



GROUP

MODEL

ENG

2025MY
K4 (CL4m)
w/Nu 2.0L MPI

NUMBER

DATE

258

September 2025

TECHNICAL SERVICE BULLETIN

Subject:

SERVICE ACTION: ECM JUDGEMENT LOGIC
IMPROVEMENT FOR DTC P218100 (SA621)

This bulletin provides information to upgrade the Engine Control Module (ECM) system software on certain 2025MY K4 (CL4m) vehicles produced from July 03, 2024 through April 28, 2025 equipped with an Nu 2.0L MPI engine. The vehicles affected may exhibit a MIL 'ON' with DTC P218100 stored under certain driving conditions such as high-load, high-speed driving in low temperature environments. There are no drivability or other symptoms associated with this condition. High-load control logic helps to lower the coolant temperature by allowing the valve of the Integrated Thermal Module (ITM) to fully open the radiator port during rapid acceleration. Follow the procedure outlined in this publication to update software of the 'ECM' system and improve the judgement logic of the ITM. Refer to [SST081](#) for software upgrade instructions using Kia Diagnostic System (KDS) tablet with VCI-II, confirm the Upgrade Event Number/Name, ROM ID Information, and Manual Mode passwords (if applicable) on the applicable vehicle.

DTC Description:**P218100 - Cooling System Performance** **NOTICE**

A Service Action is a repair program without customer notification that is performed during the warranty period. Any dealer requesting to perform this repair outside the warranty period will require DPSM approval.

Repair status for a VIN is provided on KDealer+ (Service → Warranty Coverage → Warranty Coverage Inquiry → Campaign Information). Not completed Recall / Service Action reports are available on KDealer+ (Consumer Affairs → Not Completed Recall → Recall VIN → Select Report), which includes a list of affected vehicles.

This issue number is SA621.

SUBJECT: SERVICE ACTION: DTC P2181 JUDGEMENT LOGIC IMPROVEMENT (SA621)

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

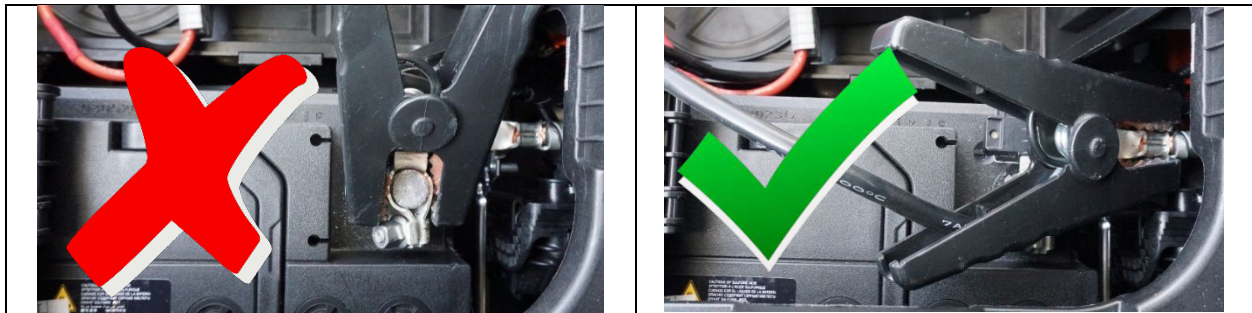
To correct this condition, the specified system module should be reprogrammed using KDS as described in this bulletin in 'Auto Mode'.

Upgrade Event Name
849.CL4m NU ENGINE MIL ON DTC (P2181) 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.

SUBJECT: SERVICE ACTION: DTC P2181 JUDGEMENT LOGIC IMPROVEMENT (SA621)

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.

Engine	System	IMMO 	ECU P/No.	ROM ID	
				Previous	New
2.0L Nu	Engine	Yes	39100 2J360	CLGVM0AMFCXCSQGA CLGVM0AMFCXCSQGB CLGVM0AMFCXCSQGC	CLGVM0AMFCXCSQGD

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.

Software Information:

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

Select ECU Upgrade Mode

Auto Mode

Manual Mode

📄 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.

Menu	Password
CL4m 2.0ATK SBC : 39100-2J360	0632

UPGRADE EVENT:

Select the applicable **'Engine'** system module and the Event Group.

- 849.CL4m NU ENGINE MIL ON DTC (P2181) 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.



SUBJECT: **SERVICE ACTION: DTC P2181 JUDGEMENT LOGIC IMPROVEMENT (SA621)**

AFFECTED VEHICLE RANGE:

Model	Production Date Range
K4 (CL4)	July 03, 2024 to April 28, 2025

REQUIRED TOOL:

Tool Name	Part Number	Figure	Comments
Kia Diagnostic System (KDS)	N/A		KDS + VCI

WARRANTY INFORMATION:

N Code: N99 C Code: C99

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
V	39100 2J360	0	(SA621) ECM Judgement Logic Improvement	250M10R0	0.3 M/H	N/A	0

Note: For Substitute Transportation policy, please refer to Service Policy and Procedures Manual (SPPM) 6.11 "Kia Substitute Transportation".

NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA621 when accessing the KDealer+ system.