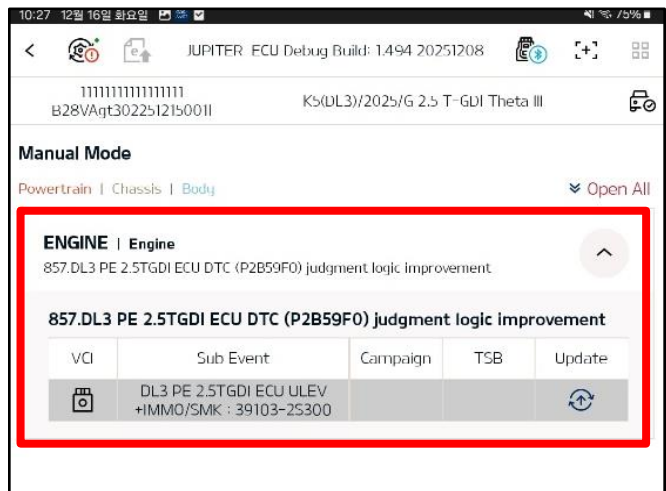


UPGRADE EVENT K5 (DL3):

Select the applicable '857' system module and the Event Group.

- **857.DL3 PE 2.5TGDI ECU DTC (P2B59F0) Judgment Logic Improvement**

Verify the affected vehicle Calibration Identification of the applicable ECU ROM ID and reference the Information Table on page 3 as necessary.

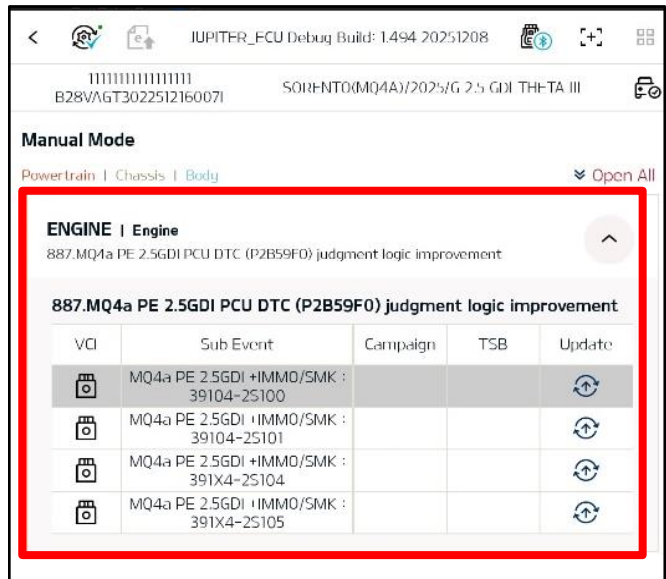


UPGRADE EVENT Sorento (MQ4a):

Select the applicable '887' system module and the Event Group.

- **887.MQ4a PE 2.5GDI PCU DTC (P2B59F0) Judgment Logic Improvement**

Verify the affected vehicle Calibration Identification of the applicable ECU ROM ID and reference the Information Table on page 3 as necessary.





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ECU LOGIC IMPROVEMENT FOR DTC P2B59F0 (CA2516)

AFFECTED VEHICLE RANGE:

MY	Model	Production Date Range
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2024-2025	Sorento (MQ4a)	December 13, 2023 to November 12, 2024
2024-2025	Sportage (NQ5)	November 17, 2023 to March 20, 2025
2024-2025	Sportage (NQ5a)	January 8, 2024 to May 8, 2025

REQUIRED TOOL:

Tool Name	Part Number	Figure	Location	Comments
Kia Diagnostic System (KDS)	N/A		SHOP	KDS + VCI
VCI-II Connector	N/A			Connect Directly to KDS Using Included Ethernet Cable

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.
NQ5	V	39100 2S506	0	CA2516A ECU Logic Improvement	250241R0	0.3 M/H	N/A	0
NQ5a		39100 2S527		CA2516B ECU Logic Improvement	250A41R0			
DL3		39103 2S300		CA2516C ECU Logic Improvement	250241R1			
MQ4a		39104 2S100		CA2516D ECU Logic Improvement	260A05R0			

For Substitute Transportation policy, please refer [to Service Policy and Procedures Manual \(SPPM\) 6.11 "Kia Substitute Transportation"](#).

Note: A [Vehicle Diagnosis Number \(VDN\)](#) must be created for DTC's prior to ordering parts and performing necessary procedure(s), as outlined in this TSB. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. 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 **CA2516** when accessing the KDealer+ system.

