	GROUP ENG	MODEL 2019MY Rio (SC)
	NUMBER 202	DATE April 2019
TECHNICAL SERVICE BULLETIN		
SUBJECT: SERVICE ACTION: ECU LOGIC IMPROVEMENT FOR DTC P0128 (SA374)		

This bulletin provides the procedure to improve the logic of the Engine Control Unit (ECU) on some 2019MY Rio (SC) vehicles, produced from August 27, 2018 through March 4, 2019, which may experience a malfunction indicator light (MIL) ON with DTC P0128. To correct this concern, apply the improved logic to the ECU 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 2 of this bulletin. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

DTC:

P0128 - Coolant Thermostat (Coolant Temperature below Thermostat Regulating Temperature)



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 SA374.

File Under: <Engine>

- Circulate To:** General Manager Service Manager Parts Manager
 Service Advisors Technicians Body Shop Manager Fleet Repair

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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

411. SC GAMMA 1.6GDI ECU MIL ON DTC (P0128) LOGIC IMPROVEMENT

* NOTICE

- A fully charged battery is necessary before ECU upgrade can take place. It is recommended that the Midtronics GR8-1299 system be used in ECU mode during charging. **DO NOT** connect any other battery charger to the vehicle during ECU upgrade.
- All ECU upgrades must be done with the ignition key in the 'ON' position.
- 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 model, year.

* NOTICE

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the particular 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 #411

Model	EM	TM	IMMO	ECU P/No.	ROM ID	
					Previous	New
SC	1.6L	AT	No	391D1-2BSB0	GSC-KNU06P000C03	GSC-KNU06P100C03
		MT		391H1-2BSB0	GSC-KNU06E000603	GSC-KNU06E100603

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

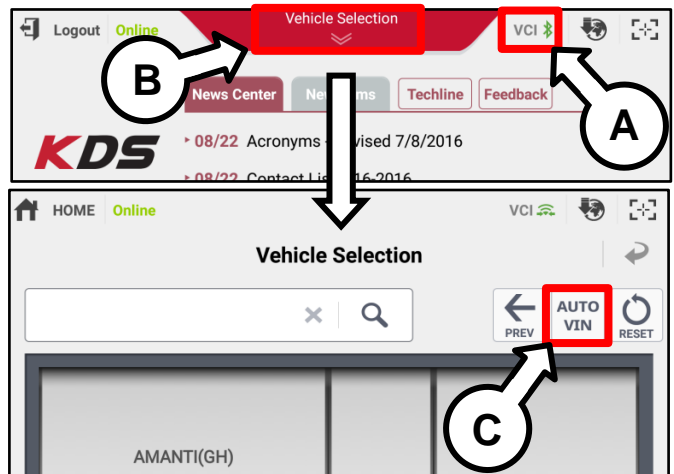
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



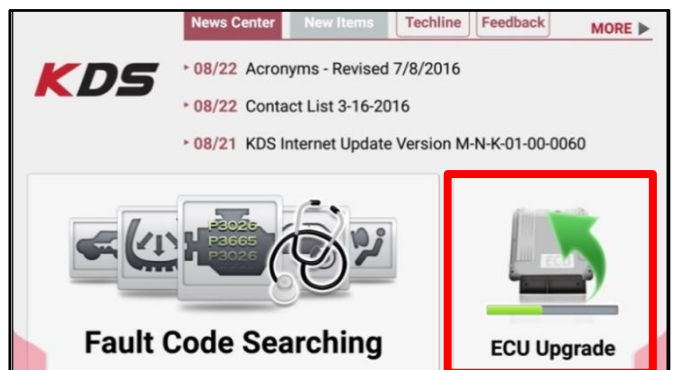
2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.



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



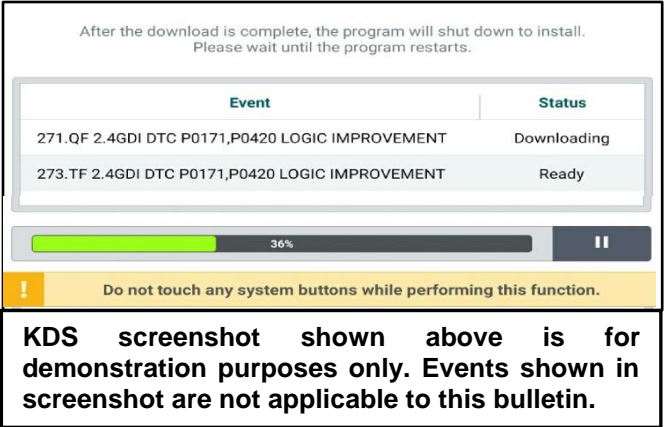
4. Select **ECU Upgrade**.



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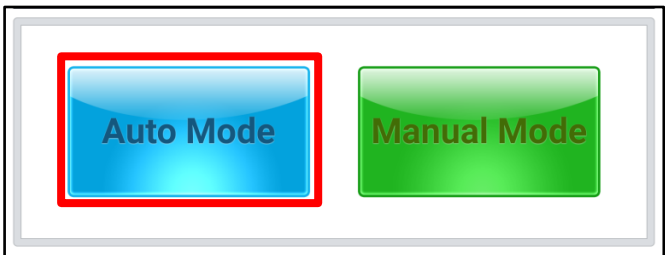
- The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Event #411**.

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



- Select **Auto Mode**.

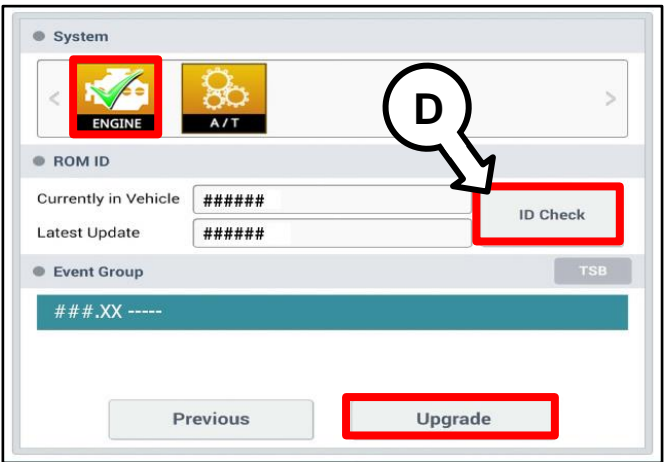
CAUTION
 Do NOT attempt to perform a Manual Mode upgrade **UNLESS Auto Mode fails**. Always follow the instructions given on the KDS in either Auto or Manual mode.



- Select the **Engine** system under the System selection menu.

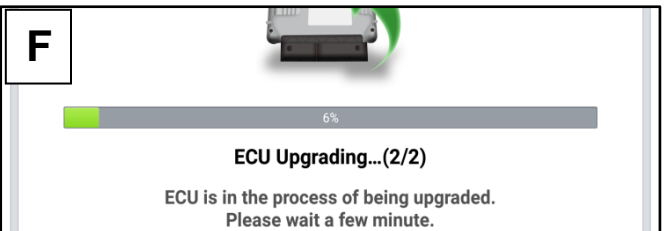
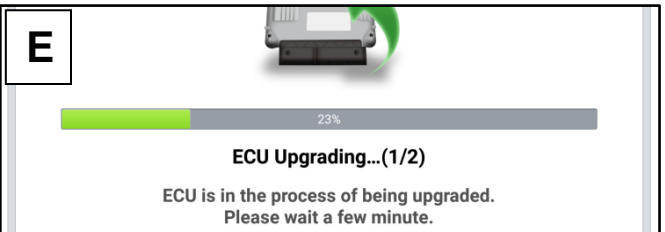
Touch **ID Check** (D) and confirm that the latest update is available.

Select **Upgrade Event #411** and select **Upgrade** to continue.



- 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.



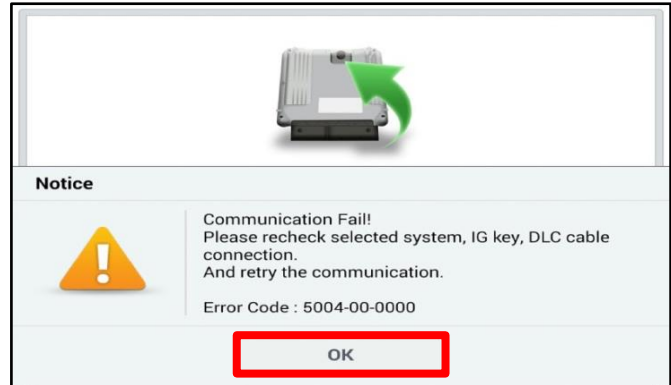
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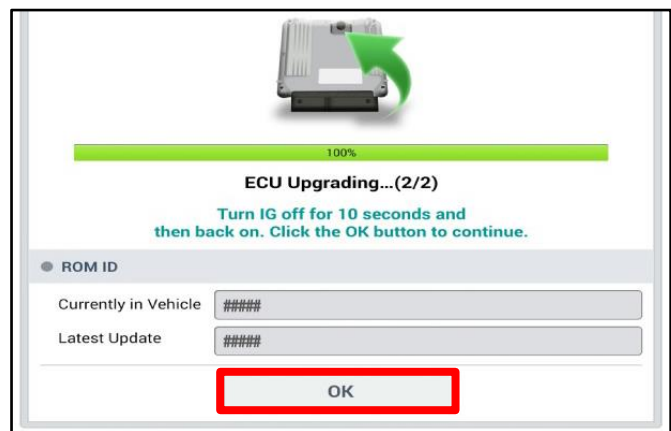
9. If a “Communication Fail” screen appears, verify that the VCI-II and KDS are communicating properly. Touch **OK** and restart the procedure from step 4.

* NOTICE

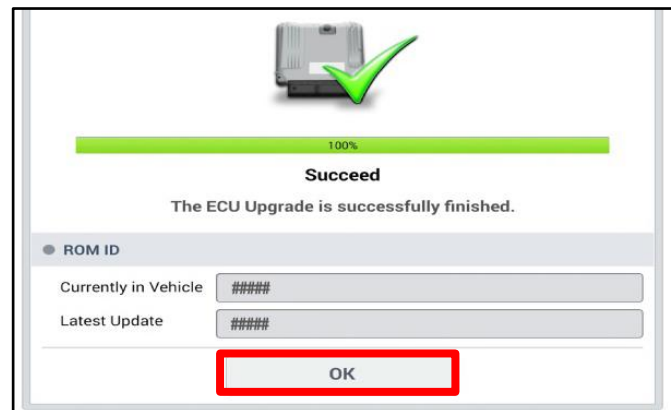
If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.



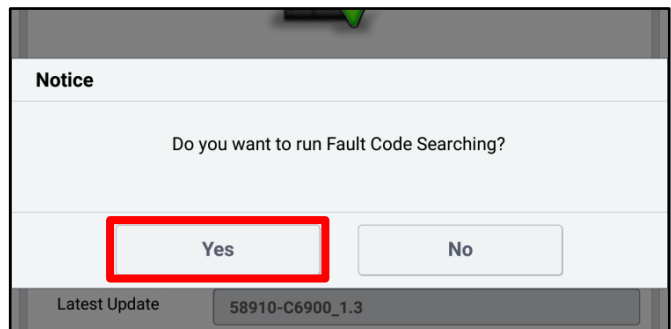
10. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.



11. Once the upgrade is complete, touch **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 proper 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
SC GAMMA 1.6GDI (ULEV 125) 6AT -IMMO : 391D1-2BSB0	1120
SC GAMMA 1.6GDI (ULEV 125) 6MT -IMMO : 391H1-2BSB0	1121

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **Engine** system under the System selection menu. Select **Upgrade Event #411** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID Information Table on page 2 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. Touch **OK** to continue.
7. Once the upgrade is complete, touch **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
Rio (SC)	August 27, 2018 through March 4, 2019

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	391D1 2BSB0	0	(SA374) ECU Logic Improvement for DTC P0128	190M02R0	0.3 M/H	N/A	0

*** NOTICE**

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA374 when accessing the WebDCS system.