	GROUP	MODEL
	Engine	**2012-2013MY Rio (UB) w/1.6L GDI**
	NUMBER	DATE
	131	**May 2013**

TECHNICAL SERVICE BULLETIN

SUBJECT: ECM UPGRADE – KNOCK IMPROVEMENT

This bulletin provides information related to an ECM software upgrade for all 2012-2013MY Rio (UB) 1.6L vehicles which may exhibit a knocking or pinging concern under moderate or heavy acceleration, especially while driving on an inclined road. To correct this condition, the ECM should be reprogrammed using the GDS download as described in this bulletin. Before performing this procedure, verify the VIN falls within the production ranges by consulting the table on page 6.

For confirmation that the latest reflash has been done to a vehicle you are working on, verify ROM ID using the tables in this TSB.
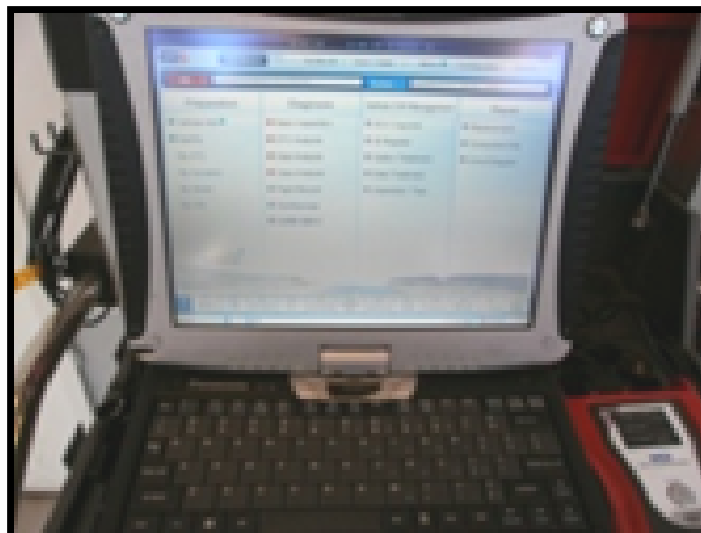
Global Diagnostic System (GDS)

File Under: <Engine>

Circulate To: [X] **General Manager**   [X] **Service Manager**   [X] **Parts Manager**

[X] **Service Advisor(s)** [X] **Technician(s)**   [X] **Body Shop Manager**   [ ] **Fleet Repair**

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

ECM Upgrade Procedure:

UPGRADE EVENT NAME
203.UB 1.6 GDI KNOCK IMPROVEMENT (VER. 2)

✱NOTICE

- **A fully charged battery is necessary before ECM upgrade can take place. It is recommended that the Midtronics GR8-1299 system be used in ECM mode during charging. DO NOT connect any other battery charger to the vehicle during ECM upgrade.**

- **All ECM upgrades must be done with the ignition key in the 'ON' position.**

- **Be careful not to disconnect any cables connected to the vehicle or GDS during the ECM upgrade procedure.**

- **DO NOT start the engine during ECM upgrade.**

- **DO NOT turn the ignition key 'OFF' or interrupt the power supply during ECM upgrade.**

- **When the ECM upgrade is completed, turn the ignition 'OFF' and wait 20 seconds before starting the engine.**

- **ONLY use approved ECM upgrade software designated for the correct model, year.**

⚠ CAUTION

Before attempting an ECM 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.

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ROM ID Information Tables:

Upgrade event #203:

MODEL	ISG	ECM P/N	ROM ID	
			PREVIOUS	NEW
UB1.6 GDI	Yes (+)	39110-2BDM5 39110-2BDM6 39110-2BDB7	GGUB-BNU6QS00C00 GGUB-BNU6QS01C00 GGUB-BNU6QS02C00 GGUB-BNU6QS03C00 GGUB-BNU6QS04C00 GGUB-BNU6QS00C0A GGUB-BNU6QS01CA0 GGUB-DNU6QS00C00 GGUB-DNU6QS01C00 GGUB-DNU6QS02C00 GGUB-DNU6QS03C00 GGUB-DNU6QF03C00 GGUB-DNU6QS04C00 GGUB-DNU6QS05C00	**GGUB-DNU6QF05C00**
	No (-)	39110-2BDL5 39110-2BDL6 39110-2BDA7	GGUB-BNU6PS00C00 GGUB-BNU6PS01C00 GGUB-BNU6PS02C00 GGUB-BNU6PS03C00 GGUB-BNU6PS04C00 GGUB-BNU6PS00C0A GGUB-BNU6PS01CA0 GGUB-DNU6PS00C00 GGUB-DNU6PS01C00 GGUB-DNU6PS02C00 GGUB-DNU6PS03C00 GGUB-DNU6PS04C00 GGUB-DNU6PS05C00	**GGUB-DNU6PF05C00**
	Yes (+)	39110-2BDM8 39110-2BDM9 39110-2BDD7	GIUB-BNU6QS00C00 GIUB-BNU6QS01C00 GIUB-BNU6QS02C00 GIUB-BNU6QS03C00 GIUB-BNU6QS04C00 GIUB-BNU6QS00C0A GIUB-BNU6QS01CA0 GIUB-BNU6QS02CA0 GIUB-DNU6QS00C00 GIUB-DNU6QS01C00 GIUB-DNU6QS02C00 GIUB-DNU6QS03C00 GIUB-DNU6QS04C00 GIUB-DNU6QF04C00 GIUB-DNU6QS05C00 GIUB-DNU6QS06C00	**GIUB-DNU6QF06C00**

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Upgrade event #203 (Continued):

MODEL	ISG	ECM P/N	ROM ID	
			PREVIOUS	**NEW**
UB1.6 GDI	No (-)	39110-2BDL8 39110-2BDL9 39110-2BDC	GIUB-BNU6PS00C00 GIUB-BNU6PS01C00 GIUB-BNU6PS02C00 GIUB-BNU6PS03C00 GIUB-BNU6PS04C00 GIUB-BNU6PS00C0A GIUB-BNU6PS01CA0 GIUB-BNU6PS02CA0 GIUB-DNU6PS00C00 GIUB-DNU6PS01C00 GIUB-DNU6PS02C00 GIUB-DNU6PS03C00 GIUB-DNU6PS04C00 GIUB-DNU6PS05C00 GIUB-DNU6PS06C00	**GIUB-DNU6PF06C00**
	Yes (+)	39110-2BDF7	GIUB-DNU6QSG0C00 GIUB-DNU6QSG1C00 GIUB-DNU6QSG2C00 GIUB-DNU6QSG3C00 GIUB-DNU6QSG4C00 GIUB-DNU6QFG4C00 GIUB-DNU6QSG5C00 GIUB-DNU6QSG6C00	**GIUB-DNU6QFG6C00**
	No (-)	39110-2BDE7	GIUB-DNU6PSG0C00 GIUB-DNU6PSG1C00 GIUB-DNU6PSG2C00 GIUB-DNU6PSG3C00 GIUB-DNU6PSG4C00 GIUB-DNU6PSG5C00 GIUB-DNU6PSG6C00	**GIUB-DNU6PFG6C00**

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.

1. Connect the power supply cable to the GDS tool.

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*NOTICE

If attempting to perform the ECM upgrade with the power supply cable disconnected from the GDS tool, be sure to check that the GDS tool is fully charged before ECM upgrade. If the GDS tool is not fully charged, failure to perform the ECM upgrade may occur. Therefore, it is strongly recommended that the power supply be connected to the GDS tool.


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2. Connect the USB cable between the VCI and the GDS tool.

✱ NOTICE

When performing the ECM upgrade using the GDS tool, wireless communication between the VCI and GDS tool is not available. Therefore, be sure to connect the USB cable between the VCI and the GDS tool.

3. Connect the Main 16-pin DLC cable (GHDM – 241000) to the VCI.

4. Connect the Main 16-pin DLC cable (GHDM – 241000) to the OBD-II connector, located under the driver's side of the instrument panel.
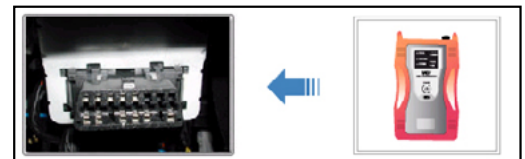

5. With the ignition key ON, turn ON the VCI and GDS tool. Access the GDS vehicle identification number (VIN) screen and configure the vehicle using the VIN Auto Detect function.

6. Select ENGINE system and click OK.

   NOTE: The display screen image to the right is for demonstration purposes only. Actual screen details will vary by model.
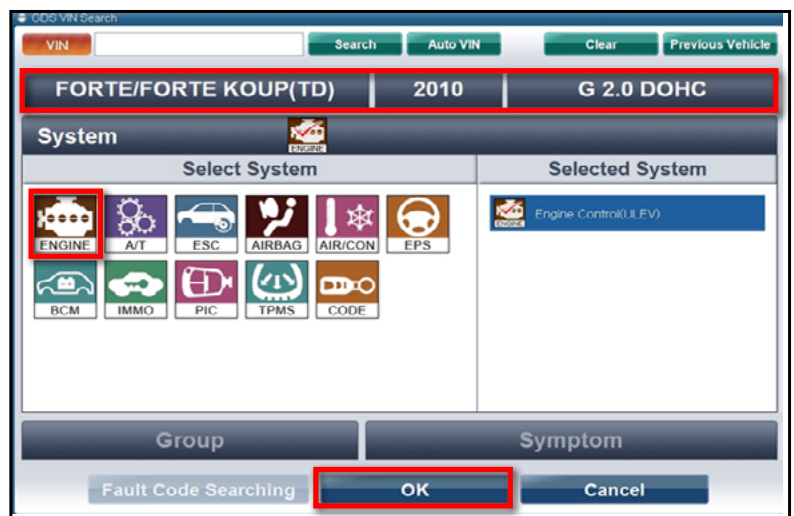
7. Once back at the GDS Main Screen, select ECU Upgrade from the bottom right-hand corner. Next select Auto Mode, and then Engine. Perform the ECM upgrade in accordance with normal GDS tool ECM upgrade procedures.
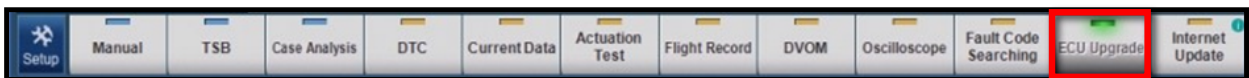
⚠ CAUTION

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> **✱NOTICE**
>
> **Do NOT attempt to perform a Manual Mode upgrade unless Auto Mode fails. Always follow the instructions given on the GDS tool in either Auto or Manual mode. See table for Manual Mode passwords.**

MANUAL MODE ECM UPGRADE PASSWORDS:
DO NOT perform Manual Mode ECM upgrade unless Auto Mode fails.

Upgrade event #203 Rio (UB):

MODEL	MENU	PASSWORD
UB 1.6 GDI 12~13MY	UB -ISG 39110-2BDM5/DM6/DB7	**1027**
	UB -ISG 39110-2BDL5/DL6/DA7	**1028**
	UB +ISG 39110-2BDM8/DM9/DD7	**1029**
	UB +ISG 39110-2BDL8/DL9/DC7	**1030**
	UB +ISG 39110-2BDF7	**1031**
	UB +ISG 39110-2BDE7	**1032**

7. When the GDS tool reports that the ECM upgrade has been successfully completed, click OK, turn OFF the ignition key, and wait at least 10 seconds before attempting to start the engine.

8. Check for Diagnostic Trouble Codes using the GDS and erase any DTCs stored such as EPS, ESC, and TPMS. Due to CAN BUS multiple DTCs may be set during reprogramming.

9. Start the engine to confirm proper operation of the vehicle.

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Rio (UB)	2012~2013MY

WARRANTY CLAIM INFORMATION:

Claim Type	Causal P/N	Qty.	N Code	C Code	Repair Description	Labor Op Code	Op Time	Related Parts	Qty.
W	39110 2BDM5	0	N69	C40	(ENG131) ECM Upgrade	39110F6H	0.2 M/H	N/A	0