



GROUP

MODEL

FUE

**2021-2022MY
K5 (DL3a)
w/1.6L T-GDI**

NUMBER

DATE

058**April 2022**

TECHNICAL SERVICE BULLETIN

SUBJECT:

1.6L T-GDI WITH MIL ON DTC P00B7 ECM LOGIC IMPROVEMENT & A/C TORQUE DEMAND

This bulletin provides the procedure to update the software logic of the Engine Control Module (ECM) system on some 2021-2022MY K5 (DL3a) vehicles equipped with the Gamma 1.6L T-GDI engine produced from March 27, 2020 through January 10, 2022, which may exhibit an MIL ON with DTC P00B7 and/or RPM fluctuation and possible stalling when turning A/C 'OFF' while vehicle is parked. 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 page 3 of this bulletin.

DTC Description:

P00B7 - Engine Coolant Flow Low/Performance



Kia Diagnostic System (KDS)

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ECU Upgrade Procedure:

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

Upgrade Event Name

607. DL3a GAMMA 1.6TGDI ENGINE MIL ON DTC (P00B7) 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 #607

Model	EM	TM	IMMO 	ISG	ECU P/No.	ROM ID	
						Previous	New
21MY DL3a (1.6L T-GDI)	ULEV 70	8AT	Yes	Yes	39121 2MKKO	TDLA1NU06F022EOK TDLA1NU06F122EOK TDLA1NU06F223EOK TDLA1NU06F424EOK TDLA1NU06F524EOK	TDLA1NU06F52FEOK
			No		39123 2MKKO	TDLA1NU06E022EOK TDLA1NU06E122EOK TDLA1NU06E223EOK TDLA1NU06E424EOK TDLA1NU06E524EOK	TDLA1NU06E52FEOK
			Yes	No	39121 2MKTO	TDLA1NU06F022E03 TDLA1NU06F122E03 TDLA1NU06F223E03 TDLA1NU06F424E03 TDLA1NU06F524E03	TDLA1NU06F52FE03
			No		39123 2MKTO	TDLA1NU06E022E03 TDLA1NU06E122E03 TDLA1NU06E223E03 TDLA1NU06E424E03 TDLA1NU06E524E03	TDLA1NU06E52FE03
			Yes		39121 2MKVO	TDLA1NU06F026K03 TDLA1NU06F126K03	TDLA1NU06F12FK03
			No		39123 2MKVO	TDLA1NU06E026K03 TDLA1NU06E126K03	TDLA1NU06E12FK03
22MY DL3a (1.6L T-GDI)			Yes	Yes	39121 2MKK1	TDLA2NU06F02EEOK TDLA2NU06F12FEOK	TDLA2NU06F22FEOK
			No		39123 2MKK1	TDLA2NU06E02EEOK TDLA2NU06E12FEOK	TDLA2NU06E22FEOK
			Yes	No	39121 2MKT1	TDLA2NU06F02EE03 TDLA2NU06F12FE03	TDLA2NU06F22FE03
			No		39123 2MKT1	TDLA2NU06E02EE03 TDLA2NU06E12FE03	TDLA2NU06E22FE03
			Yes		39121 2MKV1	TDLA2NU06F02EK03 TDLA2NU06F12FK03	TDLA2NU06F22FK03
			No		39123 2MKV1	TDLA2NU06E02EK03 TDLA2NU06E12FK03	TDLA2NU06E22FK03

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

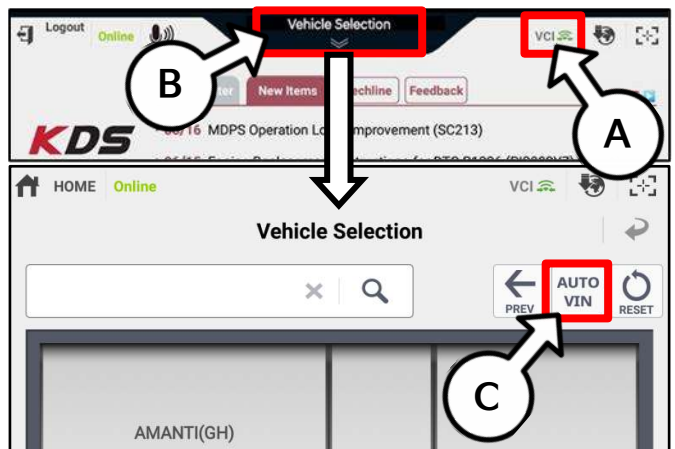
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



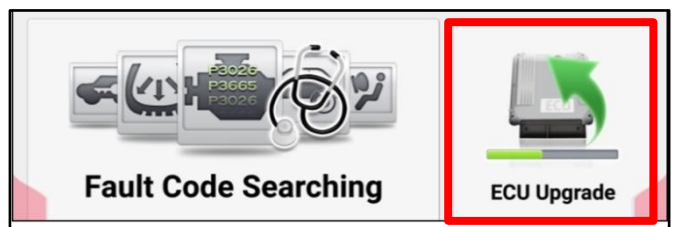
2. With the ignition ON, turn ON the KDS tablet. Select 'KDS' from the home screen.



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



4. Select 'ECU Upgrade'.



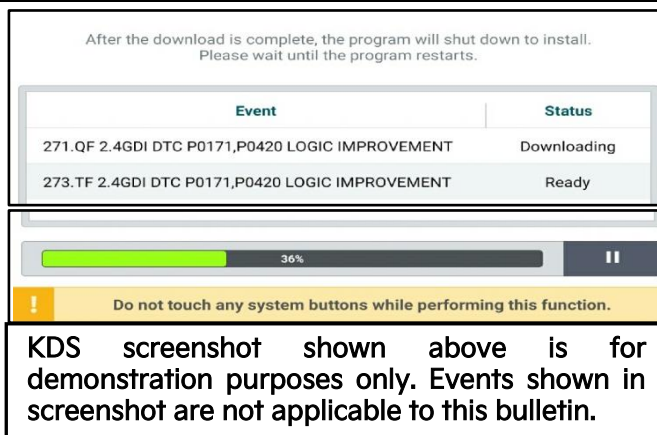
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5. The KDS will check the server for recently uploaded Events and then automatically download Upgrade Event #607.

NOTICE

The vehicle must be identified in Vehicle Selection to download an Event for that vehicle.



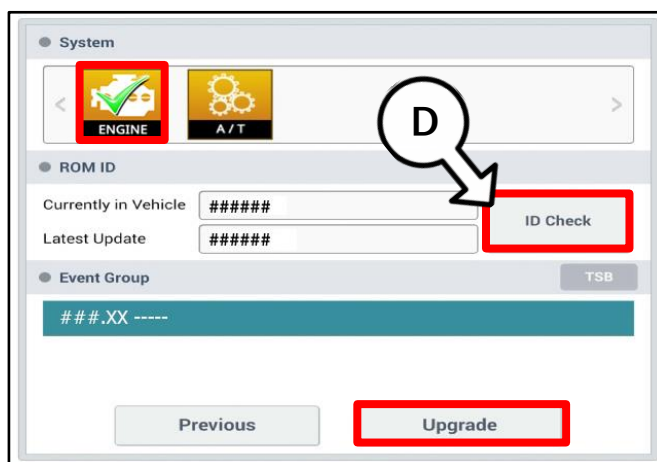
6. Select Auto Mode.

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.



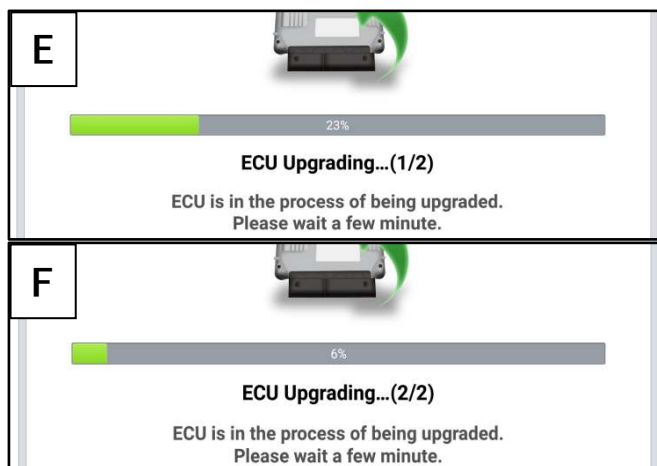
7. Select the Engine system under the System selection menu.
- Touch ID Check (D) and confirm that the latest update is available.
- Select Upgrade Event #607 and select Upgrade to continue.



8. 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.



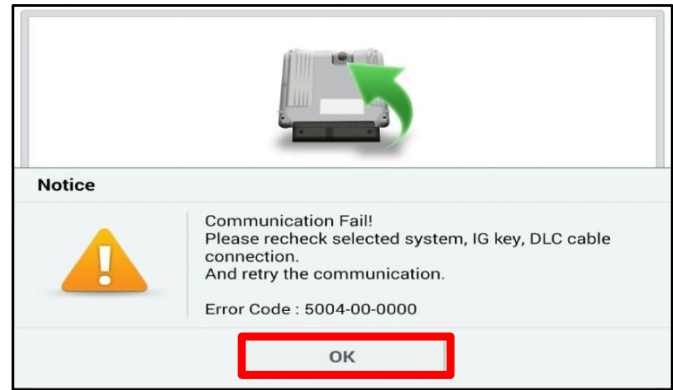
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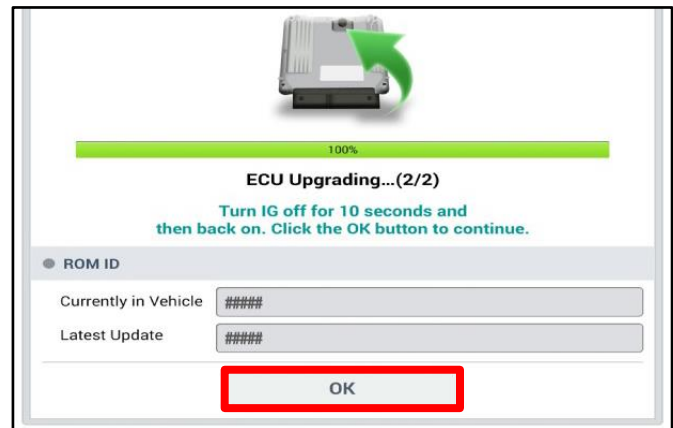
9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Select 'OK' and restart the procedure from step 4.

NOTICE

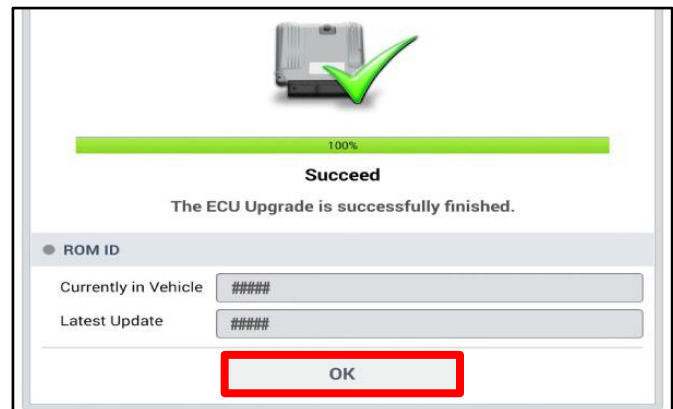
If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.



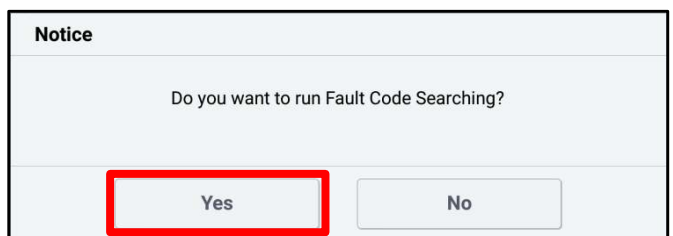
10. When instructed on the KDS, turn the ignition OFF for ten (10) seconds then back on. Select 'OK' to continue.



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.

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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
DL3a Gamma 1.6TGDI ULEV 70 8AT +IMMO/SMK +ISG (21MY): 39121-2MKKO	0701
DL3a Gamma 1.6TGDI ULEV 70 8AT -IMMO +ISG (21MY): 39123-2MKKO	0702
DL3a Gamma 1.6TGDI ULEV 70 8AT +IMMO/SMK (21MY): 39121-2MKTO	0703
DL3a Gamma 1.6TGDI ULEV 70 8AT -IMMO (21MY): 39123-2MKTO	0704
DL3a Gamma 1.6TGDI ULEV 70 8AT +IMMO/SMK (21MY): 39121-2MKVO	0705
DL3a Gamma 1.6TGDI ULEV 70 8AT -IMMO (21MY): 39123-2MKVO	0706
DL3a Gamma 1.6TGDI ULEV 70 8AT +IMMO/SMK +ISG (22MY): 39121-2MKK1	0707
DL3a Gamma 1.6TGDI ULEV 70 8AT -IMMO +ISG (22MY): 39123-2MKK1	0708
DL3a Gamma 1.6TGDI ULEV 70 8AT +IMMO/SMK (22MY): 39121-2MKT1	0709
DL3a Gamma 1.6TGDI ULEV 70 8AT -IMMO (22MY): 39123-2MKT1	0710
DL3a Gamma 1.6TGDI ULEV 70 8AT +IMMO/SMK (22MY): 39121-2MKV1	0711
DL3a Gamma 1.6TGDI ULEV 70 8AT -IMMO (22MY): 39123-2MKV1	0712

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **Engine** system under the System selection menu. Select **Upgrade Event #607** 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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AFFECTED VEHICLE RANGE:

Model	Production Date Range
K5 (DL3a)	March 27, 2020 to January 10, 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	39101 2S002	0	ECM Logic Improvement	39121F02	0.4 M/H	N/A	0