


# SB-10055390-7155

	GROUP	MODEL
	Engine	2006~2011MY Rio (JB)
	NUMBER	DATE
	135	December 2013

## TECHNICAL SERVICE BULLETIN

**SUBJECT:** ECM UPGRADE – LOGIC IMPROVEMENT  
 (DTC – P0140, P0128, P0300, P0328, P0442, P0451 & P0461)

This bulletin provides information related to the ECM software upgrade of some Rio (JB) vehicles, produced from April 1, 2006 through July 1, 2011, which may experience a Malfunction Indicator Lamp (MIL) illuminated with the ECM (Electronic Control Module) system-related DTC P0140/P0128/P0300/P0328/P0442/ /P0451/P0461. 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.

**DTC Description**

- P0140 O2 Sensor Circuit No Activity Detected (Bank 1 Sensor 2)
- P0128 Coolant Thermostat (Coolant Temperature Below Thermostat Reg. Temperature)
- P0300 Random/Multiple Cylinder Misfire Detected
- P0328 Knock Sensor 1 Circuit High Input
- P0442 Evaporative Emission System - Leak detected (small leak)
- P0451 Evaporative Emission Control System Pressure Sensor Range/Performance
- P0461 Fuel Level Sensor "A" Circuit Range/Performance



Global Diagnostic System (GDS)

**\* NOTICE**

**DO NOT** replace any parts related to the DTCs mentioned above unless proven to be the cause for the DTC **AFTER** the reflash has been performed. First perform the reflash as described in this bulletin, and verify that no DTC(s) will re-set. Should a DTC re-set after the reflash, diagnose according to KGIS. Parts replacement in conjunction with this TSB may be subject to Mandatory Parts Return and returned parts will be tested by KMA. Unnecessarily replaced parts will be subject to chargeback.

File Under: <Engine>

- Circulate To:     General Manager     Service Manager     Parts Manager
- Service Advisor(s)     Technician(s)     Body Shop Manager     Fleet Repair

SUBJECT:

**ECM UPGRADE – LOGIC IMPROVEMENT**  
(DTC – P0140, P0128, P0300, P0328, P0442, P0451 & P0461)

**ECM Upgrade Procedure:**

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

<b>UPGRADE EVENT NAME</b>
216.JB DTC LOGIC IMPROVEMENT (ECU)

**★ NOTICE**

- A fully charged battery is necessary before ECM/PCM upgrade can take place. It is recommended that the Midtronics GR8-1299 system be used in ECM/PCM mode during charging. DO NOT connect any other battery charger to the vehicle during ECM/PCM upgrade.
- All ECM/PCM 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/PCM upgrade procedure.
- DO NOT start the engine during ECM/PCM upgrade.
- DO NOT turn the ignition key 'OFF' or interrupt the power supply during ECM/PCM upgrade.
- When the ECM/PCM upgrade is completed, turn the ignition 'OFF' and wait 20 seconds before starting the engine.
- ONLY use approved ECM/PCM upgrade software designated for the correct model, year.

**★ NOTICE**

To determine if the vehicle is equipped with an Immobilizer (+IMMO) turn the ignition ON and look for security tell-tale in the IP Cluster. Failure to follow the procedure may cause the ECM/PCM to become inoperative after upgrade and may be subject to chargeback.







**CAUTION**

Before attempting an ECM/PCM 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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**(DTC – P0140, P0128, P0300, P0328, P0442, P0451 & P0461)**

**ROM ID INFORMATION TABLES :**

**Upgrade event #216**

MODEL	EM	T/M	IMMO	ECM P/N	ROM ID	
					PREVIOUS	NEW
JB 1.6L '06MY	FEDERAL	MT	Yes (+) 	39110-26BE6	GJB-7F6CQS0-A000 GJB-7F6CQS1-A000 GJB-7F6CQS2-A000 GJB-7F6CQS3-A000 GJB-7F6CQS4-A000	GJB-7F6CQFA-A000
	FEDERAL	AT	Yes (+) 	39110-26BE1	GJB-7F6CFS0-5000 GJB-7F6CFS1-5000 GJB-7F6CFS2-5000 GJB-7F6CFS3-5000 GJB-7F6CFS4-5000	GJB-7F6CFFA-5000
	CA/FEDERAL	MT	No (-)	39110-26BE5	GJB-7N6CPS0-A000 GJB-7N6CPS1-A000 GJB-7N6CPS2-A000 GJB-7N6CPS3-A000 GJB-7N6CPS4-A000	GJB-7N6CPFA-A000
	CA/FEDERAL	AT	No (-)	39110-26BE0	GJB-7N6CES0-5000 GJB-7N6CES1-5000 GJB-7N6CES2-5000 GJB-7N6CES3-5000 GJB-7N6CES4-5000	GJB-7N6CEFA-5000
JB 1.6L '07MY	CA/FEDERAL	MT	No (-)	39110-26BG0	GJB-7N6CESA-5000 GJB-7N6CESB-5000 GJB-7N6CESC-5000 GJB-7N6CESD-5000 GJB-7N6CESE-5000 GJB-7N6CESF-5000 GJB-7N6CESG-5000 GJB-7N6CESH-5000 GJB-7N6CESQ-5000	GJB-7N6CEF0-5000
	CA/FEDERAL	AT	No (-)	39110-26BG5	GJB-7N6CPSA-A000 GJB-7N6CPSB-A000 GJB-7N6CPSC-A000 GJB-7N6CPSD-A000 GJB-7N6CPSE-A000 GJB-7N6CPSF-A000 GJB-7N6CPSG-A000 GJB-7N6CPSH-A000 GJB-7N6CPSQ-A000	GJB-7N6CPF0-A000
	CA/FEDERAL	MT	Yes (+) 	39110-26BE2	GJB-7F6CFSA-5000 GJB-7F6CFSB-5000 GJB-7F6CFSC-5000 GJB-7F6CFSD-5000 GJB-7F6CFSE-5000 GJB-7F6CFSF-5000 GJB-7F6CFSG-5000 GJB-7F6CFSH-5000 GJB-7F6CFSQ-5000	GJB-7F6CFF0-5000
	CA/FEDERAL	AT	Yes (+) 	39110-26BE7	GJB-7F6CQSA-A000 GJB-7F6CQSB-A000 GJB-7F6CQSC-A000 GJB-7F6CQSD-A000 GJB-7F6CQSE-A000 GJB-7F6CQSF-A000 GJB-7F6CQSG-A000 GJB-7F6CQSH-A000 GJB-7F6CQSQ-A000	GJB-7F6CQF0-A000






SUBJECT:

**ECM UPGRADE – LOGIC IMPROVEMENT  
(DTC – P0140, P0128, P0300, P0328, P0442, P0451 & P0461)**


MODEL	EM	T/M	IMMO	ECM P/N	ROM ID	
					PREVIOUS	NEW
JB 1.6L '08-11MY	CA/FED	MT	No (-)	39110-26BG1	GJB-8N6CES0-5000 GJB-8N6CES1-5000 GJB-8N6CES2-5000 GJB-8N6CES3-5000 GJB-8N6CES4-5000 GJB-8N6CES5-5000 GJB-8N6CEST-5000 GJB-8N6CEF0-5000 GJB-8N6CEF1-5000	<b>GJB-8N6CEF2-5000</b>
	CA/FED	MT	No (-)	39120-26BG1	GJB-9N6CES0-5000 GJB-9N6CES1-5000 GJB-9N6CES2-5000 GJB-9N6CES3-5000 GJB-9N6CES4-5000 GJB-9N6CES5-5000 GJB-9N6CES6-5000 GJB-9N6CES7-5000 GJB-9N6CEST-5000 GJB-9N6CEF0-5000 GJB-9N6CEF1-5000	<b>GJB-9N6CEF2-5000</b>
	CA/FED	MT	No (-)	39130-26AH0	GJB-AN6CES0-5000 GJB-AN6CES1-5000 GJB-AN6CES2-5000 GJB-AN6CEF0-5000 GJB-AN6CEF1-5000	<b>GJB-AN6CEF2-5000</b>
	CA/FED	MT	No (-)	39140-26AH0	GJB-BN6CES0-5000 GJB-BN6CES1-5000 GJB-BN6CES2-5000 GJB-BN6CEF0-5000	<b>GJB-BN6CEF1-5000</b>
	CA/FED	AT	No (-)	39110-26BG6	GJB-8N6CPS0-A000 GJB-8N6CPS1-A000 GJB-8N6CPS2-A000 GJB-8N6CPS3-A000 GJB-8N6CPS4-A000 GJB-8N6CPS5-A000 GJB-8N6CPST-A000 GJB-8N6CPF0-A000 GJB-8N6CPF1-A000	<b>GJB-8N6CPF2-A000</b>
	CA/FED	AT	No (-)	39120-26BG6	GJB-9N6CPS0-A000 GJB-9N6CPS1-A000 GJB-9N6CPS2-A000 GJB-9N6CPS3-A000 GJB-9N6CPS4-A000 GJB-9N6CPS5-A000 GJB-9N6CPS6-A000 GJB-9N6CPS7-A000 GJB-9N6CPST-A000 GJB-9N6CPF0-A000 GJB-9N6CPF1-A000	<b>GJB-9N6CPF2-A000</b>

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**ECM UPGRADE – LOGIC IMPROVEMENT**  
**(DTC – P0140, P0128, P0300, P0328, P0442, P0451 & P0461)**

MODEL	EM	T/M	IMMO	ECM P/N	ROM ID	
					PREVIOUS	NEW
JB 1.6L '08-11MY	CA/FED	AT	No (-)	39130-26AH5	GJB-AN6CPS0-A000 GJB-AN6CPS1-A000 GJB-AN6CPS2-A000 GJB-AN6CPF0-A000 GJB-AN6CPF1-A000	GJB-AN6CPF2-A000
	CA/FED	AT	No (-)	39140-26AH5	GJB-BN6CPS0-A000 GJB-BN6CPS1-A000 GJB-BN6CPS2-A000 GJB-BN6CPF0-A000	GJB-BN6CPF1-A000
	FED	MT	Yes (+) 	39110-26BE3	GJB-8F6CFS0-5000 GJB-8F6CFS1-5000 GJB-8F6CFS2-5000 GJB-8F6CFS3-5000 GJB-8F6CFS4-5000 GJB-8F6CFS5-5000 GJB-8F6CFST-5000 GJB-8F6CFF0-5000 GJB-8F6CFF1-5000	GJB-8F6CFF2-5000
	FED	MT	Yes (+) 	39120-26BE3	GJB-9F6CFS0-5000 GJB-9F6CFS1-5000 GJB-9F6CFS2-5000 GJB-9F6CFS3-5000 GJB-9F6CFS4-5000 GJB-9F6CFS5-5000 GJB-9F6CFS6-5000 GJB-9F6CFS7-5000 GJB-9F6CFST-5000 GJB-9F6CFF0-5000 GJB-9F6CFF1-5000	GJB-9F6CFF2-5000
	FED	MT	Yes (+) 	39130-26AJ0	GJB-AF6CFS0-5000 GJB-AF6CFS1-5000 GJB-AF6CFS2-5000 GJB-AF6CFF0-5000 GJB-AF6CFF1-5000	GJB-AF6CFF2-5000
	FED	MT	Yes (+) 	39140-26AJ0	GJB-BF6CFS0-5000 GJB-BF6CFS1-5000 GJB-BF6CFS2-5000 GJB-BF6CFF0-5000	GJB-BF6CFF1-5000
	FED	AT	Yes (+) 	39110-26BE8	GJB-8F6CQS0-A000 GJB-8F6CQS1-A000 GJB-8F6CQS2-A000 GJB-8F6CQS3-A000 GJB-8F6CQS4-A000 GJB-8F6CQS5-A000 GJB-8F6CQST-A000 GJB-8F6CQF0-A000 GJB-8F6CQF1-A000	GJB-8F6CQF2-A000

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		AT	Yes (+) 	39120-26BE8	GJB-9F6CQS0-A000 GJB-9F6CQS1-A000 GJB-9F6CQS2-A000 GJB-9F6CQS3-A000 GJB-9F6CQS4-A000 GJB-9F6CQS5-A000 GJB-9F6CQS6-A000 GJB-9F6CQS7-A000 GJB-9F6CQST-A000 GJB-9F6CQF0-A000 GJB-9F6CQF1-A000	GJB-9F6CQF2-A000
FED		AT	IMMO	39130-26AJ5	GJB-AF6CQS0-A000 GJB-AF6CQS1-A000 GJB-AF6CQS2-A000 GJB-AF6CQF0-A000 GJB-AF6CQF1-A000	GJB-AF6CQF2-A000
FED		AT	IMMO	39140-26AJ5	GJB-BF6CQS0-A000 GJB-BF6CQS1-A000 GJB-BF6CQS2-A000 GJB-BF6CQF0-A000	GJB-BF6CQF1-A000

*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.

**★ 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 is fully charged before ECM upgrade. If the GDS is not fully charged, failure to perform the ECM upgrade may occur. Therefore, it is strongly recommended that the power supply connector be connected to the GDS.

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

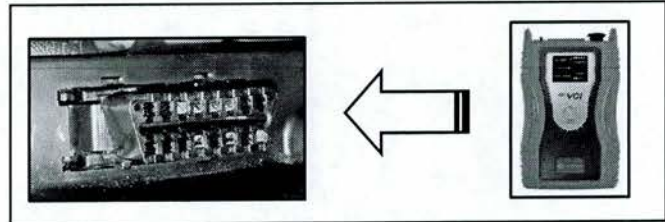
**★ NOTICE**

When performing the ECM upgrade using the GDS, 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.

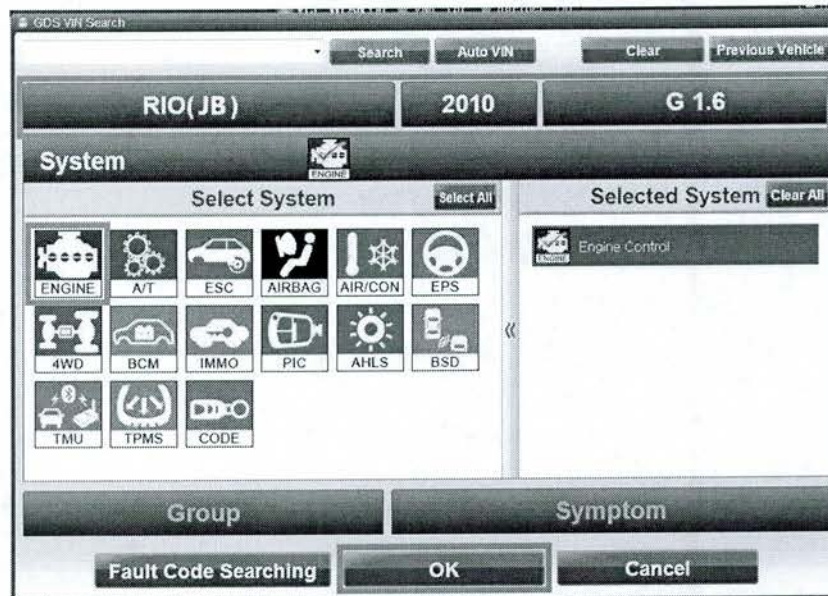
3. Connect the Main 16-pin DLC cable (GHDM – 241000) to the VCI.

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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. 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**.



*Display screen above is for demonstration only purposes and may vary depending on 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 ECM upgrade procedures.



**\* NOTICE**

To determine if the vehicle is equipped with an Immobilizer (+IMMO) turn the ignition ON and look for security tell-tale in the IP Cluster. Failure to follow the procedure may cause the PCM to become inoperative after upgrade and may be subject to chargeback.

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(DTC – P0140, P0128, P0300, P0328, P0442, P0451 & P0461)**

**⚠ 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. 📄

**\* NOTICE**

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

**MANUAL MODE ECM UPGRADE PASSWORDS:**

Upgrade event #216 Rio (JB)

2006MY Rio (JB) 1.6L

MENU	PASSWORD
JB FED 1.6 MT +IMMO/SMK : 39110-26BE6	0266
JB FED 1.6 AT +IMMO/SMK : 39110-26BE1	0261
JB CAL/FED 1.6 MT -IMMO : 39110-26BE5	0265
JB CAL/FED 1.6 AT -IMMO : 39110-26BE0	0260

2007MY Rio (JB) 1.6L

MENU	PASSWORD
JB CAL/FED 1.6 MT -IMMO : 39110-26BG0	0262
JB CAL/FED 1.6 AT -IMMO : 39110-26BG5	0267
JB CAL/FED 1.6 MT +IMMO/SMK : 39110-26BE2	0263
JB CAL/FED 1.6 AT +IMMO/SMK : 39110-26BE7	0268

2008~2011MY Rio (JB) 1.6L

MENU	PASSWORD
JB CAL/FED 1.6 MT -IMMO : 39110-26BG1	1101
JB CAL/FED 1.6 MT -IMMO : 39120-26BG1	1201
JB CAL/FED 1.6 MT -IMMO : 39130-26AH0	1300
JB CAL/FED 1.6 MT -IMMO : 39140-26AH0	1400



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**2008~2011MY Rio (JB) 1.6L (Cont'd)**

JB CAL/FED 1.6 AT -IMMO : 39110-26BG6	1106
JB CAL/FED 1.6 AT -IMMO : 39120-26BG6	1206
JB CAL/FED 1.6 AT -IMMO : 39130-26AH5	1305
JB CAL/FED 1.6 AT -IMMO : 39140-26AH5	1405
JB FED 1.6 MT +IMMO : 39110-26BE3	1103
JB FED 1.6 MT +IMMO : 39120-26BE3	1203
JB FED 1.6 MT +IMMO : 39130-26AJ0	1301
JB FED 1.6 MT +IMMO : 39140-26AJ0	1401
JB FED 1.6 AT +IMMO : 39110-26BE8	1108
JB FED 1.6 AT +IMMO : 39120-26BE8	1208
JB FED 1.6 AT +IMMO : 39130-26AJ5	1306
JB FED 1.6 AT +IMMO : 39140-26AJ5	1406

7. When the GDS 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 maybe set during reprogramming.
9. Start the engine to confirm proper operation of the vehicle.

**AFFECTED VEHICLE PRODUCTION RANGE:**

Model	Production Date Range
Rio (JB)	April 1, 2006 Through July 14, 2011

**WARRANTY CLAIM INFORMATION:**

Claim Type	Causal P/N	Qty	N Code	C Code	Repair Description	Labor Op Code	Time	Related Parts	Qty
W	39120 26BG6	0	N69	C40	(ENG135) ECM Upgrade	39110F6T	0.2 M/H	N/A	0