



GROUP

MODEL

Voluntary Emissions
Service Campaign2022-2024MY
Carnival (KA4)

NUMBER

DATE

SC290

May 2024

VOLUNTARY EMISSIONS SERVICE CAMPAIGN

SUBJECT:

LAMBDA-III 3.5L GDI ENGINE DTC P00B7
ECM LOGIC IMPROVEMENT (SC290)

This bulletin provides the procedure to update the software logic of the Engine Control Module (ECM) system on some 2022-2024MY Carnival (KA4) vehicles produced from January 4, 2021 through November 6, 2023. The subject vehicles may have engine calibrations that were not optimized for emissions standards under certain specific conditions, which may cause the vehicle to release air pollution which exceed Federal and California standards. As a result, the subject vehicles may exhibit an illumination of Malfunction Indicator Lamp (MIL) with DTC P00B7. Follow the procedure outlined in this publication to apply the improved logic to the 'Engine' 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 pages 3-5 of this bulletin. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

DTC Description:

P00B7: Engine Coolant Flow Low/Performance



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.

ECU Upgrade Procedure:

To correct this condition, the ECU should be reprogrammed using the KDS download, as described in TSB [SST081](#).

Upgrade Event Name

712.KA4 LAMBDA 3.5GDI ENGINE MIL ON DTC (P2118 & P00B7) JUDGMENT LOGIC IMPROVEMENT

This upgrade MUST BE performed with both ECM & TCU CAL IDs paired as noted in the tables.

 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 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.

 NOTICE

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the applicable model is equipped with an immobilizer  (IMMO) 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: LAMBDA-III 3.5L GDI ENGINE DTC P00B7 ECM LOGIC IMPROVEMENT (SC290)
ROM ID INFORMATION TABLE:
Upgrade Event #712

This upgrade MUST BE performed with both ECM & TCU CAL IDs paired as noted in the table below.

MY	IMMO	ECU P/No.	ROM ID		TCU CAL ID
			Previous	New	
2024	Yes	39110 3N693	GKA-4NU0HF000M03 GKA-4NU0HF100M03 GKA-4NU0HF200M03 GKA-4NU0HF300M03	GKA-4NU0HF400M03	TKA4G35X0XSA2NS1 SKA4G35X0XSA2NS1
	No	39110-3N694	GKA-4NU0HE000M03 GKA-4NU0HE100M03 GKA-4NU0HE200M03 GKA-4NU0HE300M03	GKA-4NU0HE400M03	
	Yes	39110-3N695	GKA-4NU0HF000ML3 GKA-4NU0HF100ML3 GKA-4NU0HF200ML3 GKA-4NU0HF300ML3	GKA-4NU0HF400ML3	
	No	39110-3N696	GKA-4NU0HE000ML3 GKA-4NU0HE100ML3 GKA-4NU0HE200ML3 GKA-4NU0HE300ML3	GKA-4NU0HE400ML3	
	Yes	39110-3N697	GKA-4NU0HK000M03 GKA-4NU0HK100M03 GKA-4NU0HK200M03 GKA-4NU0HK300M03	GKA-4NU0HK400M03	
	Yes	39110-3N698	GKA-4NU0HK000ML3 GKA-4NU0HK100ML3 GKA-4NU0HK200ML3 GKA-4NU0HK300ML3	GKA-4NU0HK400ML3	
2023	Yes	39110-3N683	GKA-3NU0HF000M03 GKA-3NU0HF100M03 GKA-3NU0HF200M03 GKA-3NU0HF300M03 GKA-3NU0HF400M03	GKA-3NU0HF500M03	TKA4G35X0XSA1NS0 TKA4G35X0XSA2NS1 SKA4G35X0XSA1NS0 SKA4G35X0XSA2NS1
	No	39110-3N684	GKA-3NU0HE000M03 GKA-3NU0HE100M03 GKA-3NU0HE200M03 GKA-3NU0HE300M03 GKA-3NU0HE400M03	GKA-3NU0HE500M03	
	Yes	39110-3N685	GKA-3NU0HF000ML3 GKA-3NU0HF100ML3 GKA-3NU0HF200ML3 GKA-3NU0HF300ML3 GKA-3NU0HF400ML3	GKA-3NU0HF500ML3	
	-IMMO	39110-3N686	GKA-3NU0HE000ML3 GKA-3NU0HE100ML3 GKA-3NU0HE200ML3 GKA-3NU0HE300ML3 GKA-3NU0HE400ML3	GKA-3NU0HE500ML3	

Continued on page 4.

SUBJECT: LAMBDA-III 3.5L GDI ENGINE DTC P00B7 ECM LOGIC IMPROVEMENT (SC290)

Upgrade Event #712

This upgrade MUST BE performed with both ECM & TCU CAL IDs paired as noted in the table below.

MY	IMMO	ECU P/No.	ROM ID		TCU CAL ID
			Previous	New	
2023	Yes	39110-3N687	GKA-3NU0HK000M03 GKA-3NU0HK100M03 GKA-3NU0HK200M03 GKA-3NU0HK300M03 GKA-3NU0HK400M03	GKA-3NU0HK500M03	TKA4G35X0XSA1NS0 TKA4G35X0XSA2NS1
	Yes	39110-3N688	GKA-3NU0HK000ML3 GKA-3NU0HK100ML3 GKA-3NU0HK200ML3 GKA-3NU0HK300ML3 GKA-3NU0HK400ML3	GKA-3NU0HK500ML3	SKA4G35X0XSA1NS0 SKA4G35X0XSA2NS1
2022	Yes	39110-3N121 (SBC)	GKA-0NU0HF000M03 GKA-0NU0HF100M03 GKA-0NU0HF200M03 GKA-0NU0HF300M03 GKA-0NU0HF400M03	GKA-0NU0HFA00M03	TKA4G35X0XSA1NS0 TKA4G35X0XSA2NS1
	Yes	39110-3N196 (SBW)	GKA-0NU0HF500M03 GKA-0NU0HF600M03 GKA-0NU0HF700M03 GKA-0NU0HF800M03 GKA-0NU0HF900M03		SKA4G35X0XSA1NS0 SKA4G35X0XSA2NS1
	No	39110-3N122 (SBC)	GKA-0NU0HE000M03 GKA-0NU0HE100M03 GKA-0NU0HE200M03 GKA-0NU0HE300M03 GKA-0NU0HE400M03	GKA-0NU0HEA00M03	TKA4G35X0XSA1NS0 TKA4G35X0XSA2NS1
	No	39110-3N197 (SBW)	GKA-0NU0HE500M03 GKA-0NU0HE600M03 GKA-0NU0HE700M03 GKA-0NU0HE800M03 GKA-0NU0HE900M03		SKA4G35X0XSA1NS0 SKA4G35X0XSA2NS1
2022	Yes	39110-3N506	GKA-0NU0HF000ML3 GKA-0NU0HF100ML3 GKA-0NU0HF200ML3 GKA-0NU0HF300ML3 GKA-0NU0HF400ML3 GKA-0NU0HF500ML3 GKA-0NU0HF600ML3 GKA-0NU0HF700ML3 GKA-0NU0HF800ML3 GKA-0NU0HF900ML3	GKA-0NU0HFA00ML3	TKA4G35X0XSA1NS0 TKA4G35X0XSA2NS1
	No	39110-3N507	GKA-0NU0HE000ML3 GKA-0NU0HE100ML3 GKA-0NU0HE200ML3 GKA-0NU0HE300ML3 GKA-0NU0HE400ML3 GKA-0NU0HE500ML3 GKA-0NU0HE600ML3 GKA-0NU0HE700ML3 GKA-0NU0HE800ML3 GKA-0NU0HE900ML3	GKA-0NU0HEA00ML3	SKA4G35X0XSA1NS0 SKA4G35X0XSA2NS1

SUBJECT: LAMBDA-III 3.5L GDI ENGINE DTC P00B7 ECM LOGIC IMPROVEMENT (SC290)
Upgrade Event #712

This upgrade MUST BE performed with both ECM & TCU CAL IDs paired as noted in the table below.

MY	IMMO	ECU P/No.	ROM ID		TCU CAL ID
			Previous	New	
2022	Yes	39110-3N651	GKA-ONU0HK000M03 GKA-ONU0HK100M03 GKA-ONU0HK200M03 GKA-ONU0HK300M03 GKA-ONU0HK400M03 GKA-ONU0HK500M03 GKA-ONU0HK600M03 GKA-ONU0HK700M03 GKA-ONU0HK800M03 GKA-ONU0HK900M03	GKA-ONU0HKA00M03	TKA4G35X0XSA1NS0 TKA4G35X0XSA2NS1
	Yes	39110-3N652	GKA-ONU0HK000ML3 GKA-ONU0HK100ML3 GKA-ONU0HK200ML3 GKA-ONU0HK300ML3 GKA-ONU0HK400ML3 GKA-ONU0HK500ML3 GKA-ONU0HK600ML3 GKA-ONU0HK700ML3 GKA-ONU0HK800ML3 GKA-ONU0HK900ML3	GKA-ONU0HKA00ML3	SKA4G35X0XSA1NS0 SKA4G35X0XSA2NS1

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.

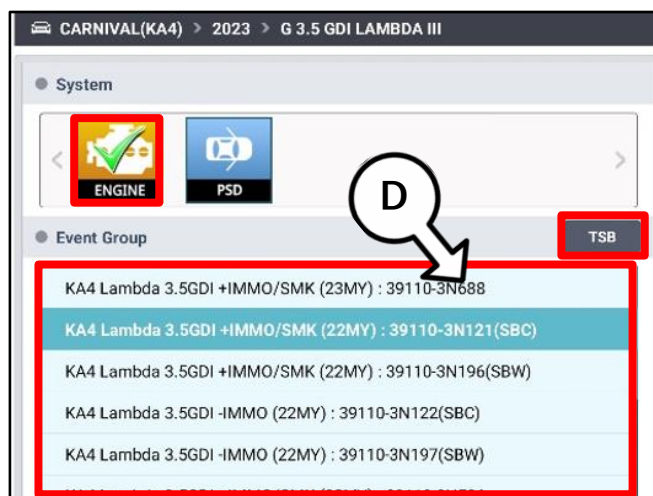
Refer to TSB [SST081](#) for instructions to upgrade the 'ENGINE' system:

UPGRADE EVENT:

712.KA4 LAMBDA 3.5GDI ENGINE MIL ON DTC (P2118 & P00B7) JUDGMENT LOGIC IMPROVEMENT

NOTICE

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



Manual Mode: **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 and refer to TSB [SST081](#) for instructions.

Manual Mode ECU Upgrade Passwords

Menu	Password
KA4 Lambda 3.5GDI ULEV 70 (24MY): 39110-3N693	3693
KA4 Lambda 3.5GDI ULEV 70 (24MY): 39110-3N694	3964
KA4 Lambda 3.5GDI ULEV 70 (24MY): 39110-3N695	3695
KA4 Lambda 3.5GDI ULEV 70 (24MY): 39110-3N696	3696
KA4 Lambda 3.5GDI ULEV 70 (24MY): 39110-3N697	3067
KA4 Lambda 3.5GDI ULEV 70 (24MY): 39110-3N698	3698
KA4 Lambda 3.5GDI +IMMO/SMK (23MY): 39110-3N683	3639
KA4 Lambda 3.5GDI -IMMO (23MY): 39110-3N684	0364
KA4 Lambda 3.5GDI +IMMO/SMK (23MY): 39110-3N685	5863
KA4 Lambda 3.5GDI -IMMO (23MY): 39110-3N686	3586
KA4 Lambda 3.5GDI +IMMO/SMK (23MY): 39110-3N687	7863
KA4 Lambda 3.5GDI +IMMO/SMK (23MY): 39110-3N688	2335
KA4 Lambda 3.5GDI +IMMO/SMK (22MY): 39110-3N121(SBC)	9999
KA4 Lambda 3.5GDI +IMMO/SMK (22MY): 39110-3N196(SBW)	9699
KA4 Lambda 3.5GDI -IMMO (22MY): 39110-3N122(SBC)	8322
KA4 Lambda 3.5GDI -IMMO (22MY): 39110-3N197(SBW)	9739
KA4 Lambda 3.5GDI +IMMO/SMK (22MY): 39110-3N506	6350
KA4 Lambda 3.5GDI -IMMO (22MY): 39110-3N507	7510
KA4 Lambda 3.5GDI +IMMO/SMK (22MY): 39110-3N651	1973
KA4 Lambda 3.5GDI +IMMO/SMK (22MY): 39110-3N652	2348

SUBJECT: LAMBDA-III 3.5L GDI ENGINE DTC P00B7 ECM LOGIC IMPROVEMENT (SC290)
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.**

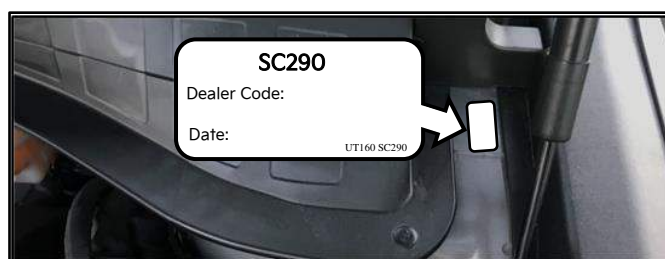
NOTE: DO NOT COMPLETE THE CARD UNLESS THE SERVICE CAMPAIGN WORK IS COMPLETED.

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 SC290 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.**



SUBJECT: **LAMBDA-III 3.5L GDI ENGINE DTC P00B7 ECM LOGIC IMPROVEMENT (SC290)****AFFECTED VEHICLE RANGE:**

Model	Production Date Range
Carnival (KA4)	January 4, 2021 to November 6, 2023

REQUIRED TOOL:

Tool Name	Part Number	Figure	Comments
KDS	N/A		Kia Diagnostic System

REQUIRED PART:

Tool Name	Part Number	Figure	Qty.
Campaign Completion Label	UT160 SC290		1
Vehicle Emissions Recall Proof of Correction Card	UT161 SC290		1

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.
R	39110 3N683	0	(SC290) ECM Logic Improvement	230124R1	0.4 M/H	N/A	0

Note: Refer to [Warranty Bulletin 2024-31](#) for claim submission procedures.**NOTICE**

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference **SC290** when accessing the KDealer+ system.