



GROUP	MODEL
FUE	2022MY Carnival (KA4)
NUMBER	DATE
057	April 2022

TECHNICAL SERVICE BULLETIN

SUBJECT: **MIL ON DTC P0456 ECM LOGIC IMPROVEMENT**

This bulletin provides the procedure to update the software logic of the Engine Control Module (ECM) system on some 2022MY Carnival (KA4) vehicles produced from January 4, 2021 through January 12, 2022, which may exhibit an MIL 'ON' with DTC P0456. Follow the procedure outlined in this publication to apply the improved logic to the 'ECM' 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 3 of this bulletin.

DTC Description:

P0456: Evaporative Emission System-Leak Detected (very small leak)



Kia Diagnostic System (KDS)

ECU Upgrade Procedure:

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

Upgrade Event Name

603. KA4 LAMBDA 3.5GDI ENGINE MIL ON DTC (P0456) 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 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  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 #603

Model	EM	IMMO 	ECU P/No.	ROM ID	
				Previous	New
KA4	Lambda 3.5L GDI	Yes	39110 3N121 39110 3N196	GKA ONUOHF000M03 GKA ONUOHF100M03 GKA ONUOHF200M03 GKA ONUOHF300M03 GKA ONUOHF400M03 GKA ONUOHF500M03	GKA ONUOHF600M03
		No	39110 3N122 39110 3N197	GKA ONUOHE000M03 GKA ONUOHE100M03 GKA ONUOHE200M03 GKA ONUOHE300M03 GKA ONUOHE400M03 GKA ONUOHE500M03	GKA ONUOHE600M03
		Yes	39110 3N506	GKA ONUOHF000ML3 GKA ONUOHF100ML3 GKA ONUOHF200ML3 GKA ONUOHF300ML3 GKA ONUOHF400ML3 GKA ONUOHF500ML3	GKA ONUOHF600ML3
		No	39110 3N507	GKA ONUOHE000ML3 GKA ONUOHE100ML3 GKA ONUOHE200ML3 GKA ONUOHE300ML3 GKA ONUOHE400ML3 GKA ONUOHE500ML3	GKA ONUOHE600ML3
		Yes	39110 3N651	GKA ONUOHK000M03 GKA ONUOHK100M03 GKA ONUOHK200M03 GKA ONUOHK300M03 GKA ONUOHK400M03 GKA ONUOHK500M03	GKA ONUOHK600M03
		No	39110 3N652	GKA ONUOHK000ML3 GKA ONUOHK100ML3 GKA ONUOHK200ML3 GKA ONUOHK300ML3 GKA ONUOHK400ML3 GKA ONUOHK500ML3	GKA ONUOHK600ML3

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.



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

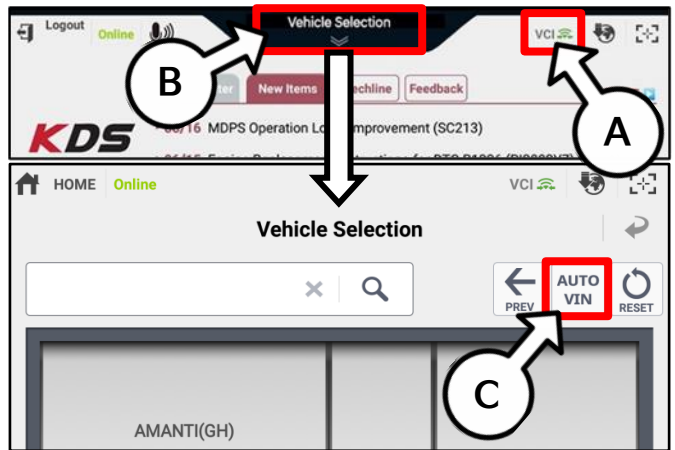
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



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 #603.

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.

Auto Mode Manual Mode

- Select the Engine system under the System selection menu. Touch ID Check (D) and confirm that the latest update is available. Select Upgrade Event #603, and select Upgrade to continue.

System

ENGINE A/T

ROM ID

Currently in Vehicle ##### ID Check

Latest Update #####

Event Group TSB

###.XX -----

Previous Upgrade

- 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)

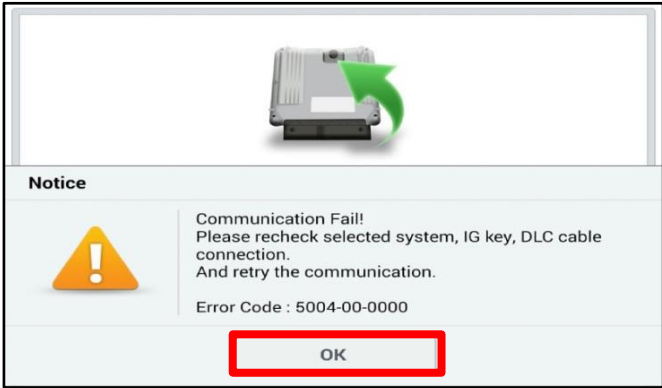
ECU is in the process of being upgraded. Please wait a few minute.

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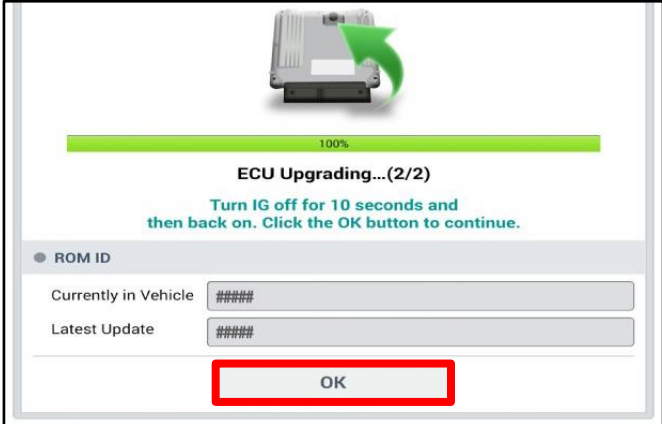
- If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select 'OK' and restart the procedure from step 4.

NOTICE

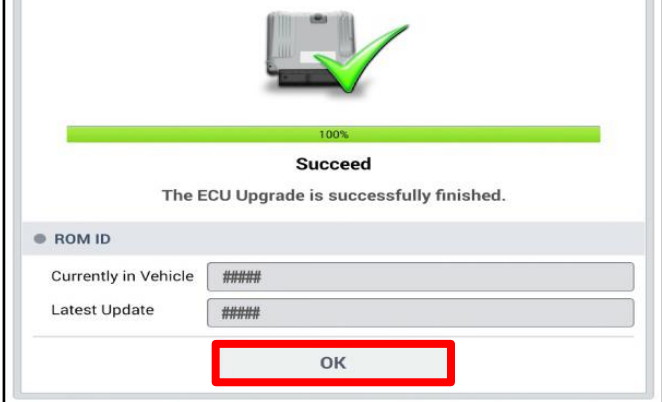
If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.



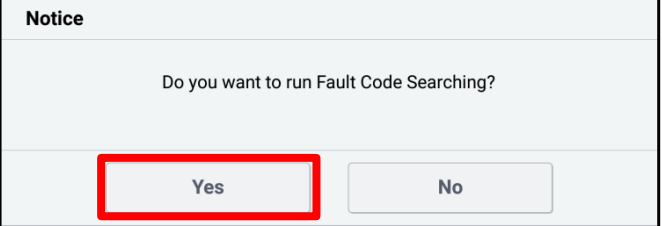
- When instructed on the KDS, turn the ignition OFF for ten (10) seconds then back on. Select 'OK' to continue.



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



- 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.



- 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
KA4 Lambda 3.5GDI +IMMO/SMK : 39110-3N121/96	7993
KA4 Lambda 3.5GDI -IMMO : 39110-3N122/97	3996
KA4 Lambda 3.5GDI +IMMO/SMK : 39110-3N506	1007
KA4 Lambda 3.5GDI -IMMO : 39110-3N507	3906
KA4 Lambda 3.5GDI +IMMO/SMK : 39110-3N651	5139
KA4 Lambda 3.5GDI +IMMO/SMK : 39110-3N652	5210

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **Engine** system under the System selection menu. Select **Upgrade Event #603** 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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MIL ON DTC P0456 ECM LOGIC IMPROVEMENT**AFFECTED VEHICLE RANGE:**

Model	Production Date Range
Carnival (KA4)	January 4, 2021 to January 12, 2022

REQUIRED TOOL:

Tool Name	Figure	Comments
KDS		Kia Diagnostic System

WARRANTY INFORMATION:**N Code: I3A C Code: ZZ3**

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	39110 3N121	0	ECM Logic Improvement	39110FQ6	0.4 M/H	N/A	0