



GROUP	MODEL
ELE	2019-2022MY Applicable Models Listed
NUMBER	DATE
246	August 2021

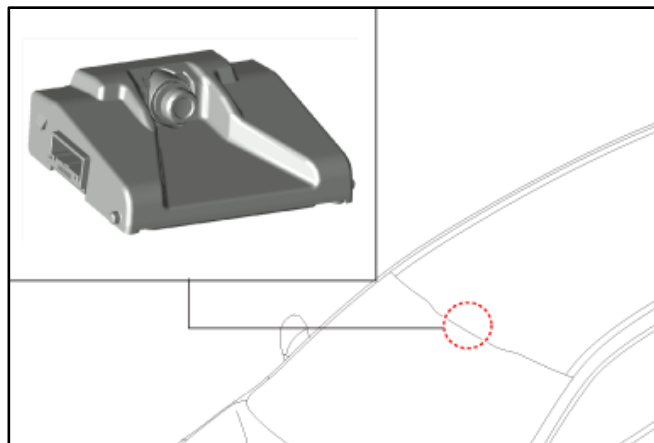
## TECHNICAL SERVICE BULLETIN

SUBJECT:

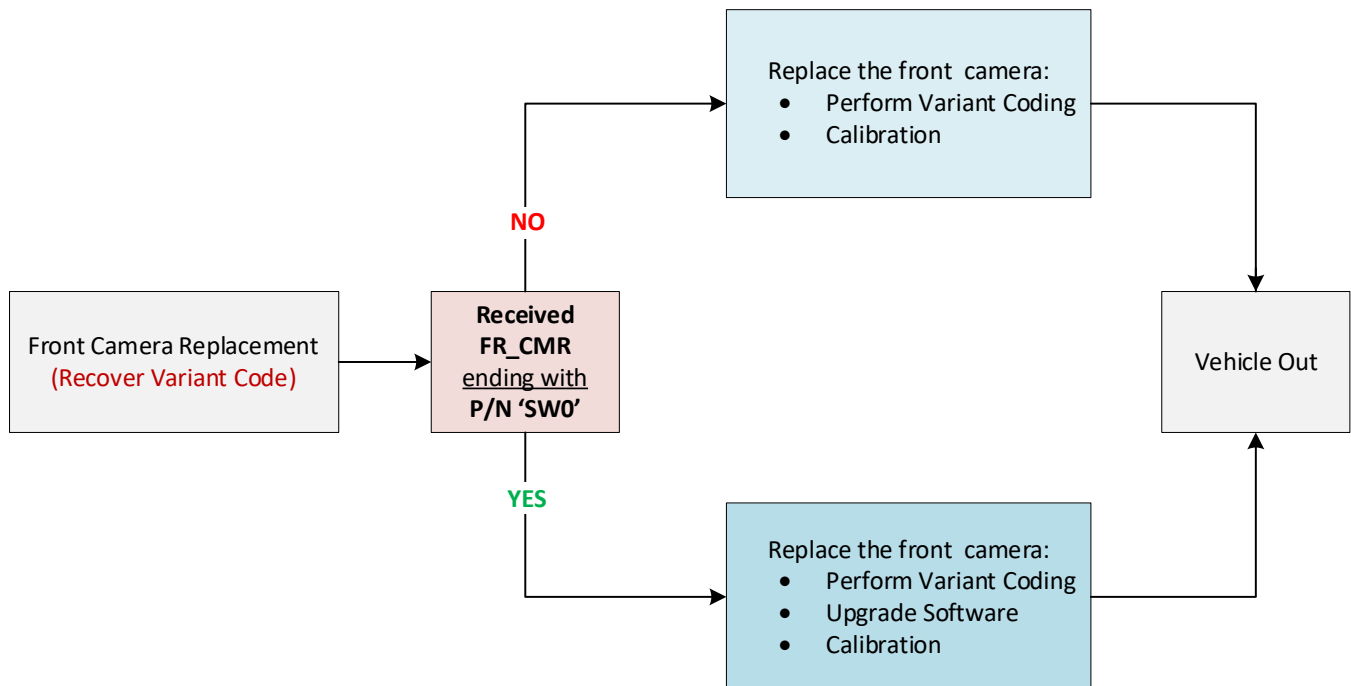
# FRONT VIEW CAMERA REPLACEMENT AND SOFTWARE UPGRADE INSTALLATION

This bulletin provides the procedure to update the software logic of the Front Camera (FR\_CMV) system on the vehicles listed below, which have had a new replacement Front View Camera installed without software upgrade. New parts with a part number ending in "SWO" do not have the operating software upgrade installed. If the S/W is not upgraded, units will exhibit a warning light ON with Diagnostic Trouble Codes (DTCs) related to the Front Camera (FR\_CMV). Follow the procedures outlined in this publication to recover and record the prior variant coding value before replacement. 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 4 of this bulletin.

System	Model	Model Years
Front Camera (FR_CMV)	Niro HEV (DE HEV)	2019 - 2022
	Seltos (SP2)	2021 - 2022
	Soul (SK3)	2020 - 2021
	Sportage (QL)	2019 - 2022
	Telluride (ON)	2020 - 2022



## Flowchart:

**IMPORTANT**

When replacing the front view camera with a new one, perform the 'Variant Coding' procedure using KDS (Refer to KGIS for further instructions).

**Replacement Procedure:**

1. Replace the Front Camera with the new part number ending in "SW0" by referring to the "Advanced Driver Assistance System (ADAS) → Front View Camera System → Front View Camera Unit → Repair procedures" OR "Body Electrical System → Lane Departure Warning System (LDWS) → Lane Departure Warning System (LDWS) unit → Repair procedures" OR "Brake System → Forward Collision-Avoidance Assist (FCA) System → Lane Departure Warning System (LDWS) unit → Repair procedures" chapter in the applicable Shop Manual on KGIS.

**NOTICE**

**Record the prior variant coding value before removing the front view camera.** Replace the front camera, **apply the variant code from the removed camera** and apply the software upgrade to the 'FR\_CMR' system using the KDS ECU Upgrade function as described in this bulletin, then proceed to the calibration as described in KGIS.

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## FRONT VIEW CAMERA REPLACEMENT &amp; S/W UPGRADE INSTALLATION

**Front Camera ECU Upgrade Procedure:**

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

Upgrade Event Name
554. ON FR_CMR UPGRADE AFTER FRONT CAMERA REPLACEMENT
555. DE HEV FR_CMR UPGRADE AFTER FRONT CAMERA REPLACEMENT
556. QL FR_CMR UPGRADE AFTER FRONT CAMERA REPLACEMENT
557. SK3 FR_CMR UPGRADE AFTER FRONT CAMERA REPLACEMENT
558. SP2 FR_CMR UPGRADE AFTER FRONT CAMERA REPLACEMENT


**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.

**ROM ID INFORMATION TABLE:****Upgrade Event #554 (Telluride)**

Model	System	Camera P/N		ROM ID	
		Previous	New	Previous	New
ON	FR_CMR	99211 S9100	99211 S9100SWO	1.ON	1.03

**Upgrade Event #555 (Niro HEV)**

Model	System	Camera P/N		ROM ID	
		Previous	New	Previous	New
DE HEV	FR_CMR	99211 G5000	99211 G5000SWO	1.DE	1.07

**Upgrade Event #556 (Sportage)**

Model	System	Camera P/N		ROM ID	
		Previous	New	Previous	New
QL	FR_CMR	99211 F1000	99211 F1000SWO	1.QL	1.06

**Upgrade Event #557 (Soul)**

Model	System	Camera P/N		ROM ID	
		Previous	New	Previous	New
SK3	FR_CMR	99211 K0000	99211 K0000SWO	1.SK	1.02
		99211 K0100	99211 K0100SWO	2.SK	1.00

**Upgrade Event #558 (Seltos)**

Model	System	Camera P/N		ROM ID	
		Previous	New	Previous	New
SP2	FR_CMR	99211 Q5100	99211 Q5100SWO	1.SP	1.05

*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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## FRONT VIEW CAMERA REPLACEMENT &amp; S/W UPGRADE INSTALLATION

**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.**

1. Connect the VCI-II to the OBD-II connector, located under the driver's side of the instrument panel.

**NOTICE**

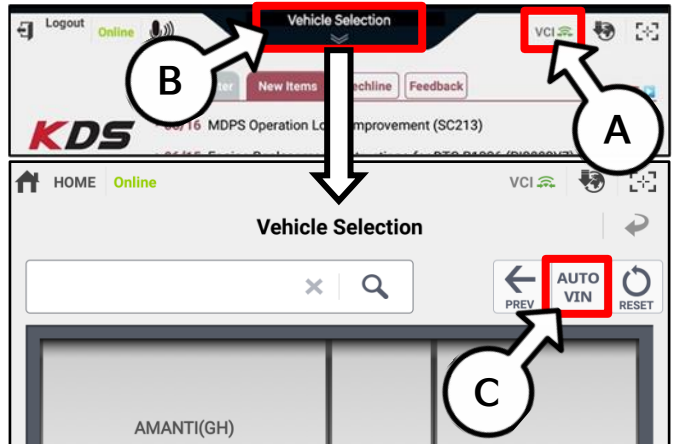
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



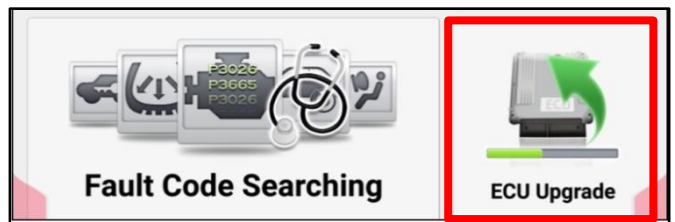
2. With the ignition ON, turn ON the KDS tablet. Select 'KDS' from the home screen.



3. Confirm communication with VCI (A) and then configure the vehicle (B) using the 'AUTO VIN' (C) feature.



4. Select 'ECU Upgrade'.



- The KDS will check the server for recently uploaded Events and then automatically download Upgrade Event #554 (ON), #555 (DE HEV), #556 (QL), #557 (SK3), or #558 (SP2).

**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%

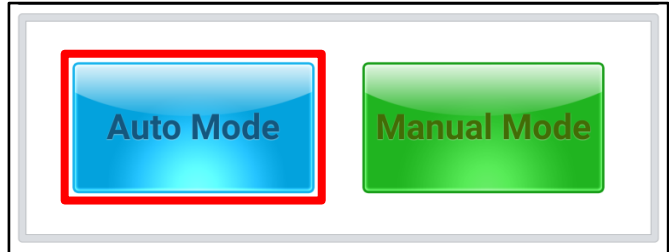
Do not touch any system buttons while performing this function.

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.



- Select the FR\_CMV system under the System selection menu. Touch ID Check (D) and confirm that the latest update is available. Select Upgrade Event #554 (ON), #555 (DE HEV), #556 (QL), #557 (SK3), or #558 (SP2), and select Upgrade to continue.

System

EPS FR\_CMV

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.

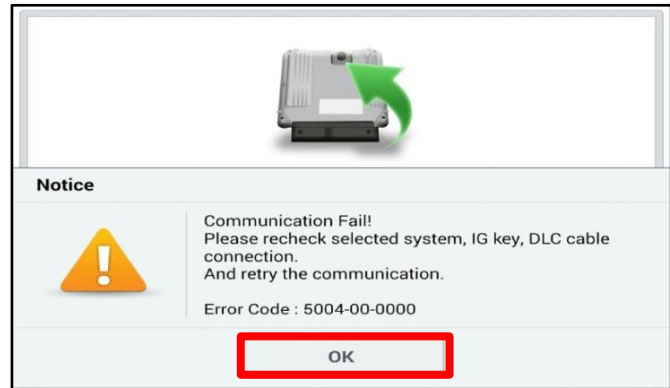
SUBJECT:

## FRONT VIEW CAMERA REPLACEMENT &amp; S/W UPGRADE INSTALLATION

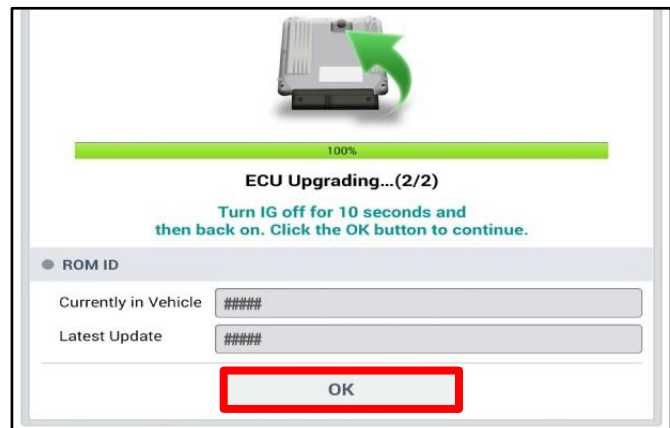
9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select 'OK' and restart the procedure from step 4.

 **NOTICE**

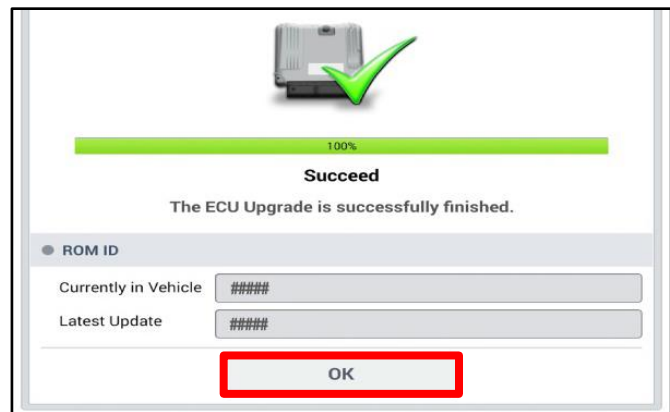
**If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.**



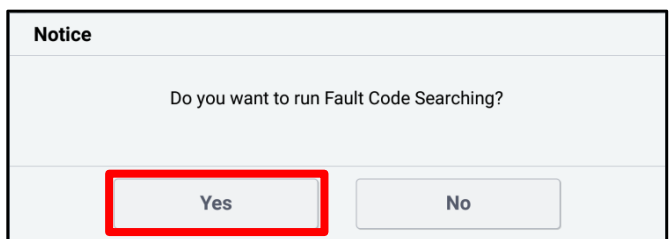
10. When instructed on the KDS, turn the ignition OFF for ten (10) seconds then back on. Select 'OK' to continue.



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. Perform Variant Coding & Calibration Procedure.
14. Confirm normal operation.

**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
ON FR_CMR : 99211-S9100	0019
DE HEV FR_CMR : 99211-G5000	0005
QL FR_CMR : 99211-F1000 [1.QL]	0001
QL FR_CMR : 99211-F1500 [2.QL]	0051
SK3 FR_CMR : 99211-K0000 [1.SK]	1129
SK3 FR_CMR : 99211-K0100 [2.SK]	0010
SP2 FR_CMR : 99211-Q5100 [1.SP]	0015

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **FM\_CMR** system under the System selection menu. Select **Upgrade Event #554 (ON), #555 (DE HEV), #556 (QL), #557 (SK3), or #558 (SP2)** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID Information Table on page 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. Perform **Variant Coding & Calibration Procedure**.
10. Confirm normal operation.



SUBJECT:

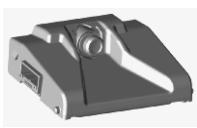
**FRONT VIEW CAMERA REPLACEMENT & S/W UPGRADE INSTALLATION****AFFECTED VEHICLE RANGE:**

Model	Model Years
Niro HEV (DE HEV)	2019 - 2022
Seltos (SP2)	2021 - 2022
Soul (SK3)	2020 - 2021
Sportage (QL)	2019 - 2022
Telluride (ON)	2020 - 2022

**REQUIRED TOOL:**

Tool Name	Figure	Comments
KDS		Kia Diagnostic System

**REQUIRED PART:**

Part Name	Model	Part Number		Figure	Qty.
		Incl. S/W upgrade	Requires S/W upgrade		
Front View Camera	Niro (DE HEV)	99211 G5000	99211 G5000SWO		1
	Seltos (SP2)	99211 Q5100	99211 Q5100SWO		
	Soul (SK3)	99211 K0000	99211 K0000SWO		
		99211 K0100	99211 K0100SWO		
	Sportage (QL)	99211 F1000	99211 F1000SWO		
	Telluride (ON)	99211 S9100	99211 S9100SWO		

SUBJECT:

**FRONT VIEW CAMERA REPLACEMENT & S/W UPGRADE INSTALLATION****WARRANTY INFORMATION:****N Code: I14 C Code: ZZ3**

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time
DE HEV	W	99211 G5000 or 99211 G5000SWO	1	Front View Camera Replacement + Variant Coding and Calibration	95470R00	0.6 M/H
SP2		99211 Q5100 or 99211 Q5100SWO				
SK3		99211 K0000 or 99211 K0000SWO				
		99211 K0100 or 99211 K0100SWO				
QL		99211 F1000 or 99211 F1000SWO				
ON		99211 S9100 or 99211 S9100SWO				
All		<b>SWO Part Only</b>	0	Front Camera Software Upgrade (Add-on LOP)	95470RA1	0.2 M/H

**Note:** The software upgrade procedure must be performed with parts number ending in 'SWO' and claimed as an 'add-on labor operation' (LOP) (ex. 95470RA1) during warranty claim entry.

