



GROUP	MODEL
Voluntary Emissions Service Campaign	2016-2022MY Multiple Models
NUMBER	DATE
SC340 (Rev 1, 11/07/2025)	November 2025

VOLUNTARY EMISSIONS SERVICE CAMPAIGN

SUBJECT:

THETA II 2.4L GDI EMISSIONS ECM LOGIC IMPROVEMENT (SC340)

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 information to upgrade the Electronic Control Module 'ECM' system software for certain 2016-2022MY vehicles equipped with 2.4L Theta II engines listed in the table below. Kia has become aware that certain 2016-2022MY vehicles equipped with 2.4L Theta II engines may have engine calibrations that were not optimized for emissions standards under certain specific conditions. These calibrations may cause the vehicle to release air pollutants which exceed Federal and California standards. These standards were established to protect your health and welfare from the dangers of air pollution. Follow the procedure outlined in this publication to update the 'ECM' software with improve Diagnostic Trouble Code (DTC) judgement logic. Refer to [SST081](#) for software upgrade instructions using Kia Diagnostic System (KDS) tablet and VCI-II and confirm the Upgrade Event Number/Name, ROM ID Information, and Manual Mode passwords (if applicable) on the applicable vehicle.

Model Year	Model	Production Date Range
19-20MY	Optima (JFa)	May 6, 2018 to June 23, 2020
19-20MY	Sorento (UMa)	January 22, 2018 to November 4, 2020
19-21MY	Sportage (QL)	April 2, 2018 to March 22, 2021
22MY	Sportage (QL)	On Hold Until Further Notice
16-18MY	Optima (JF, JFa), Sorento (UMa), Sportage (QL)	TBD Software Release (Under Development and will be released at different stages)

NOTICE

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 SC340.

A printed copy is for reference only; publication information can be updated at any time. 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 'ECM' system:

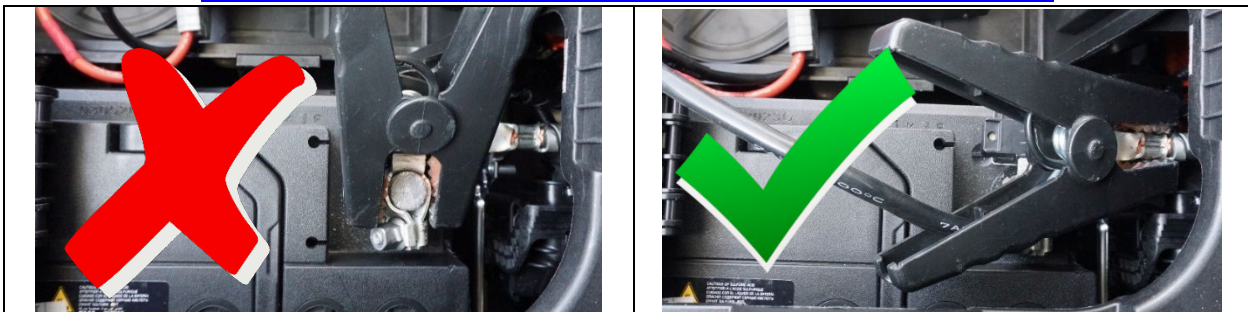
To correct this condition, the specified system module should be reprogrammed using KDS as described in this bulletin in 'Auto Mode'.

Upgrade Event Name
876.UMa PE Theta 2.4 Emission Logic Improvement (19MY)
877.UMa PE Theta 2.4 Emission Logic Improvement (20MY)
878.JFa PE Theta 2.4 Emission Logic Improvement (19~20MY)
879.QL/QL PE Theta 2.4 Emission Logic Improvement (19~21MY)
879.QL/QL PE Theta 2.4 Emission Logic Improvement (22MY) *On Hold Until Further Notice


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:

Upgrade Event #876 Sorento (UMa)


ⓘ 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.

Model	System	IMMO 	ECU P/No.	ROM ID	
				Previous	New
Sorento (UMa) 19MY	ECM (ULEV)	Yes	39171 2GMN0	UPAJNC4ERE1A UPAJNC4ERE1B UPAJNC4ERE1C UPAJNC4ERE1D UPAJNC4ERG1A UPAJNC4ERG1B UPAJNC4ERG1C UPAJNC4ERG1D	UPAJNC4ERGXA
			39171 2GMN1	UPAJNC4ERE1A UPAJNC4ERE1B UPAJNC4ERE1C UPAJNC4ERE1D UPAJNC4ERG1K UPAJNC4ERG1L UPAJNC4ERG1M UPAJNC4ERG1N	UPAJNC4ERGXB
		No	39173 2GMA0	UPAJNC4EME1A UPAJNC4EME1B UPAJNC4EME1C UPAJNC4EME1D UPAJNC4EMG1A UPAJNC4EMG1B UPAJNC4EMG1C UPAJNC4EMG1D	UPAJNC4EMGXA
			39173 2GMA1	UPAJNC4EME1A UPAJNC4EME1B UPAJNC4EME1C UPAJNC4EME1D UPAJNC4EMG1K UPAJNC4EMG1L UPAJNC4EMG1M UPAJNC4EMG1N	UPAJNC4EMGXB

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Upgrade Event #877 (UMa)

Model	System	IMMO 	ECU P/No.	ROM ID	
				Previous	New
Sorento (UMa) 20MY	ECM (ULEV)	Yes	39171 2GMN2 39171 2GMN3	UPAKNC4ERG1A UPAKNC4ERG1B UPAKNC4ERG3A UPAKNC4ERG3B UPAKNC4ERG3C UPAKNC4ERG3D UPAKNC4ERG3E	UPAKNC4ERGXA
		No	39173 2GMA2 39173 2GMA3	UPAKNC4EMG1A UPAKNC4EMG1B UPAKNC4EMG3A UPAKNC4EMG3B UPAKNC4EMG3C UPAKNC4EMG3D UPAKNC4EMG3E	UPAKNC4EMGXA

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Upgrade Event #878 Optima (JFa)

Model	System	IMMO 	ECU P/No.	ROM ID	
				Previous	New
Optima (JFa) 19MY	ECM (ULEV)	Yes	39171 2GJK0	JPAJNC4ERE3A JPAJNC4ERE3B JPAJNC4ERE3C JPAJNC4ERE6D JPAJNC4ERE6E JPAJNC4ERE6F JPAJNC4ERG1G JPAJNC4ERG1H JPAJNC4ERG1I JPAJNC4ERG1J	JPAJNC4ERGXA
		No	39171 2GJK5	JPAJNC4EME3A JPAJNC4EME3B JPAJNC4EME3C JPAJNC4EME6D JPAJNC4EME6E JPAJNC4EME6F JPAJNC4EMG1G JPAJNC4EMG1H JPAJNC4EMG1I JPAJNC4EMG1J	JPAJNC4EMGXA
	ECM (SULEV)	Yes	39171 2GJL0	JPAJNS4ERE3A JPAJNS4ERE3B JPAJNS4ERE3C JPAJNS4ERE6D JPAJNS4ERE6E JPAJNS4ERG1F JPAJNS4ERG1G JPAJNS4ERG1H JPAJNS4ERG1I	JPAJNS4ERGXA
		No	39171 2GJL5	JPAJNS4EME3A JPAJNS4EME3B JPAJNS4EME3C JPAJNS4EME6D JPAJNS4EME6E JPAJNS4EMG1F JPAJNS4EMG1G JPAJNS4EMG1H JPAJNS4EMG1I	JPAJNS4EMGXA

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Upgrade Event #878 (JFa)

Model	System	IMMO 	ECU P/No.	ROM ID	
				Previous	New
Optima (JFa) 20MY	ECM (ULEV)	Yes	39171 2GJK1	JPAKNC4ERG11 JPAKNC4ERG1A JPAKNC4ERG1B JPAKNC4ERG1C JPAKNC4ERG3A JPAKNC4ERG3B JPAKNC4ERG3C	JPAKNC4ERGXA
		No	39171 2GJK6	JPAKNC4EMG11 JPAKNC4EMG1A JPAKNC4EMG1B JPAKNC4EMG1C JPAKNC4EMG3A JPAKNC4EMG3B JPAKNC4EMG3C	JPAKNC4EMGXA
	ECM (SULEV)	Yes	39171 2GJL1	JPAKNS4ERG11 JPAKNS4ERG1A JPAKNS4ERG1B JPAKNS4ERG1C JPAKNS4ERG3A JPAKNS4ERG3B JPAKNS4ERG3C	JPAKNS4ERGXA
		No	39171 2GJL6	JPAKNS4EMG11 JPAKNS4EMG1A JPAKNS4EMG1B JPAKNS4EMG1C JPAKNS4EMG3A JPAKNS4EMG3B JPAKNS4EMG3C	JPAKNS4EMGXA

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Upgrade Event #879 Sportage (QL)

Model	System	IMMO 	ECU P/No.	ROM ID	
				Previous	New
Sportage (QL) 19MY	ECM (ULEV)	Yes	39100 2GHR7	QLDJNC4ERE2A QLDJNC4ERG1B QLDJNC4ERG1C QLDJNC4ERG1D QLDJNC4ERG1E	QLDJNC4ERGXA
			39100 2GHS7	QLDJNC4ERE2K QLDJNC4ERG1L QLDJNC4ERG1M QLDJNC4ERG1N QLDJNC4ERG1O	QLDJNC4ERGXB
		No	39100 2GHS2	QLDJNC4EME2A QLDJNC4EMG1B QLDJNC4EMG1C QLDJNC4EMG1D QLDJNC4EMG1E	QLDJNC4EMGXA
			39100 2GHT2	QLDJNC4EME2K QLDJNC4EMG1L QLDJNC4EMG1M QLDJNC4EMG1N QLDJNC4EMG1O	QLDJNC4EMGXB
	ECM (SULEV)	Yes	39100 2GHT7	QLDJNS4ERE2A QLDJNS4ERG1B QLDJNS4ERG1C QLDJNS4ERG1D QLDJNS4ERG1E	QLDJNS4ERGXA
			39100 2GHV7	QLDJNS4ERE2K QLDJNS4ERG1L QLDJNS4ERG1M QLDJNS4ERG1N QLDJNS4ERG1O	QLDJNS4ERGXB
		No	39100 2GHV2	QLDJNS4EME2A QLDJNS4EMG1B QLDJNS4EMG1C QLDJNS4EMG1D QLDJNS4EMG1E	QLDJNS4EMGXA
			39100 2GHW2	QLDJNS4EME2K QLDJNS4EMG1L QLDJNS4EMG1M QLDJNS4EMG1N QLDJNS4EMG1O	QLDJNS4EMGXB

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Upgrade Event #879 (QL)

Model	System	IMMO 	ECU P/No.	ROM ID	
				Previous	New
Sportage (QL) 20MY	ECM (ULEV)	Yes	39171 2GRA1 39171 2GRB1	QPDKNC4ERG0A QPDKNC4ERG2A QPDKNC4ERG2B QPDKNC4ERG3A QPDKNC4ERG3B QPDKNC4ERG3C	QPDKNC4ERGXA
		No	39171 2GRC1 39171 2GRD1	QPDKNC4EMG0A QPDKNC4EMG2A QPDKNC4EMG2B QPDKNC4EMG3A QPDKNC4EMG3B QPDKNC4EMG3C	QPDKNC4EMGXA
	ECM (SULEV)	Yes	39171 2GRE1 39171 2GRF1	QPDKNS4ERG0A QPDKNS4ERG0B QPDKNS4ERG2A QPDKNS4ERG2B QPDKNS4ERG3A QPDKNS4ERG3B QPDKNS4ERG3C	QPDKNS4ERGXA
		No	39171 2GRG1 39171 2GRH1	QPDKNS4EMG0A QPDKNS4EMG0B QPDKNS4EMG2A QPDKNS4EMG2B QPDKNS4EMG3A QPDKNS4EMG3B QPDKNS4EMG3C	QPDKNS4EMGXA


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Upgrade Event #879 Sportage (QL)

Model	System	IMMO 	ECU P/No.	ROM ID	
				Previous	New
Sportage (QL) 21MY	ECM (ULEV)	Yes	39171 2GRA2 39171 2GRB2	QPDLNC4ERG3A	QPDLNC4ERGXA
		No	39171 2GRC2 39171 2GRD2	QPDLNC4EMG3A	QPDLNC4EMGXA
	ECM (SULEV)	Yes	39171 2GRE2 39171 2GRF2	QPDLS4ERG3A	QPDLS4ERGXA
		No	39171 2GRG2 39171 2GRH2	QPDLS4EMG3A	QPDLS4EMGXA
Sportage (QL) 22MY	On Hold Until Further Notice				

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.

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

UPGRADE EVENT:

Select the applicable **'ECM'** system module and the Event Group for the affected vehicle:

- **876.UMa PE Theta 2.4 Emission Logic Improvement (19MY)**

or

- **877.UMa PE Theta 2.4 Emission Logic Improvement (20MY)**

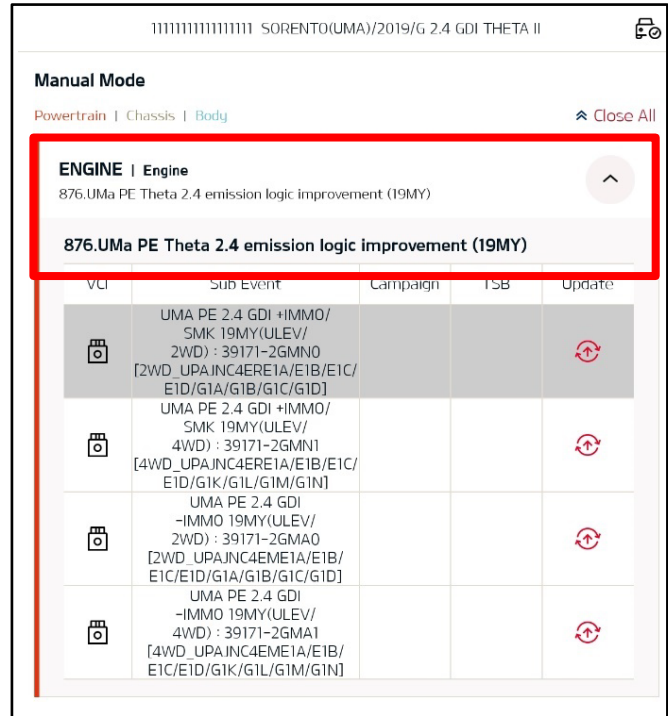
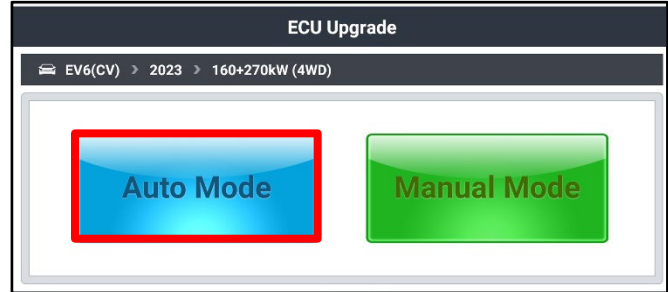
or

- **878.JFa PE Theta 2.4 Emission Logic Improvement (19-20MY)**

or

- **879.QL/QL PE Theta 2.4 Emission Logic Improvement (19-21MY)**

Verify the affected vehicle Calibration Identification of the applicable ECU ROM ID and reference the Information Table on pages 3 - 8 as necessary.



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 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 No.	Menu	Password
#876	UMA PE 2.4 GDI +IMMO/SMK 19MY(ULEV/2WD): 39171-2GMN0 [2WD_UPAJNC4ERE1A/E1B/E1C/E1D/G1A/G1B/G1C/G1D]	5932
	UMA PE 2.4 GDI +IMMO/SMK 19MY(ULEV/4WD): 39171-2GMN1 [4WD_UPAJNC4ERE1A/E1B/E1C/E1D/G1K/G1L/G1M/G1N]	3211
	UMA PE 2.4 GDI -IMMO 19MY(ULEV/2WD): 39171-2GMA0 [2WD_UPAJNC4EME1A/E1B/E1C/E1D/G1A/G1B/G1C/G1D]	8872
	UMA PE 2.4 GDI -IMMO 19MY(ULEV/4WD): 39171-2GMA1 [4WD_UPAJNC4EME1A/E1B/E1C/E1D/G1K/G1L/G1M/G1N]	5252
#877	UMA PE 2.4 GDI +IMMO/SMK 20MY(ULEV): 39171-2GMN2/N3	2468
	UMA PE 2.4 GDI -IMMO 20MY(ULEV): 39173-2GMA2/A3	3322
#878	JFa PE 2.4GDI ULEV +IMMO/SMK(19MY): 39171-2GJK0	7222
	JFa PE 2.4GDI ULEV -IMMO(19MY): 39171-2GJK5	5744
	JFa PE 2.4GDI SULEV +IMMO/SMK(19MY): 39171-2GJL0	9911
	JFa PE 2.4GDI SULEV -IMMO(19MY): 39171-2GJL5	3455
	JFa PE 2.4GDI ULEV +IMMO/SMK(20MY): 39171-2GJK1	4342
	JFa PE 2.4GDI ULEV -IMMO(20MY): 39171-2GJK6	7230
	JFa PE 2.4GDI SULEV +IMMO/SMK(20MY): 39171-2GJL1	1624
	JFa PE 2.4GDI SULEV -IMMO(20MY): 39171-2GJL6	6349

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'Manual Mode' passwords.

Event No.	Menu	Password
#879	QL 2.4GDI ULEV +IMMO/SMK(19MY/2WD): 39100-2GHR7	2794
	QL 2.4GDI ULEV +IMMO/SMK(19MY/4WD): 39100-2GHS7	7266
	QL 2.4GDI ULEV -IMMO(19MY/2WD): 39100-2GHS2	6345
	QL 2.4GDI ULEV -IMMO(19MY/4WD): 39100-2GHT2	2727
	QL 2.4GDI SULEV +IMMO/SMK(19MY/2WD): 39100-2GHT7	6360
	QL 2.4GDI SULEV +IMMO/SMK(19MY/4WD): 39100-2GHV7	4729
	QL 2.4GDI SULEV -IMMO(19MY/2WD): 39100-2GHV2	2249
	QL 2.4GDI SULEV -IMMO(19MY/4WD): 39100-2GHW2	3791
	QL PE 2.4GDI ULEV +IMMO/SMK(20MY/2WD): 39171-2GRA1/B1	3332
	QL PE 2.4GDI ULEV +IMMO/SMK(20MY/4WD): 39171-2GRC1/D1	2121
	QL PE 2.4GDI SULEV +IMMO/SMK(20MY/2WD): 39171-2GRE1/F1	1221
	QL PE 2.4GDI SULEV -IMMO(20MY/2WD): 39171-2GRG1/H1	3842
	QL PE 2.4GDI ULEV +IMMO/SMK(21MY/2WD): 39171-2GRA2/B2	4234
	QL PE 2.4GDI ULEV -IMMO(21MY/2WD): 39171-2GRC2/D2	4340
	QL PE 2.4GDI SULEV +IMMO/SMK(21MY/2WD): 39171-2GRE2/F2	7924
	QL PE 2.4GDI SULEV -IMMO(21MY/2WD): 39171-2GRG2/H2	2222

SUBJECT:

THETA II 2.4L GDI EMISSIONS ECM LOGIC IMPROVEMENT (SC340)**ATTENTION: THE PROOF OF CORRECTION CARD AND CAMPAIGN COMPLETION LABEL ARE RESTRICTED ONLY TO DEALERS IN THE FOLLOWING STATES:**

California, Connecticut, Delaware, Massachusetts, Maine, Maryland, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington. See Parts Information below to order the Proof of Correction Card and Campaign Completion Label from the PDC.

VEHICLE EMISSION RECALL - PROOF OF CORRECTION CARD

A Vehicle Emission Recall - Proof of Correction card must be filled out for all vehicles registered in California, Connecticut, Delaware, Massachusetts, Maine, Maryland, New Jersey, New York, Oregon, Pennsylvania, Rhode Island, Vermont, and Washington. Residents of these states, who own an affected vehicle, will be required to possess a Vehicle Emission Recall - Proof of Correction card as evidence of voluntary service campaign completion, when they apply for vehicle registration renewal.

WHAT TO DO WITH THE CARD:

The Vehicle Emission Recall - Proof of Correction card must be completed by the Dealership's Service Manager using a permanent ink pen. A fine point pen is recommended. When filling in the information, copy the information directly from the vehicle, not the repair order. **ALL INFORMATION MUST BE PRINTED AND NEAT.**

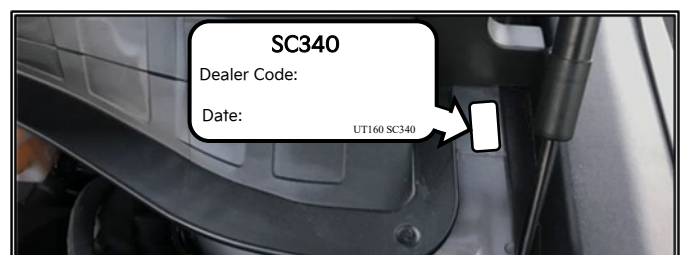
NOTE: DO NOT COMPLETE THE CARD UNLESS THE SERVICE CAMPAIGN WORK IS COMPLETED.

The copy of the card shown below indicates the areas to be filled in. Each area must be filled in. The completed card should be given to the owner of the vehicle upon completion of the Campaign and placement of the Campaign Completion Label outlined below...

FILLING OUT AND APPLYING THE CAMPAIGN COMPLETION LABEL (CA and S.177 STATES ONLY):

The dealer must fill in the Dealer Code and Date information fields on the Campaign Completion Label. Once complete, affix the campaign completion label under the hood of the vehicle, as shown below.

CA and S.177 States Only: Apply SC340 Campaign Completion Label onto the body in the area next to the shock tower, as shown. **NOTE: Be sure to clean the mounting surface to ensure proper label adhesion.**




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THETA II 2.4L GDI EMISSIONS ECM LOGIC IMPROVEMENT (SC340)**AFFECTED VEHICLE RANGE:**

Model	Production Date Range
Optima (JF, JFa)	August 28, 2015 to June 23, 2020
Sorento (UMa)	October 27, 2014 to November 4, 2020
Sportage (QL)	December 10, 2015 to December 7, 2021

REQUIRED TOOL:

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

REQUIRED PART:

Part Name	Part Number	Figure	Qty.	Comments
Vehicle Emissions Recall Proof of Correction Card	UT161 SC340		1	N/A
Campaign Completion Label	UT160 SC340		1	N/A

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WARRANTY INFORMATION:

N Code: N99 C Code: C99

Model MY	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
JFa 19-20MY	R	39108 2GGC5	0	(SC340) 2.4L GDI Theta II Emissions Logic Improvement	250A21R0	0.3 M/H	N/A	0
UMa 19-20MY		39173 2GMA0			250A21R1			
QL 19-21MY		39100 2GHR5			250067R0			
QL 22MY	R	TBD	0	Software Release On Hold Until Further Notice	TBD	M/H	N/A	0
JF, JFa UMa, QL 16-18MY	R	TBD	0	Software Release (Under Development and will be released at different stages)	TBD	M/H	N/A	0

Note: Refer to [Warranty Bulletin 2025-28](#) for claim submission procedures. 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 [SC340](#) when accessing the KDealer+ system.

