	GROUP **Service Campaign**	MODEL **2012~2014MY Sorento (XMa) 2012~2013MY Optima (TF/QF) 2012~2013MY Sportage (SL)**
	NUMBER **SC 114 (Rev 1, 02/27/2015)**	DATE **February 2015**

VOLUNTARY SERVICE CAMPAIGN

SUBJECT: ECM UPGRADE –MIL ON WITH DTC P0087 (SC114)

> ★ **NOTICE**
>
> **This bulletin has been revised to include additional information. New/revised sections of this bulletin are indicated by a black bar in the margin area.**

This bulletin provides information related to an ECM software update for the Engine Control Unit (ECU) in certain 2012~2014MY Sorento, 2012~2013MY Optima, and 2012~2013MY Sportage vehicles equipped with the 2.4L and 2.0L Turbo GDI engines. The subject vehicle's engines are equipped with a Gasoline Direct Injection (GDI) system that utilizes a Flow Control Valve (FCV) to control the supply of fuel. The FCV needle may experience excessive wear, eventually resulting in impairment of fuel flow. If that happens, and to protect the engine, the ECU may reduce engine acceleration while illuminating the "Check Engine" or Malfunction Indicator Lamp (MIL). The ECU update will improve the durability and operation of the FCV needle.

> ★ **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.**

File Under: <Service Campaign>

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

ECM Upgrade Procedure:

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

UPGRADE EVENT NAME
241.XMA 2.4GDI DTC(P0087) LOGIC IMPROVEMENT
242.QF 2.0TGDI/2.4GDI DTC(P0087) LOGIC IMPROVEMENT
243.SL 2.0TGDI DTC(P0087) LOGIC IMPROVEMENT
244.TF 2.0TGDI/2.4GDI DTC(P0087) LOGIC IMPROVEMENT

★ 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. ↩

SUBJECT:

ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

ROM ID INFORMATION TABLES :

Upgrade event #241 (XMa)

MY	T/M	2WD/4WD	IMMO	ECM P/N	ROM ID	
					PREVIOUS	NEW
2012MY	A/T	2WD	Yes (+) 🚗	39113 2G770	XCC4RB3C XCC4RB3D	**XCC4RB3E**
2013MY				39113 2G771	XDC4RE0A XDC4REAA XDC4REAB XDC4REAC	**XDC4REAE**
					XDC4READ	**XDC4REAF**
2012MY			No (-)	39113 2G760	XCC4MB3C XCC4MB3D	**XCC4MB3E**
2013MY				39113 2G761	XDC4ME0A XDC4MEAA XDC4MEAB XDC4MEAC	**XDC4MEAE**
					XDC4MEAD	**XDC4MEAF**
2012MY		4WD	Yes (+) 🚗	39114 2G770	XCC4RB3C XCC4RB3D	**XCC4RB3E**
2013MY				39114 2G771	XDC4RE0A XDC4REAA XDC4REAB XDC4REAC	**XDC4REAE**
					XDC4READ	**XDC4REAF**
2012MY			No (-)	39114 2G760	XCC4MB3C XCC4MB3D	**XCC4MB3E**
2013MY				39114 2G761	XDC4ME0A XDC4MEAA XDC4MEAB XDC4MEAC	**XDC4MEAE**
					XDC4MEAD	**XDC4MEAF**

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

Upgrade event #241 (XMa) (Cont'd)

MODEL	T/M	2WD/4WD	IMMO	ECU P/N	ROM ID	
					PREVIOUS	NEW
2014MY	AT	2WD	Yes (+)	39113 2GBK5	FDC4RF3A FDC4RG0A	**FDC4RG0B**
			No (-)	39113 2GBK0	FDC4MF3A FDC4MG0A	**FDC4MG0B**
		4WD	Yes (+)	39113 2GBL5	FDC4RF3A FDC4RG0A	**FDC4RG0B**
			No (-)	39113 2GBL0	FDC4MF3A FDC4MG0A	**FDC4MG0B**
	MT	2WD	Yes (+)	39114 2GBK5	FDC4RF3A FDC4RG0A	**FDC4RG0B**
			No (-)	39114 2GBK0	FDC4MF3A FDC4MG0A	**FDC4MG0B**

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

Upgrade event #242 (QF)

MODEL	T/M	IMMO	MY	ECM P/N	ROM ID	
					PREVIOUS	**NEW**
QF TGDI (ULEV)	AT	Yes (+) 🚗	12MY	39111 2G891	TCC0RC0A TCC0RC0B TCC0RC0C	**TDC0RF3B**
			13MY	39111 2G893	TDC0RE3A TDC0RE5A TDC0REAA TDC0RF3A	
				39111 2G895	TDC0RG1A	**TDC0RG1B**
		No (-)	12MY	39111 2G881	TCC0MC0A TCC0MC0B TCC0MC0C	**TDC0MF3B**
			13MY	39111 2G883	TDC0ME3A TDC0ME5A TDC0MEAA TDC0MF3A	
				39111 2G885	TDC0MG1A	**TDC0MG1B**
QF GDI (SULEV)		Yes (+) 🚗	12MY	39111 2G877	TCS4RB3A TCS4REAA	**TCS4REAB**
			13MY	39111 2G879	TDS4REAA TDS4RF0A TDS4RF3A	**TDS4RF3B**
		No (-)	12MY	39111 2G867	TCS4MB3A TCS4MEAA	**TCS4MEAB**
			13MY	39111 2G869	TDS4MEAA TDS4MF0A TDS4MF3A	**TDS4MF3B**
QF GDI (SULEV)	AT	Yes (+) 🚗	12MY	39111 2G877	TCS4RB3A TCS4REAA	**TCS4REAB**
			13MY	39111 2G879	TDS4REAA TDS4RF0A TDS4RF3A	**TDS4RF3B**
		No (-)	12MY	39111 2G867	TCS4MB3A TCS4MEAA	**TCS4MEAB**
			13MY	39111 2G869	TDS4MEAA TDS4MF0A TDS4MF3A	**TDS4MF3B**
QF GDI (ULEV)	AT	Yes (+) 🚗	12MY	39111 2G872	TCC4RB3A TCC4REAA	**TCC4REAB**
			13MY	39111 2G874	TDC4REAA TDC4RF0A TDC4RF3A	**TDC4RF3B**
		No (-)	12MY	39111 2G862	TCC4MB3A TCC4MEAA	**TCC4MEAB**
			13MY	39111 2G864	TDC4MEAA TDC4MF0A TDC4MF3A	**TDC4MF3B**

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

Upgrade event #243 (SL)

MODEL	T/M	2WD/4WD	IMMO	MY	ECM P/N	ROM ID	
						PREVIOUS	NEW
SL TGDI (ULEV)	AT	2WD	Yes (+) 🔒	12MY	39113 2G870	SCC0RB1A SCC0RB3A SCC0RC0A	SDC0RF3B
					39113 2G871	SCC0RC0B	
				13MY	39113 2G872	SDC0RE3A SDC0RE5A SDC0REAA SDC0RF3A	
					39113 2G873	SDC0RG1A	SDC0RG1B
			No (-)	12MY	39113 2G860	SCC0MB1A SCC0MB3A SCC0MC0A	SDC0MF3B
					39113 2G861	SCC0MC0B	
				13MY	39113 2G862	SDC0ME3A SDC0ME5A SDC0MEAA SDC0MF3A	
					39113 2G863	SDC0MG1A	SDC0MG1B
		4WD	Yes (+) 🔒	12MY	39114 2G870	SCC0RB1A SCC0RB3A SCC0RC0A	SDC0RF3B
					39114 2G871	SCC0RC0B	
				13MY	39114 2G872	SDC0RE3A SDC0RE5A SDC0REAA SDC0RF3A	
					39114 2G873	SDC0RG1A	SDC0RG1B
			No (-)	12MY	39114 2G860	SCC0MB1A SCC0MB3A SCC0MC0A	SDC0MF3B
					39114 2G861	SCC0MC0B	
				13MY	39114 2G862	SDC0ME3A SDC0ME5A SDC0MEAA SDC0MF3A	
					39114 2G863	SDC0MG1A	SDC0MG1B

SUBJECT: ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

Upgrade event #244 (TF)

MODEL	T/M	IMMO	MY	ECM P/N	ROM ID	
					PREVIOUS	NEW
TF TGDI	AT	Yes (+) 🚗	11MY	39111 2G890	TBC0R95C	TDC0RF3L
					TBC0R96A	
					TBC0R97A	
					TBC0R97B	
					TBC0RB3A	
					TBC0RC0A	
			12MY	39111 2G892	TCC0MC0K	
					TCC0RC0L	
					TCC0RC0M	
			13MY	39111 2G892	TDC0REAK	
					TDC0RE5K	
				39111 2G894	TDC0RF3K	
				39111 2G895	TDC0RG1K	TDC0RG1L
		No (-)	11MY	39111 2G880	TBC0M95C	TDC0MF3L
					TBC0M96A	
					TBC0M97A	
					TBC0M97B	
					TBC0MB3A	
					TBC0MC0A	
			12MY	39111 2G882	TCC0MC0L	
					TCC0MC0K	
					TCC0MC0M	
			13MY	39111 2G882	TDC0MEAK	
					TDC0ME5K	
				39111 2G884	TDC0MF3K	
				39111 2G885	TDC0MG1K	TDC0MG1L
TF GDI		Yes (+) 🚗	12MY	39111 2G878	TCS4RB3K	TCS4REAL
					TCS4REAK	
			13MY	39111 2G903	TDS4REAK	TDS4RG1L
					TDS4RF0K	
					TDS4RF3K	
					TDS4RG1K	
		No (-)	12MY	39111 2G868	TCS4MB3K	TCS4MEAL
					TCS4MEAK	
			13MY	39111 2G901	TDS4MEAK	TDS4MG1L
					TDS4MF0K	
					TDS4MF3K	
					TDS4MG1K	
TF GDI		Yes (+) 🚗	12MY	39111 2G873	TCC4RB3K	TCC4REAL
					TCC4REAK	

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

Upgrade event #244 (TF) (Cont'd)

MODEL	T/M	IMMO	MY	ECM P/N	ROM ID	
					PREVIOUS	NEW
TF GDI	A/T	Yes (+) ⟳	13MY	39111 2G902	TDC4REAK	TDC4RG1L
					TDC4RF0K	
					TDC4RF3K	
					TDC4RG1K	
		No (-)	12MY	39111 2G863	TCC4MB3K	TCC4MEAL
					TCC4MEAK	
			13MY	39111 2G900	TDC4MEAK	TDC4MG1L
					TDC4MF0K	
					TDC4MF3K	
					TDC4MG1K	

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, be sure to check that the GDS 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 connector be connected to the GDS.**

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

> ★ **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.**

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.
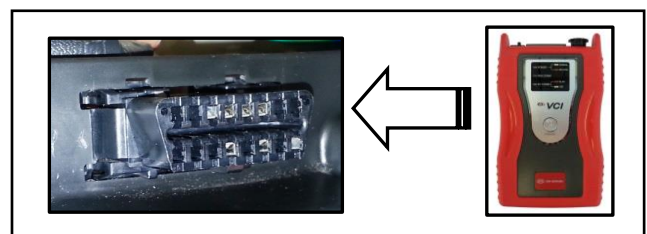
SUBJECT: ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

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.
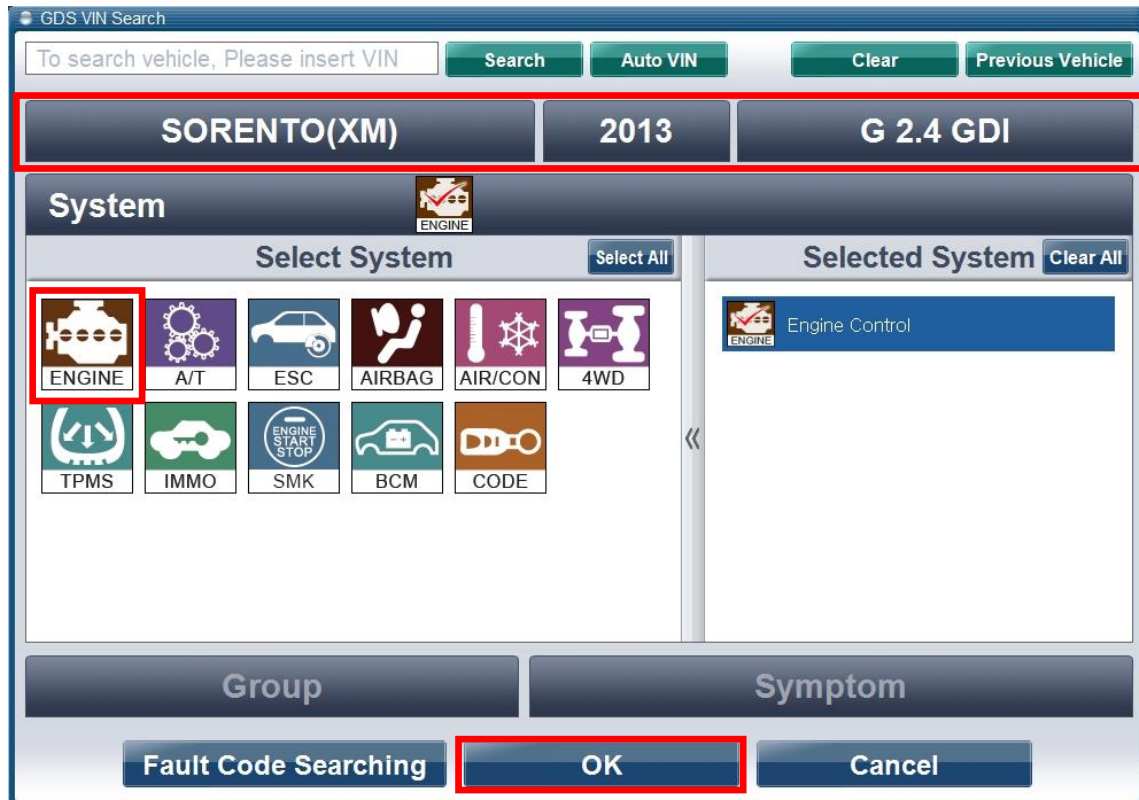
6. Select **ENGINE** system and click **OK**.

Image shown is for demonstration __ONLY__ purposes and will vary by model.

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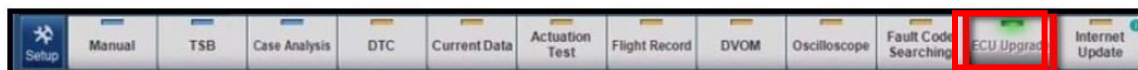
8. When the GDS reports that the ECM upgrade has been successfully completed, click **OK**, turn OFF the ignition key, and wait at least 10 seconds before attempting to start the engine.

9. Check for Diagnostic Trouble Codes using the GDS and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during reprogramming.

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

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

Manual Mode Upgrade:

> ### ⚠ 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:

* <u>Do NOT perform Manual Mode ECM upgrade unless Auto Mode fails</u>.

Upgrade event #241 Sorento (XMa)

MODEL	MENU	PASSWORD
XMa 2.4 GDI	XMA GDI -IMMO UL : 39113/14-2G760/65	2760
	XMA GDI -IMMO UL : 39113/14-2G761[~ME0A,~MEAA,~MEAB,~MEAC]	2761
	XMA GDI -IMMO UL : 39113/14-2G761[~MEAD]	2762
	XMA GDI +IMMO/SMK UL : 39113/14-2G770/75	2770
	XMA GDI +IMMO/SMK UL : 39113/14-2G771[~RE0A,~REAA,~REAB,~REAC]	2771
	XMA GDI +IMMO/SMK UL : 39113/14-2G771[~READ]	2772
	XMA GDI -IMMO UL : 39113/14-2GBK0/L0	1420
	XMA GDI +IMMO/SMK UL : 39113/14-2GBK5/L5	1425

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

Upgrade event #242 Optima (QF)

MODEL	MENU	PASSWORD
QF 2.0 T-GDI	QF TGDI AT -IMMO UL : 39111-2G881/83 2883	2883
	QF TGDI AT -IMMO UL : 39111-2G885 2885	2885
	QF TGDI AT +IMMO/SMK UL : 39111-2G891/93 2893	2893
	QF TGDI AT +IMMO/SMK UL : 39111-2G895 2895	2895
	QF GDI AT -IMMO SUL : 39111-2G867 2867	2867
	QF GDI AT -IMMO SUL : 39111-2G869 2869	2869
QF 2.4 GDI	QF GDI AT +IMMO/SMK SUL : 39111-2G877 2877	2877
	QF GDI AT +IMMO/SMK SUL : 39111-2G879 2879	2879
	QF GDI -IMMO UL : 39111/12-2G862 2862	2862
	QF GDI -IMMO UL : 39111/12-2G864 2864	2864
	QF GDI +IMMO/SMK UL : 39111/12-2G872 2872	2872
	QF GDI +IMMO/SMK UL : 39111/12-2G874	2874

Upgrade event #243 Sportage (SL)

MODEL	MENU	PASSWORD
SL 2.0 T-GDI	SL TGDI AT -IMMO UL : 39113/14-2G860/61/62	2862
	SL TGDI AT -IMMO UL : 39113/14-2G863	2863
	SL TGDI AT +IMMO/SMK UL : 39113/14-2G870/71/72	2872
	SL TGDI AT +IMMO/SMK UL : 39113/14-2G873	2873

Upgrade event #244 Optima (TF)

MODEL	MENU	PASSWORD
TF 2.0 T-GDI	TF TGDI -IMMO UL : 39101-2G880/82/84	2884
	TF TGDI -IMMO UL : 39111-2G885	2885
	TF TGDI +IMMO/SMK UL : 39111-2G890/92/94	2894
	TF TGDI +IMMO/SMK UL : 39111-2G895	2895
TF 2.4 GDI	TF GDI AT -IMMO SUL : 39111-2G868	2868
	TF GDI AT -IMMO SUL : 39111-2G901	2901
	TF GDI AT +IMMO/SMK SUL : 39111-2G878	2878
	TF GDI AT +IMMO/SMK SUL : 39111-2G903	2903
	TF GDI +IMMO/SMK UL : 39111/12-2G873	2873
	TF GDI +IMMO/SMK UL : 39111/12-2G902	2902
	TF GDI -IMMO UL : 39111/12-2G863	2863
	TF GDI -IMMO UL : 39111/12-2G900	2900

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

1. Within the ECU Upgrade screen, select Manual Mode in the left column, select **Engine Control System** and then select Upgrade Event 241, 242, 243 or 244. Select the appropriate control unit part number by referring to the ROM ID Information Table on Pages 3~8, and click **OK**.

2. Enter the appropriate password from the tables on Pages 10~11. Click on **OK**.

3. Upgrade will begin and the progress of the upgrade will appear on the bar graph.

4. 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.

5. Check if any incidental Diagnostic Trouble Codes (DTC(s)) have been created by the upgrade process; clear any DTC(s) that may be present.

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

SUBJECT:	ECM UPGRADE – MIL ON WITH DTC P0087 (SC114)

AFFECTED VEHICLE PRODUCTION RANGE:

Model	Production Date Range
Sorento (XMa)	From November 1, 2011 through August 27, 2013
Optima (QF)	From September 26, 2010 through August 22, 2013
Optima (TF)	From February 20, 2012 through August 23, 2013
Sportage (SL)	From November 24, 2011 through July 11, 2013

WARRANTY CLAIM INFORMATION:

Claim Type	Causal P/N	Qty.	N Code	C Code	Repair Description	Labor Op Code	Time	Related Parts	Qty.
R	39113 2G771	0	N99	C99	(SC 114) ECM Upgrade (XMa)	150A03R0	0.3 M/H	N/A	0
	39111 2G893				(SC 114) ECM Upgrade (QF)	150A03R1			
	39113 2G872				(SC 114) ECM Upgrade (SL)	150010R0			
	39111 2G890				(SC 114) ECM Upgrade (TF)	150010R1			

★ NOTICE

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