	GROUP	MODEL
(KIA logo)	**Product Improvement**	**See Model List on Page 1**
	NUMBER	DATE
	1802 (Rev 3, 12/04/2018)	**July 2018**

PRODUCT IMPROVEMENT CAMPAIGN

SUBJECT: KNOCK SENSOR DETECTION SYSTEM - ECU
LOGIC IMPROVEMENT (PI1802)

★ 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 a software update to the Engine Control Unit (ECU) to install the Knock Sensor Detection System (KSDS) in order to protect the engine from excessive connecting rod bearing damage. This update is for:

Year	Model	Engine	Production Date
2014	Optima (TF)	2.4L GDI	8/29/13 – 4/25/14
2015-2016	Optima (TF/QF/JF/JFa)	2.4L & 2.0T GDI	4/16/14 – 10/12/16
2014-2016	Sportage (SL)	2.4L & 2.0T GDI	9/30/13 – 11/16/15
2015-2016	Sorento (XMa/UMa)	2.4L & 2.0T GDI	1/3/14 – 4/26/16

The KSDS detects vibrations indicating the onset of excessive connecting rod bearing wear. It is designed to alert the driver at an early stage of bearing wear before the occurrence of severe engine damage, including engine failure. If vibrations caused by bearing wear start to occur, the Malfunction Indicator Lamp (MIL) will blink continuously, and the vehicle will be placed in Limp Home Mode. This will reduce further damage to the engine and ensure that the vehicle occupants are not exposed to the risk of a more severe engine failure. At that time, Diagnostic Trouble Code ("DTC") P1326, specific to the KSDS, will be recorded in the ECU. The vehicle can continue to be operated for a limited time in Limp Home Mode, but it will accelerate slowly and have a reduced maximum speed. Also, engine RPMs will be limited to approximately 1800-2000 RPM.

Please note, since Kia launched this Product Improve Campaign, Kia has become aware that the KSDS software version installed on 2014-2015MY Optima vehicles before September 7, 2018 has an error and requires the installation of a new corrected software. Kia has identified all affected 2014-2015MY Optima vehicles which require the installation of the new corrected software, and these vehicles are identified under a separate campaign number, PI1802A1, in the WEBDCS.

Kia is requesting the completion of this Product Improvement Campaign on all affected vehicles. Before conducting the procedure, verify the vehicle is included in the list of affected VINs. Also, please have your KDS connected to the internet regularly to get the latest software updates available.

File Under: <Product Improvement>

Circulate To: ☒ **General Manager**   ☒ **Service Manager**   ☒ **Parts Manager**

☒ **Service Advisors**   ☒ **Technicians**   ☒ **Body Shop Manager**   ☐ **Fleet Repair**

SUBJECT:	KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

> ★ **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.**

ECU Upgrade Procedure:

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

Upgrade Event Name
374. XMa Theta 2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade
375. TF Theta 2.0/2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade
376. SL Theta 2.0/2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade
377. QF Theta 2.0/2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade
392. UMa THETA 2.0/2.4 Knock Sensor Detection System (KSDS) ECU Upgrade (16MY)
393. JF/JFa THETA 2.0/2.4 Knock Sensor Detection System (KSDS) ECU Upgrade (16MY)
394. SL THETA 2.0/2.4 Knock Sensor Detection System (KSDS) ECU Upgrade (16MY)

> ★ **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.**

> ⚠ **CAUTION**
>
> **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.** ↩

> ★ **NOTICE**
>
> **For Optima models included in this TSB:**
> **VINs that start with 5XX are designated Optima (QF/JFa) and produced in the United States. VINs that start with KNA are designated Optima (TF/JF) are produced in South Korea.**

SUBJECT:

KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

ROM ID INFORMATION TABLE:

Upgrade Event #374, #375, #376, #377, #392, #393, #394

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
15MY Sor. (XMa)	2.4 (ULEV)	Yes 🚗	39113-2GBK6 39113-2GBK7 39113-2GBL6 39113-2GBL7	FFC4RH2A FFC4RHAA FFC4RHAB	FFC4RHAK FFC4RHAL
		No	39113-2GBK1 39113-2GBK2 39113-2GBL1 39113-2GBL2	FFC4MH2A FFC4MHAA FFC4MHAB	FFC4MHAK FFC4MHAL
14MY Opt. (TF)	2.4 (ULEV)	Yes 🚗	39108-2GBF0 39118-2GBF0	TEC4RH2K TEC4RH2L TEC4RH25	TEC4RH26
		No	39108-2GBE0 39118-2GBE0	TEC4MH2K TEC4MH2L TEC4MH25	TEC4MH26
	2.4 (SULEV)	Yes 🚗	39108-2GBF5	TES4RH2K TES4RH2L TES4RH25	TES4RH26
		No	39108-2GBE5	TES4MH2K TES4MH2L TES4MH25	TES4MH26
15MY Opt. (TF)	2.4 (ULEV)	Yes 🚗	39108-2GBF1	TFC4RH4K TFC4RH4L TFC4RH45	TFC4RH46
		No	39108-2GBE1 39118-2GBE1	TFC4MH4K TFC4MH4L TFC4MH45	TFC4MH46
	2.4 (SULEV)	No	39108-2GBE6	TFS4MH4K TFS4MH4L TFS4MH45	TFS4MH46
14MY Opt. (TF)	2.0T (ULEV)	Yes 🚗	39108-2GBG5 39108-2GBG6	TEC0RH2K TEC0RH2L TEC0RH25	TEC0RH26
		No	39108-2GBG0 39108-2GBG1	TEC0MH2K TEC0MH2L TEC0MH25	TEC0MH26
15MY Opt. (TF)	2.0T (ULEV)	Yes 🚗	39108-2GBG7	TFC0RH4K TFC0RH4L TFC0RH45	TFC0RH46
14MY Spo. (SL)	2.4 (ULEV)	Yes 🚗	39107-2GCD0 39107-2GCE0 39117-2GCD0 39117-2GCE0	SEC4RH2A SEC4RH2B SEC4RH2C SEC4RH2D	SEC4RH2K
		No	39107-2GCD5 39107-2GCE5 39117-2GCD5 39117-2GCE5	SEC4MH2A SEC4MH2B SEC4MH2C SEC4MH2D	SEC4MH2K
	2.4 (SULEV)	Yes 🚗	39107-2GCG0	SES4RH2A SES4RH2B SES4RH2C SES4RH2D	SES4RH2K

SUBJECT: KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID Previous	ROM ID New
14MY Spo. (SL)	2.4 (SULEV)	Yes 🚗	39107-2GCG0	SES4RH2A SES4RH2B SES4RH2C SES4RH2D	SES4RH2K
		No	39107-2GCG5	SES4MH2A SES4MH2B SES4MH2C SES4MH2D	SES4MH2K
15MY Spo. (SL)	2.4 (ULEV)	Yes 🚗	39107-2GCD1 39107-2GCD2 39107-2GCE1 39107-2GCE2 39117-2GCD1 39117-2GCE1	SFC4RH4A SFC4RH4B	SFC4RH4K
		No	39107-2GCD6 39107-2GCD7 39107-2GCE6 39107-2GCE7 39117-2GCD6 39117-2GCE6	SFC4MH4A SFC4MH4B	SFC4MH4K
	2.4 (SULEV)	Yes 🚗	39107-2GCG1 39107-2GCG2	SFS4RH4A SFS4RH4B	SFS4RH4K
		No	39107-2GCG6 39107-2GCG7	SFS4MH4A SFS4MH4B	SFS4MH4K
14MY Spo. (SL)	2.0T (ULEV)	Yes 🚗	39107-2GCC0	SEC0RH2A	SEC0RH2K
		No	39107-2GCC5	SEC0MH2A	SEC0MH2K
	2.0T (ULEV)	Yes 🚗	39107-2GCC1 39107-2GCC2	SFC0RH4A	SFC0RH4K
		No	39107-2GCC6 39107-2GCC7	SFC0MH4A	SFC0MH4K
15MY Spo. (SL)	2.0T (ULEV)	Yes 🚗	39107-2GCC3	SGC0RH4A	SGC0RH4K
		No	39107-2GCC8	SGC0MH4A	SGC0MH4K
15MY Opt. (QF)	2.4 (ULEV)	Yes 🚗	39108-2GBJ1 39108-2GBJ2 39118-2GBJ1	TFC4RH4A TFC4RH4B TFC4RH41	TFC4RH42
		No	39108-2GBH1 39108-2GBH2 39118-2GBH1	TFC4MH4A TFC4MH4B TFC4MH41	TFC4MH42
	2.4 (SULEV)	Yes 🚗	39108-2GBJ6 39108-2GBJ7	TFS4RH4A TFS4RH4B TFS4RH41	TFS4RH42
		No	39108-2GBH6 39108-2GBH7	TFS4MH4A TFS4MH4B TFS4MH41	TFS4MH42
15MY Opt. (QF)	2.0T (ULEV)	Yes 🚗	39108-2GBK7 39108-2GBK8	TFC0RH4A TFC0RH4B TFC0RH41	TFC0RH42
		No	39108-2GBK2 39108-2GBK3	TFC0MH4A TFC0MH4B TFC0MH41	TFC0MH42

SUBJECT:

KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID Previous	ROM ID New
16MY Sor. (UMa) 2WD	2.4 (ULEV)	Yes 🚗	39100-2GGF5	2WD_UMAFNC4ER91A 2WD_UMAFNC4ER92A 2WD_UMAGNC4ERA31 2WD_UMAFNC4ERA51 2WD_UMAFNC4ERA52	2WD_UMAFNC4ERA6K
			39100-2GGF6	2WD_UMAFNC4ERA3A 2WD_UMAFNC4ERA5A 2WD_UMAFNC4ERA5B 2WD_UMAFNC4ERA5C	2WD_UMAFNC4ERA6M
		No	39100-2GGF0	2WD_UMAFNC4EM91A 2WD_UMAFNC4EM92A 2WD_UMAGNC4EMA31 2WD_UMAFNC4EMA51 2WD_UMAFNC4EMA52	2WD_UMAFNC4EMA6K
			39100-2GGF1	2WD_UMAFNC4EMA3A 2WD_UMAFNC4EMA5A 2WD_UMAFNC4EMA5B 2WD_UMAFNC4EMA5C	2WD_UMAFNC4EMA6M
16MY Sor. (UMa) 4WD	2.4 (ULEV)	Yes 🚗	39100-2GGH5	4WD_UMAFNC4ER91A 4WD_UMAFNC4ER92A 4WD_UMAGNC4ERA31 4WD_UMAFNC4ERA51 4WD_UMAFNC4ERA52	4WD_UMAFNC4ERA6O
			39100-2GGH6	4WD_UMAFNC4ERA3A 4WD_UMAFNC4ERA5A 4WD_UMAFNC4ERA5B 4WD_UMAFNC4ERA5C	4WD_UMAFNC4ERA6P
		No	39100-2GGH0	4WD_UMAFNC4EM91A 4WD_UMAFNC4EM92A 4WD_UMAGNC4EMA31 4WD_UMAFNC4EMA51 4WD_UMAFNC4EMA52	4WD_UMAFNC4EMA6O
			39100-2GGH1	4WD_UMAFNC4EMA3A 4WD_UMAFNC4EMA5A 4WD_UMAFNC4EMA5B 4WD_UMAFNC4EMA5C	4WD_UMAFNC4EMA6P
16MY Sor. (UMa) 2WD	2.0T (ULEV)	Yes 🚗	39100-2GTC6	2WD_UMAGNC0ERA3A 2WD_UMAGNC0ERA5A 2WD_UMAGNC0ERA61	2WD_UMAGNC0ERA6K
		No	39100-2GTC1	2WD_UMAGNC0EMA3A 2WD_UMAGNC0EMA5A 2WD_UMAGNC0EMA61	2WD_UMAGNC0EMA6K
16MY Sor. (UMa) 4WD	2.0T (ULEV)	Yes 🚗	39100-2GTD6	4WD_UMAGNC0ERA3A 4WD_UMAGNC0ERA5A 4WD_UMAGNC0ERA61	4WD_UMAGNC0ERA6L
		No	39100-2GTD1	4WD_UMAGNC0EMA3A 4WD_UMAGNC0EMA5A 4WD_UMAGNC0EMA61	4WD_UMAGNC0EMA6L

SUBJECT:	KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

| Model | ENG | IMMO | ECU P/No. | ROM ID | |
				Previous	New
16MY Opt. (JF/JFa)	2.4 (ULEV)	Yes 🚗	39108-2GGC5	JFAGNC4ERB0A JFAGNC4ERB0B JFAGNC4ERC0A JFAGNC4ERC3A	JFAGNC4ERC3K
			39108-2GGC5	JFAGNC4ERD11	JFAGNC4ERD1K
		No	39108-2GGC0	JFAGNC4EMB0A JFAGNC4EMB0B JFAGNC4EMC0A JFAGNC4EMC3A	JFAGNC4EMC3K
			39108-2GGC0	JFAGNC4EMD11	JFAGNC4EMD1K
	2.4 (SULEV)	Yes 🚗	39108-2GGD5	JFAGNS4ERB0A JFAGNS4ERB0B JFAGNS4ERC0A JFAGNS4ERC3A	JFAGNS4ERC3K
			39108-2GGD5	JFAGNS4ERD11	JFAGNS4ERD1K
		No	39108-2GGD0	JFAGNS4EMB0A JFAGNS4EMB0B JFAGNS4EMC0A JFAGNS4EMC3A	JFAGNS4EMC3K
			39108-2GGD0	JFAGNS4EMD11	JFAGNS4EMD1K
16MY Opt. (JFa)	2.0T (ULEV)	Yes 🚗	39108-2GTK5	JFAGNC0ERB0A JFAGNC0ERB0B JFAGNC0ERB4A	JFAGNC0ERB4K
		No	39108-2GTK0	JFAGNC0EMB0A JFAGNC0EMB0B JFAGNC0EMB4A	JFAGNC0EMB4K
16MY Spo. (SL)	2.4 (ULEV)	Yes 🚗	39107-2GCD3 39107-2GCE3 39117-2GCD3 39117-2GCE3	SGC4RH4A SGC4RH4B	SGC4RH4K
		No	39107-2GCD8 39107-2GCE8 39117-2GCD8 39117-2GCE8	SGC4MH4A SGC4MH4B	SGC4MH4K
	2.4 (SULEV)	Yes 🚗	39107-2GCG3	SGS4RH4A SGS4RH4B	SGS4RH4K
		No	39107-2GCG8	SGS4MH4A SGS4MH4B	SGS4MH4K

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.

SUBJECT:

KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

✶ **NOTICE**

Prior to performing the ECU upgrade, be sure to check that the KDS is fully charged.

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1. Connect the VCI-II to the OBD-II connector, located under the driver's side of the instrument panel.

   ### ✶ **NOTICE**
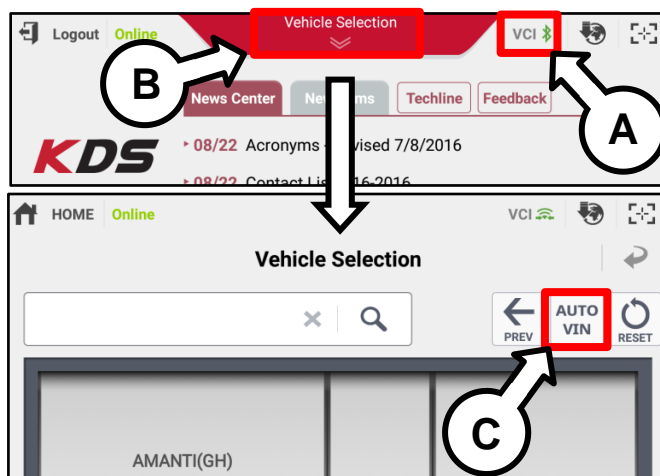
   The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.
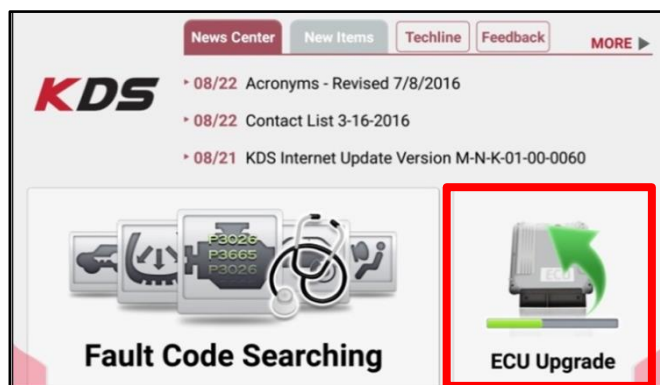
2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.

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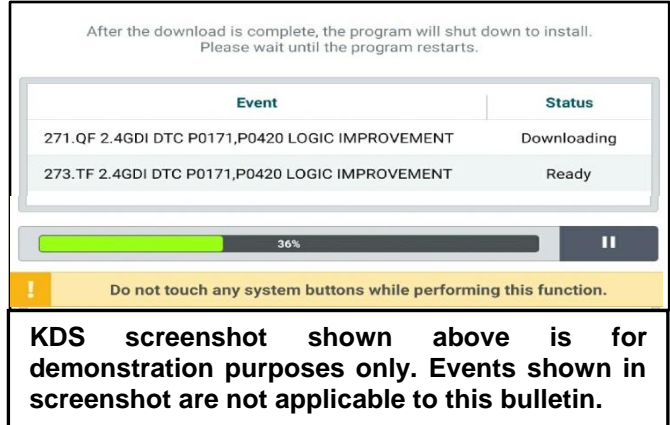
4. Select **ECU Upgrade**.

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SUBJECT: KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

5. The KDS will check the server for recently uploaded Events and then automatically download **Upgrade Event #374 (XMa), #375 (TF), #376 (SL), #377 (QF), #392 (UMa), #393 (JF/JFa), or #394 (16MY SL).**

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

After the download is complete, the program will shut down to install. Please wait until the program restarts.

Event	Status
271.QF 2.4GDI DTC P0171,P0420 LOGIC IMPROVEMENT	Downloading
273.TF 2.4GDI DTC P0171,P0420 LOGIC IMPROVEMENT	Ready

36%

! Do not touch any system buttons while performing this function.

KDS screenshot shown above is for demonstration purposes only. Events shown in screenshot are not applicable to this bulletin.

6. Select **Auto Mode**.

> **★ NOTICE**
>
> **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.**

Auto Mode   **Manual Mode**
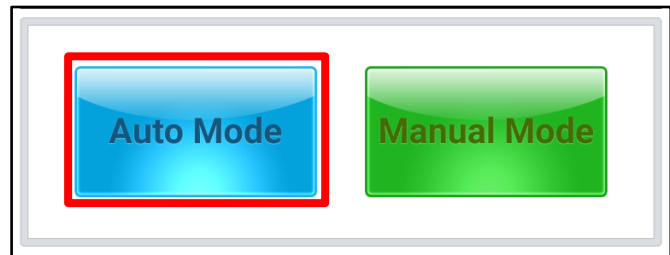
7. Select the **ENGINE** system under the System selection menu.

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

Select **Upgrade Event #374 (XMa), #375 (TF), #376 (SL), #377 (QF), #392 (UMa), #393 (JF/JFa), or #394 (16MY SL)** and select **Upgrade** to continue.

● System

ENGINE   A / T   **D**

● ROM ID

Currently in Vehicle ######
Latest Update ######   ID Check

● Event Group   TSB

###.XX -----

Previous   Upgrade
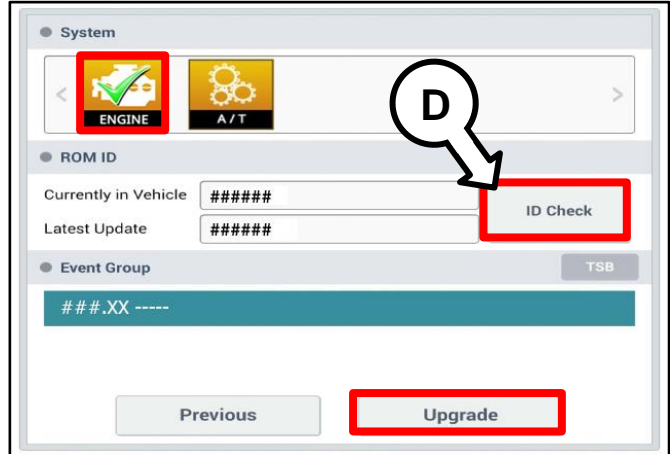
8. The ECU upgrade will begin and the progress of the upgrade will appear on the bar graph. Upgrade part (1/2) (E) will download the upgrade event to the VCI-II. Upgrade part (2/2) (F) will upgrade the ECU.

> **★ NOTICE**
>
> **Do not touch the system buttons (like 'Back', 'Home', 'etc.') while performing ECU Upgrade.**

E

23%

ECU Upgrading...(1/2)

ECU is in the process of being upgraded. Please wait a few minute.

F

6%

ECU Upgrading...(2/2)

ECU is in the process of being upgraded. Please wait a few minute.

TSB: PI1802 (Rev 3) Multiple Models July 2018
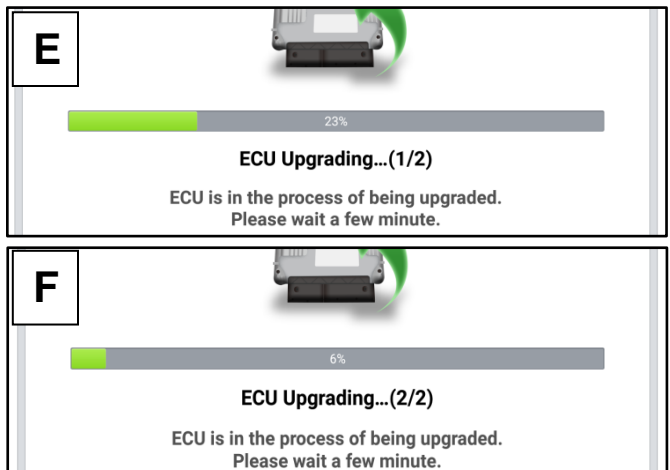
9. If a "Communication Fail" screen appears, verify that the VCI-II and KDS are communicating properly. Touch **OK** and restart the procedure from step 4.

★ 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.

Notice

Communication Fail!
Please recheck selected system, IG key, DLC cable connection.
And retry the communication.

Error Code : 5004-00-0000

OK

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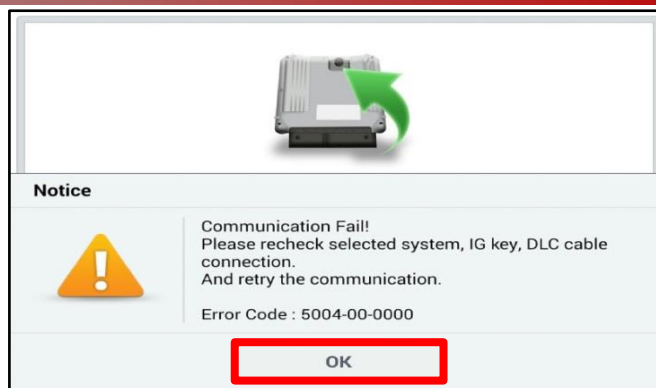
10. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.

★ NOTICE

If applicable and instructed on the KDS, leave the ignition ON for five (5) seconds to perform ETC Adaptive Learning.
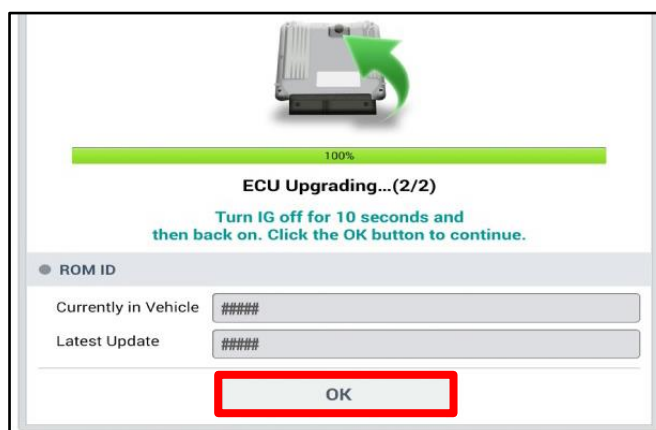
100%
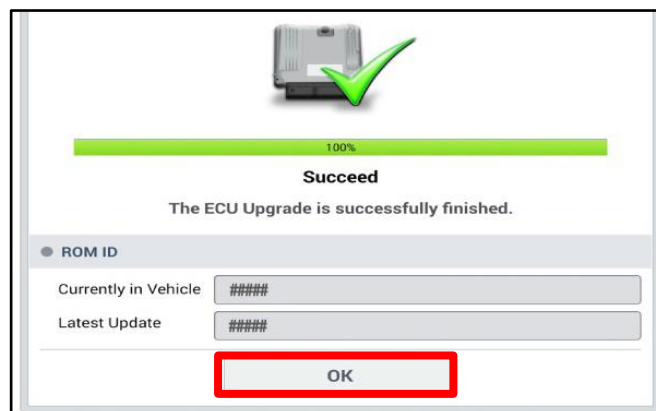
ECU Upgrading...(2/2)
Turn IG off for 10 seconds and then back on. Click the OK button to continue.

● ROM ID

Currently in Vehicle ####
Latest Update ####

OK

---

11. Once the upgrade is complete, touch **OK** to finalize the procedure.

100%

Succeed
The ECU Upgrade is successfully finished.

● ROM ID

Currently in Vehicle ####
Latest Update ####

OK

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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.

Notice

Do you want to run Fault Code Searching?

Yes   No

Latest Update   58910-C6900_1.3

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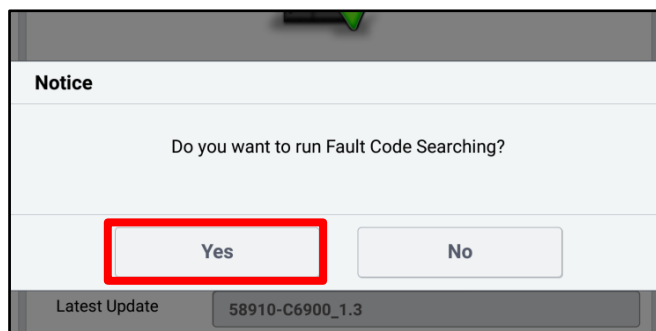
13. Start the engine to confirm proper operation of the vehicle.

SUBJECT:	KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

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 (14-15MY)

Model	Menu	Password
XMa 2.4	XMA 2.4GDI -IMMO : 39113-2GBK1/K2/L1/L2	1322
	XMA 2.4GDI +IMMO/SMK : 39113-2GBK6/K7/L6/L7	1327
TF 2.0T	TF F/L 2.0 TGDI 14MY(ULEV) -IMMO : 39108-2GBG0/G1	8201
	TF F/L 2.0 TGDI 14MY(ULEV) +IMMO/SMK : 39108-2GBG5/G6	8256
	TF F/L 2.0 TGDI 15MY(ULEV) +IMMO/SMK : 39108-2GBG7	0827
TF 2.4	TF F/L 2.4 GDI 14MY(ULEV) -IMMO : 39108/18-2GBE0	1820
	TF F/L 2.4 GDI 14MY(ULEV) +IMMO/SMK : 39108/18-2GBF0	1821
	TF F/L 2.4 GDI 14MY(SULEV) -IMMO : 39108-2GBE5	0828
	TF F/L 2.4 GDI 14MY(SULEV) +IMMO/SMK : 39108-2GBF5	0829
	TF F/L 2.4 GDI 15MY(ULEV) -IMMO : 39108/18-2GBE1	1822
	TF F/L 2.4 GDI 15MY(ULEV) +IMMO/SMK : 39108-2GBF1	0821
	TF F/L 2.4 GDI 15MY(SULEV) -IMMO : 39108-2GBE6	0826
SL 2.0T	SL 2.0 TGDI 14MY(ULEV) -IMMO : 39107-2GCC5	0725
	SL 2.0 TGDI 14MY(ULEV) +IMMO/SMK : 39107-2GCC0	0720
	SL 2.0 TGDI 15MY(ULEV) -IMMO : 39107-2GCC6/C7	7267
	SL 2.0 TGDI 15MY(ULEV) +IMMO/SMK : 39107-2GCC1/C2	7212
	SL 2.0T-GDI -IMMO 6AT 15MY (ULEV) : 39107-2GCC8	0729
	SL 2.0T-GDI +IMMO/SMK 6AT 15MY (ULEV) : 39107-2GCC3	0724
SL 2.4	SL 2.4 GDI 14MY(ULEV) -IMMO : 39107/17-2GCD5/E5	7255
	SL 2.4 GDI 14MY(ULEV) +IMMO/SMK : 39107/17-2GCD0/E0	7200
	SL 2.4 GDI 14MY(SULEV) -IMMO : 39107-2GCG5	0726
	SL 2.4 GDI 14MY(SULEV) +IMMO/SMK : 39107-2GCG0	0721
	SL 2.4 GDI 15MY(ULEV) -IMMO : 39107-2GCD6/D7/E6/E7, 39117-2GCD6/E6	7266
	SL 2.4 GDI 15MY(ULEV) +IMMO/SMK : 39107-2GCD1/D2/E1/E2, 39117-2GCD1/E1	7211
	SL 2.4 GDI 15MY(SULEV) -IMMO : 39107-2GCG6/G7	7268
	SL 2.4 GDI 15MY(SULEV) +IMMO/SMK : 39107-2GCG1/G2	7213
QF 2.0T	QF 2.0 TGDI 15MY(ULEV) -IMMO : 39108-2GBK2/K3	0823
	QF 2.0 TGDI 15MY(ULEV) +IMMO/SMK : 39108-2GBK7/K8	0828
QF 2.4	QF 2.4 GDI 15MY(ULEV) -IMMO : 39108-2GBH1/H2, 39118-2GBH1	1821
	QF 2.4 GDI 15MY(ULEV) +IMMO/SMK : 39108-2GBJ1/J2, 39118-2GBJ1	1822
	QF 2.4 GDI 15MY(SULEV) -IMMO : 39108-2GBH6/H7	0827
	QF 2.4 GDI 15MY(SULEV) +IMMO/SMK : 39108-2GBJ6/J7	0829

SUBJECT:

KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Manual Mode ECU Upgrade Passwords (16MY)

Model	Menu	Password
UMa 2.4	UMA 2.4GDI -IMMO 6AT 15~16MY(2WD/ULEV) : 39100-2GGF0 [2WD_UMAFNC4EM91A/92A/A31/A51/A52]	0020
	UMA 2.4GDI +IMMO/SMK 6AT 15~16MY(2WD/ULEV) : 39100-2GGF5 [2WD_UMAFNC4ER91A/92A/A31/A51/A52]	0025
	UMA 2.4GDI -IMMO 6AT 15~16MY(4WD/ULEV) : 39100-2GGH0 [4WD_UMAFNC4EM91A/92A/A31/A51/A52]	0021
	UMA 2.4GDI +IMMO/SMK 6AT 15~16MY(4WD/ULEV) : 39100-2GGH5 [4WD_UMAFNC4ER91A/92A/A31/A51/A52]	0026
	UMA 2.4GDI -IMMO 6AT 15~16MY(2WD/ULEV) : 39100-2GGF1 [2WD_UMAFNC4EMA3A/5A/5B/5C]	0022
	UMA 2.4GDI +IMMO/SMK 6AT 15~16MY(2WD/ULEV) : 39100-2GGF6 [2WD_UMAFNC4ERA3A/5A/5B/5C]	0027
	UMA 2.4GDI -IMMO 6AT 15~16MY(4WD/ULEV) : 39100-2GGH1 [4WD_UMAFNC4EMA3A/5A/5B/5C]	0023
	UMA 2.4GDI +IMMO/SMK 6AT 15~16MY(4WD/ULEV) : 39100-2GGH6 [4WD_UMAFNC4ERA3A/5A/5B/5C]	0028
UMa 2.0T	UMA 2.0T-GDI -IMMO 6AT 15MY(2WD/ULEV) : 39100-2GTC0 [2WD_UMAFNC0EM92A/1]	2020
	UMA 2.0T-GDI +IMMO/SMK 6AT 15MY(2WD/ULEV) : 39100-2GTC5 [2WD_UMAFNC0ER92A/1]	2025
	UMA 2.0T-GDI -IMMO 6AT 15MY(4WD/ULEV) : 39100-2GTD0 [4WD_UMAFNC0EM92A/1]	2021
	UMA 2.0T-GDI +IMMO/SMK 6AT 15MY(4WD/ULEV) : 39100-2GTD5 [4WD_UMAFNC0ER92A/1]	2026
	UMA 2.0T-GDI -IMMO 6AT 16MY(2WD/ULEV) : 39100-2GTC1 [2WD_UMAGNC0EMA3A/5A/61]	2022
	UMA 2.0T-GDI +IMMO/SMK 6AT 16MY(2WD/ULEV) : 39100-2GTC6 [2WD_UMAGNC0ERA3A/5A/61]	2027
	UMA 2.0T-GDI -IMMO 6AT 16MY(4WD/ULEV) : 39100-2GTD1 [4WD_UMAGNC0EMA3A/5A/61]	2023
	UMA 2.0T-GDI +IMMO/SMK 6AT 16MY(4WD/ULEV) : 39100-2GTD6 [4WD_UMAGNC0ERA3A/5A/61]	2028
JF/JFa 2.4	JF/JFA 2.4GDI -IMMO 6AT 16MY (ULEV) : 39108-2GGC0 [JFAGNC4EMB0A/B0B/C0A/C3A]	0820
	JF/JFA 2.4GDI +IMMO/SMK 6AT 16MY (ULEV) : 39108-2GGC5 [JFAGNC4ERB0A/B0B/C0A/C3A]	0825
	JF/JFA 2.4GDI -IMMO 6AT 16MY (SULEV) : 39108-2GGD0 [JFAGNS4EMB0A/B0B/C0A/C3A]	0821
	JF/JFA 2.4GDI +IMMO/SMK 6AT 16MY (SULEV) : 39108-2GGD5 [JFAGNS4ERB0A/B0B/C0A/C3A]	0826
	JF/JFA 2.4GDI -IMMO 6AT 16MY (ULEV) : 39108-2GGC0 [JFAGNC4EMD11]	0822
	JF/JFA 2.4GDI +IMMO/SMK 6AT 16MY (ULEV) : 39108-2GGC5 [JFAGNC4ERD11]	0827
	JF/JFA 2.4GDI -IMMO 6AT 16MY (SULEV) : 39108-2GGD0 [JFAGNS4EMD11]	0823
	JF/JFA 2.4GDI +IMMO/SMK 6AT 16MY (SULEV) : 39108-2GGD5 [JFAGNS4ERD11]	0828
JFa 2.0T	JFA 2.0T-GDI -IMMO 6AT 16MY (ULEV) : 39108-2GTK0	0824
	JFA 2.0T-GDI +IMMO/SMK 6AT 16MY (ULEV) : 39108-2GTK5	0829
SL 2.4	SL 2.4GDI -IMMO 6AT/MT 16MY (ULEV) : 39107/17-2GCD8/E8	1728
	SL 2.4GDI +IMMO/SMK 6AT/MT 16MY (ULEV) : 39107/17-2GCD3/E3	1723
	SL 2.4GDI -IMMO 6AT 16MY (SULEV) : 39107-2GCG8	0728
	SL 2.4GDI +IMMO/SMK 6AT 16MY (SULEV) : 39107-2GCG3	0723

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.

2. Select the **ENGINE** system under the System selection menu. Select **Upgrade Event #374 (XMa), #375 (TF), #376 (SL), #377 (QF), #392 (UMa), #393 (JF/JFa), or #394 (16MY SL)** and select **Upgrade** to continue.

3. Select the appropriate control unit part number with reference to the ROM ID Information Table on page 3-6, 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.

SUBJECT:

KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

AFFECTED VEHICLE RANGE:

Model	Production Date Range
14MY Optima (TF)	August 29, 2013 through April 25, 2014
15-16MY Optima (TF/QF/JF/JFa)	April 16, 2014 through October 12, 2016
14-16MY Sportage (SL)	September 30, 2013 through November 16, 2015
15-16MY Sorento (XMa/UMa)	January 3, 2014 through April 26, 2016

WARRANTY INFORMATION (PI1802A):
N Code: N99   C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
XMa (15MY)	R	39113 2GBK1	0	(PI1802A) KSDS - ECU Logic Improvement	180A10R0	0.3 M/H	N/A	0
TF (14-15MY)	R	39108 2GBE0	0	(PI1802A) KSDS - ECU Logic Improvement	180107R0	0.3 M/H	N/A	0
QF (15MY)	R	39108 2GBH1	0	(PI1802A) KSDS - ECU Logic Improvement	180A15R0	0.3 M/H	N/A	0
SL (14-15MY)	R	39107 2GCD5	0	(PI1802A) KSDS - ECU Logic Improvement	180108R0	0.3 M/H	N/A	0

WARRANTY INFORMATION (PI1802A1):
N Code: N99   C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
TF (14-15MY)	R	39108 2GBE0	0	(PI1802A1) KSDS - ECU Logic Improvement	180119R0	0.3 M/H	N/A	0
QF (15MY)	R	39108 2GBH1	0	(PI1802A1) KSDS - ECU Logic Improvement	180A17R0	0.3 M/H	N/A	0

SUBJECT:	KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

WARRANTY INFORMATION (PI1802B):
N Code: N99   C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
SL (16MY)	R	39107 2GCD5	0	(PI1802B) KSDS - ECU Logic Improvement	180108R0	0.3 M/H	N/A	0
JF (16MY)	R	39108 2GGC5	0	(PI1802B) KSDS - ECU Logic Improvement	180109R0	0.3 M/H	N/A	0
JFa (16MY)	R	39108 2GTK5	0	(PI1802B) KSDS - ECU Logic Improvement	180A25R0	0.3 M/H	N/A	0
UMa (16MY)	R	39100 2GGF0	0	(PI1802B) KSDS - ECU Logic Improvement	180A26R0	0.3 M/H	N/A	0

★ NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference PI1802* when accessing the WebDCS system.