



GROUP	MODEL
FUE	2022-2023MY Carnival (KA4)
NUMBER	DATE
062	December 2022

## TECHNICAL SERVICE BULLETIN

SUBJECT: **SERVICE ACTION: ECM LOGIC UPDATE FOR DTC P2118  
AND THROTTLE BODY FREEZING (SA514)**

This bulletin provides the procedure to update the software logic of the Engine Control Module (ECM) system on some 2022-2023MY Carnival (KA4) vehicles produced from January 4, 2021 through October 26, 2022, which may exhibit an MIL "ON" with DTC P2118. The throttle body plate may freeze after a cold soak in very cold temperatures, possibly causing the vehicle to go into "limp-home" mode. Once the vehicle is warmed up, the throttle body performs normally. 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 3-4 of this bulletin. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

### DTC Description:

P211800: Throttle Actuator Control Motor Current Range/Performance



Kia Diagnostic System (KDS)

### 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 WebDCS (Service → Warranty Coverage → Warranty Coverage Inquiry → Campaign Information). Not completed Recall / Service Action reports are available on WebDCS (Consumer Affairs → Not Completed Recall → Recall VIN → Select Report), which includes a list of affected vehicles.

This issue number is SA514.

SUBJECT:

## SERVICE ACTION: ECM LOGIC UPDATE FOR DTC P2118 AND THROTTLE BODY FREEZING (SA514)

### ECU Upgrade Procedure:

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

#### Upgrade Event Name

637. KA4 LAMBDA 3.5GDI ENGINE MIL ON DTC (P2118) 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 #637

Model	Engine	IMMO 	ECU P/No.	ROM ID	
				Previous	New
KA4	3.5L GDI	Yes	39110 3N683	GKA 3NU0HF000M03 GKA 3NU0HF100M03 GKA 3NU0HF200M03 GKA 3NU0HF300M03	GKA 3NU0HF400M03
		No	39110 3N684	GKA 3NU0HE000M03 GKA 3NU0HE100M03 GKA 3NU0HE200M03 GKA 3NU0HE300M03	GKA 3NU0HE400M03
		Yes	39110 3N685	GKA 3NU0HF000ML3 GKA 3NU0HF100ML3 GKA 3NU0HF200ML3 GKA 3NU0HF300ML3	GKA 3NU0HF400ML3
		No	39110 3N686	GKA 3NU0HE000ML3 GKA 3NU0HE100ML3 GKA 3NU0HE200ML3 GKA 3NU0HE300ML3	GKA 3NU0HE400ML3
		Yes	39110 3N687	GKA 3NU0HK000M03 GKA 3NU0HK100M03 GKA 3NU0HK200M03 GKA 3NU0HK300M03	GKA 3NU0HK400M03
			39110 3N688	GKA 3NU0HK000ML3 GKA 3NU0HK100ML3 GKA 3NU0HK200ML3 GKA 3NU0HK300ML3	GKA 3NU0HK400ML3
			39110 3N121 39110 3N196	GKA ONU0HF000M03 GKA ONU0HF100M03 GKA ONU0HF200M03 GKA ONU0HF300M03 GKA ONU0HF400M03 GKA ONU0HF500M03 GKA ONU0HF600M03 GKA ONU0HF700M03 GKA ONU0HF800M03	GKA ONU0HF900M03
		No	39110 3N122 39110 3N197	GKA ONU0HE000M03 GKA ONU0HE100M03 GKA ONU0HE200M03 GKA ONU0HE300M03 GKA ONU0HE400M03 GKA ONU0HE500M03 GKA ONU0HE600M03 GKA ONU0HE700M03 GKA ONU0HE800M03	GKA ONU0HE900M03



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### Upgrade Event #637 *(continued)*

Model	Engine	IMMO 	ECU P/No.	ROM ID	
				Previous	New
KA4	3.5L GDI	Yes	39110 3N506	GKA ONUOHF000ML3	GKA ONUOHF900ML3
				GKA ONUOHF100ML3	
		GKA ONUOHF200ML3			
		GKA ONUOHF300ML3			
GKA ONUOHF400ML3					
GKA ONUOHF500ML3					
GKA ONUOHF600ML3					
GKA ONUOHF700ML3					
GKA ONUOHF800ML3					
No	39110 3N507	GKA ONUOHE000ML3	GKA ONUOHE900ML3		
		GKA ONUOHE100ML3			
GKA ONUOHE200ML3					
GKA ONUOHE300ML3					
GKA ONUOHE400ML3					
GKA ONUOHE500ML3					
GKA ONUOHE600ML3					
GKA ONUOHE700ML3					
GKA ONUOHE800ML3					
Yes	39110 3N651	GKA ONUOHK000M03	GKA ONUOHK900M03		
		GKA ONUOHK100M03			
GKA ONUOHK200M03					
GKA ONUOHK300M03					
GKA ONUOHK400M03					
GKA ONUOHK500M03					
GKA ONUOHK600M03					
GKA ONUOHK700M03					
GKA ONUOHK800M03					
	39110 3N652	GKA ONUOHK000ML3	GKA ONUOHK900ML3		
		GKA ONUOHK100ML3			
GKA ONUOHK200ML3					
GKA ONUOHK300ML3					
GKA ONUOHK400ML3					
GKA ONUOHK500ML3					
GKA ONUOHK600ML3					
GKA ONUOHK700ML3					
GKA ONUOHK800ML3					

*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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**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.

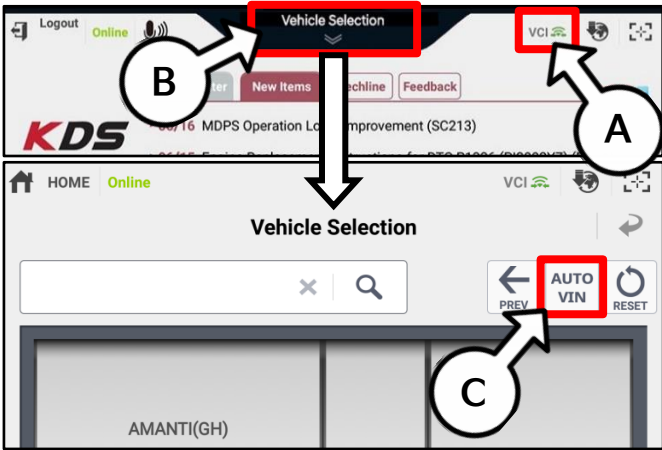
**NOTICE**  
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



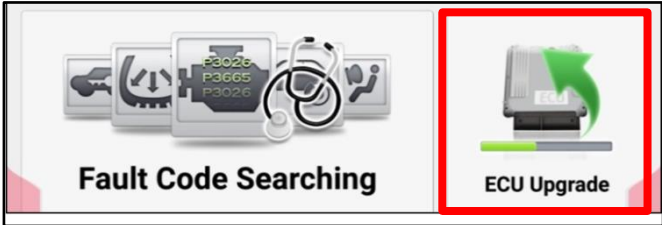
2. With the ignition ON, turn ON the KDS tablet. Select 'KDS' from the home screen.



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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SUBJECT:

- The KDS will check the server for recently uploaded Events and then automatically download Upgrade Event #637.

**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 #637 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.



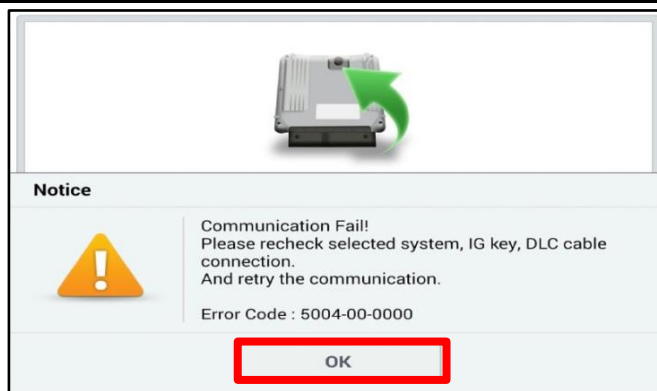
SUBJECT:

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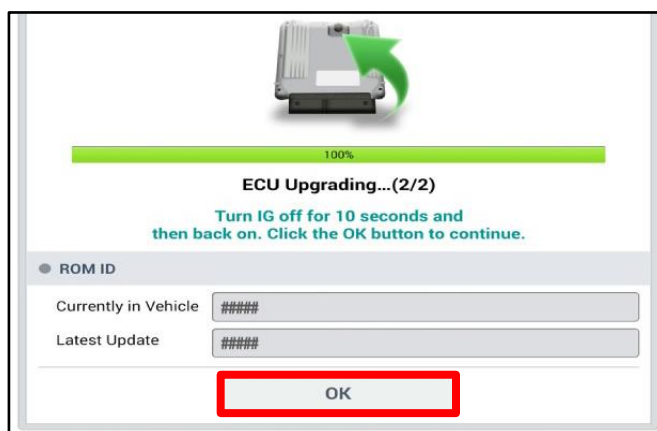
9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select 'OK' and restart the procedure from step 4.

### NOTICE

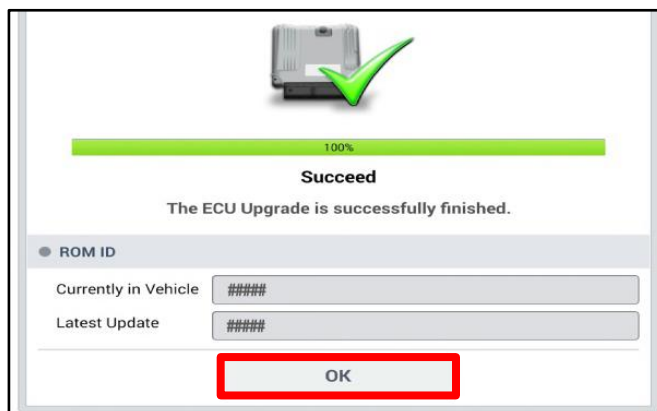
**If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.**



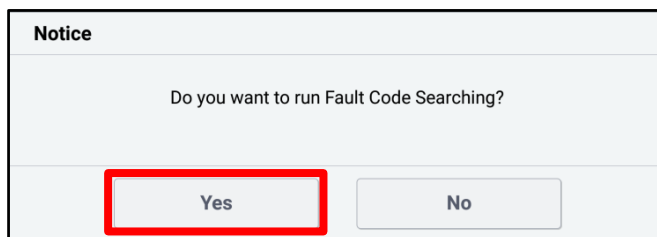
10. When instructed on the KDS, turn the ignition OFF for ten (10) seconds then back on. Select 'OK' to continue.



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



12. 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.



13. Start the engine to confirm normal operation of the vehicle.

## SERVICE ACTION: ECM LOGIC UPDATE FOR DTC P2118 AND THROTTLE BODY FREEZING (SA514)

### 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: 39110-3N684	3063
KA4 Lambda 3.5GDI +IMMO/SMK: 39110-3N683	3064
KA4 Lambda 3.5GDI -IMMO: 39110-3N686	3065
KA4 Lambda 3.5GDI +IMMO/SMK: 39110-3N685	3066
KA4 Lambda 3.5GDI +IMMO/SMK: 39110-3N687	3067
KA4 Lambda 3.5GDI +IMMO/SMK: 39110-3N688	3068
KA4 Lambda 3.5GDI -IMMO: 39110-3N122/197	3069
KA4 Lambda 3.5GDI +IMMO/SMK: 39110-3N121/196	3070
KA4 Lambda 3.5GDI -IMMO: 39110-3N507	3071
KA4 Lambda 3.5GDI +IMMO/SMK: 39110-3N506	3072
KA4 Lambda 3.5GDI +IMMO/SMK: 39110-3N651	3073
KA4 Lambda 3.5GDI +IMMO/SMK: 39110-3N652	3074

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the '**ENGINE**' system under the System selection menu. Select **Upgrade Event #637** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID Information Table on pages 3-4, 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.



SUBJECT:

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### AFFECTED VEHICLE RANGE:

Model	Production Date Range
Carnival (KA4)	January 4, 2021 to October 26, 2022

### REQUIRED TOOL:

Tool Name	Figure	Comments
KDS		Kia Diagnostic System

### 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	39110 3N683	0	(SA514) ECM Logic Improvement	220128RO	0.4 M/H	N/A	0

### NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference [SA514](#) when accessing the WebDCS system.