



GROUP	MODEL
Safety Recall Campaign	2017-2018MY Optima (JF P/HEV) w/Nu 2.0L GDI
NUMBER	DATE
SC218A	January 2022

## SAFETY RECALL CAMPAIGN

SUBJECT: **UPDATED KSDS SOFTWARE INSTALLATION (SC218A)**

This bulletin provides information to install the corrected and updated Knock Sensor Detection System (KSDS) software on certain 2017-2018MY Optima (JF P/HEV) equipped with Nu 2.0L GDI ULEV/SULEV engine, produced from June 27, 2016 through April 27, 2018, that already had the initial update performed under SC218. **Since Kia launched SC218 in November 2021, Kia has become aware that the original KSDS software version installed on the affected vehicles before January 25, 2022 has an error and requires the installation of a corrected and updated KSDS software. These vehicles are identified under SC218A in the WEBDCS.**

The KSDS detects vibrations indicating the onset of excessive connecting rod bearing wear. It is designed to alert the driver at an early stage of bearing wear before the occurrence of severe engine damage, including engine failure. If vibrations caused by bearing wear start to occur, the Malfunction Indicator Lamp (MIL) will blink continuously, and the vehicle will be placed in Limp Home Mode. This will reduce further damage to the engine and ensure that the vehicle occupants are not exposed to the risk of a more severe engine failure. At that time, Diagnostic Trouble Code ("DTC") P1326, specific to the KSDS, will be recorded in the ECU. The vehicle can continue to be operated for a limited time in Limp Home Mode, but it will accelerate slowly and have a reduced maximum speed. Also, engine RPMs will be limited to approximately 1800-2000 RPM.

Kia is requesting the completion of this bulletin on all affected vehicles. Before conducting the procedure, verify the vehicle is included in the list of affected VINs. Also, please have your KDS connected to the internet regularly to get the latest software updates available.

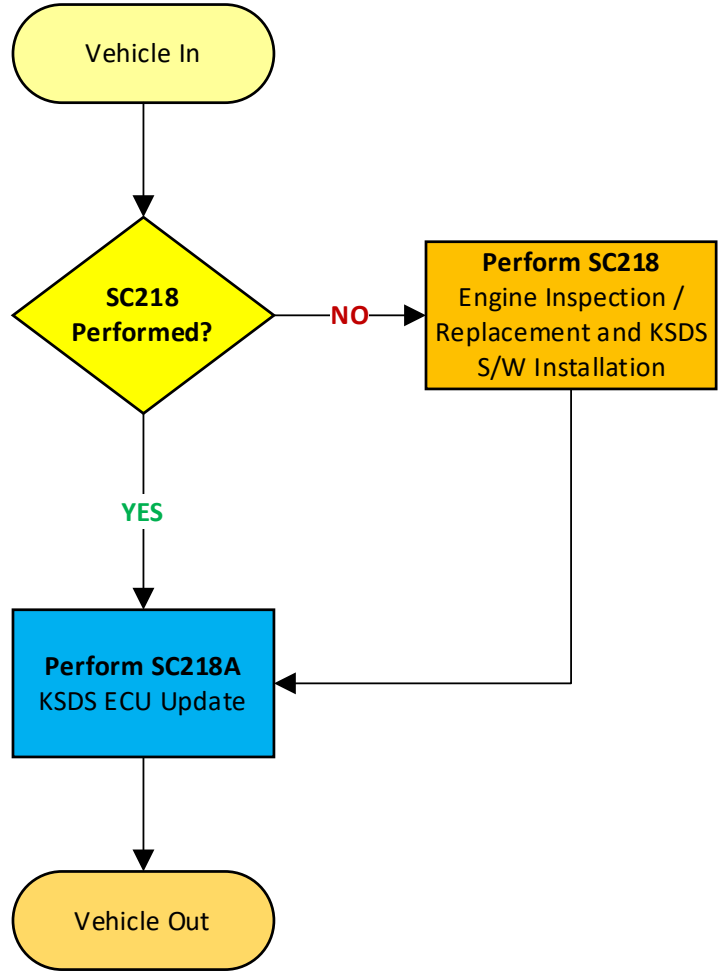
### NOTICE

**There is no charge to the vehicle owner for this repair. Under applicable law, you may not sell or otherwise deliver any affected vehicle until it has been repaired pursuant to the procedures set forth in this bulletin.**

### NOTICE

**To assure complete customer satisfaction, always remember to refer to WebDCS Warranty Coverage (validation) Inquiry Screen (Service → Warranty Coverage → Warranty Coverage Inquiry) for a list of any additional campaigns that may need to be performed on the vehicle before returning it to the customer.**

Flowchart:



Note: If any concerns arise during/after completing the flowchart, open a Techline case online.



SUBJECT:

## UPDATED KSDS SOFTWARE UPDATE (SC218A)

## ECU Upgrade Procedure:

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

## Upgrade Event Name

599. JF HEV/PHEV NU 2.0GDI Knock Sensor Detection System (KSDS) ECU UPGRADE (17~18MY, 2ND)


 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 #599

Model	Engine	TM	IMMO 	EM	ECU P/No.	ROM ID	
						Previous	New
JF HEV (17MY)	Nu 2.0L GDI	AT	Yes	ULEV	39161 2EJB0	JF7UPHMF6A1K	JF7UPHMF6A2K
JF HEV (18MY)					39161 2EJB1	JF8UPHMF6D4K	JF8UPHMF6D5K
JF PHEV (17MY)				SULEV	39161 2EJH0	JF7SPPMF6C1K	JF7SPPMF6C2K
JF PHEV (18MY)					39161 2EJH1	JF8SPPMF6D4K	JF8SPPMF6D5K

*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.*

SUBJECT:

# UPDATED KDS SOFTWARE UPDATE (SC218A)

## 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

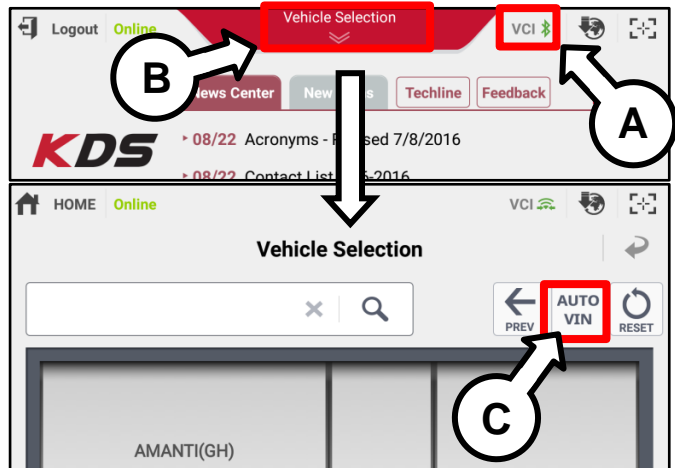
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



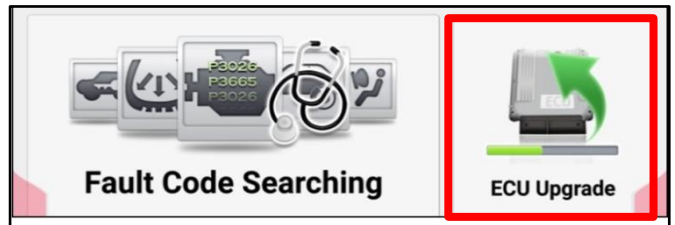
2. With the ignition ON, turn ON the KDS tablet. Select 'KDS' from the home screen.



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



4. Select 'ECU Upgrade'.



SUBJECT:

# UPDATED KSDS SOFTWARE INSTALLATION (SC218A)

- The KDS will check the server for recently uploaded Events and then automatically download Upgrade Event #599.

## 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 ENGINE system under the System selection menu.

Touch TSB (D) and confirm that the latest update is available for the applicable model.

Select Upgrade Event #599 and select 'Upgrade' to continue.

OPTIMA PHEV(JF PHEV) > 2017 > G 2.0 GDI NU

System

ENGINE

TSB

571 .JF HEV/PHEV NU 2.0GDI Knock Sensor Detection System(KSDS) ECU UPGRADE (17MY)

JF HEV Nu 2.0GDI AT +IMMO/SMK ULEV (17MY) : 39161-2EJB0

JF PHEV Nu 2.0GDI AT +IMMO/SMK SULEV (17MY) : 39161-2EJH0

- 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.



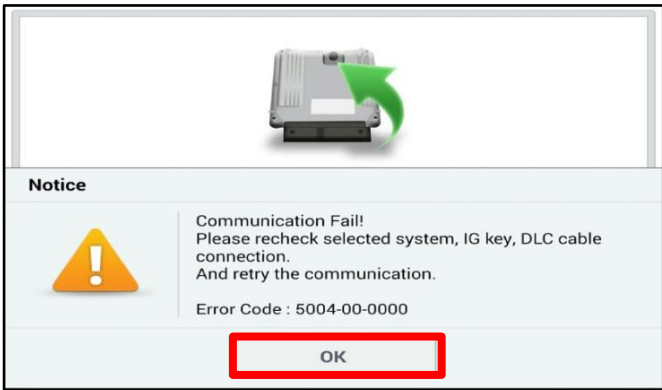
SUBJECT:

# UPDATED KSDS SOFTWARE UPDATE (SC218A)

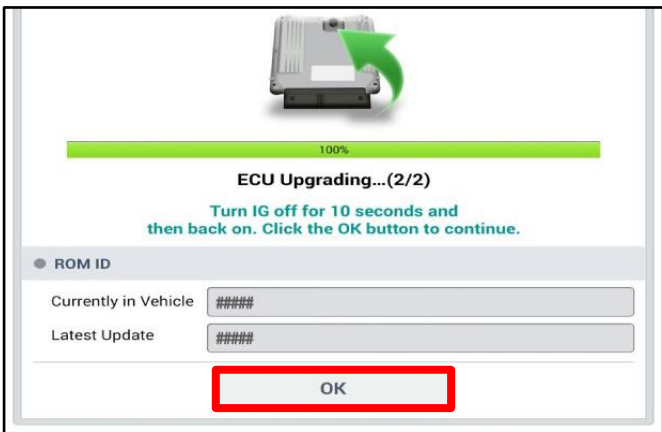
- If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select 'OK' and restart the from step 4.

**NOTICE**

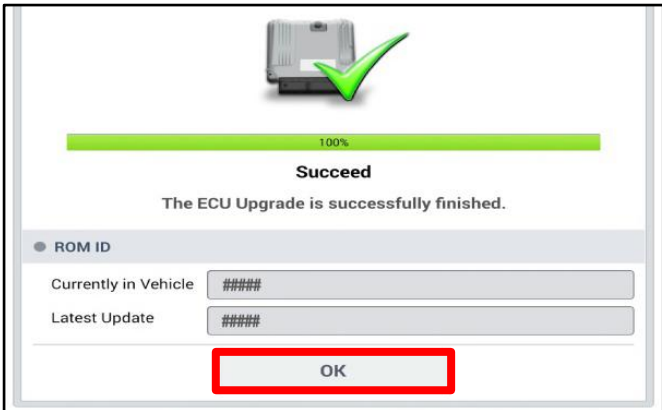
**If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.**



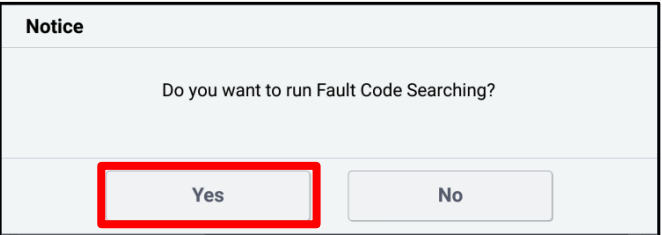
- When instructed on the KDS, turn the ignition OFF for ten (10) seconds then back on. Select 'OK' to continue.



- 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
JF HEV Nu 2.OGDI AT +IMMO/SMK ULEV (17MY): 39161-2EJBO	6121
JF PHEV Nu 2.OGDI AT +IMMO/SMK SULEV (17MY): 39161-2EJH0	6122
JF HEV Nu 2.OGDI AT +IMMO/SMK ULEV (18MY): 39161-2EJB1	6123
JF PHEV Nu 2.OGDI AT +IMMO/SMK SULEV (18MY): 39161-2EJH1	6124

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **ENGINE** system under the System selection menu. Select **Upgrade Event #599** 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.



SUBJECT:

**UPDATED KSDS SOFTWARE UPDATE (SC218A)****AFFECTED VEHICLE RANGE:**

Model	Production Date Range
Optima (JF HEV)	June 27, 2016 to April 27, 2018
Optima (JF PHEV)	

**REQUIRED TOOL:**

Tool Name	Figure	Comments
KDS		Kia Diagnostic System

**WARRANTY INFORMATION:**

N Code: N99 C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	OP Time	Replacement P/N	Qty.
JF HEV/PHEV	R	39161 2EJBO	0	(SC218A) 2 <sup>nd</sup> ECU Upgrade	221006RO	0.3 M/H	N/A	0

**NOTICE**

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference [SC218A](#) when accessing the WebDCS system.

