



GROUP  
**Product Improvement**

MODEL  
**See Model List  
on Page 1**

NUMBER  
**1802 (Rev 7, 09/30/2019)**

DATE  
**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
2015-2018	Optima (TF/QF/JF/JFa)	2.4L & 2.0T GDI	4/16/14 – 7/11/18
2014-2018	Sportage (SL/QL)	2.4L & 2.0T GDI	9/30/13 – 4/5/18
2015-2018	Sorento (XMa/UMa)	2.4L & 2.0T GDI	1/3/14 – 3/7/18

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
376.SL Theta 2.0/2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade (14-15MY SULEV)
394.SL Theta 2.0/2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade (16MY SULEV)
445.XMa Theta 2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade
446.TF Theta 2.0/2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade
447.QF Theta 2.0/2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade
448.SL Theta 2.0/2.4GDI Knock Sensor Detection System (KSDS) ECU Upgrade (15MY ULEV)
449. UMa THETA 2.0/2.4 Knock Sensor Detection System (KSDS) ECU Upgrade (16MY)
450. JF/JFa THETA 2.0/2.4 Knock Sensor Detection System (KSDS) ECU Upgrade (16MY)
448. SL THETA 2.0/2.4 Knock Sensor Detection System (KSDS) ECU Upgrade (16MY ULEV)
449. UMA THETA 2.0/2.4 Knock Sensor Detection System(KSDS) ECU UPGRADE (17MY)
450. JF/JFA THETA 2.0/2.4 Knock Sensor Detection System(KSDS) ECU UPGRADE (17MY)
451. QL THETA 2.0/2.4 Knock Sensor Detection System(KSDS) ECU UPGRADE (17MY)
449.UMA THETA 2.0/2.4 Knock Sensor Detection System(KSDS) ECU UPGRADE (18MY)
450.JF/JFA THETA 2.0/2.4 Knock Sensor Detection System(KSDS) ECU UPGRADE (18MY)
451.QL THETA 2.0/2.4 Knock Sensor Detection System(KSDS) ECU UPGRADE (18MY)

### ★ 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 #445 2015MY (XMa) , #446 2014-2015MY (TF) , #447 2015MY (QF), #376, #394 and #448 2015-2016MY (SL), #449 2015-2018MY(UMa), #450 2016-2018MY (JF/JFa), and #451 2017-2018MY (QL)

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 FFC4RHAL	FFC4RHAM
		No	39113-2GBK1 39113-2GBK2 39113-2GBL1 39113-2GBL2	FFC4MH2A FFC4MHAA FFC4MHAB FFC4RHAL	FFC4MHAM
14MY Opt. (TF)	2.4 (ULEV)	Yes	39108-2GBF0 39118-2GBF0	TEC4RH2K TEC4RH2L TEC4RH25 TEC4RH26	TEC4RH27
		No	39108-2GBE0 39118-2GBE0	TEC4MH2K TEC4MH2L TEC4MH25 TEC4MH26	TEC4MH27
	2.4 (SULEV)	Yes	39108-2GBF5	TES4RH2K TES4RH2L TES4RH25 TES4RH26	TES4RH27
		No	39108-2GBE5	TES4MH2K TES4MH2L TES4MH25 TES4MH26	TES4MH27
15MY Opt. (TF)	2.4 (ULEV)	Yes	39108-2GBF1	TFC4RH4K TFC4RH4L TFC4RH45 TFC4RH46	TFC4RH47
		No	39108-2GBE1 39118-2GBE1	TFC4MH4K TFC4MH4L TFC4MH45 TFC4MH46	TFC4MH47
	2.4 (SULEV)	No	39108-2GBE6	TFS4MH4K TFS4MH4L TFS4MH45 TFS4MH46	TFS4MH47
14MY Opt. (TF)	2.0T (ULEV)	Yes	39108-2GBG5 39108-2GBG6	TEC0RH2K TEC0RH2L TEC0RH25 TEC0RH26	TEC0RH27
		No	39108-2GBG0 39108-2GBG1	TEC0MH2K TEC0MH2L TEC0MH25 TEC0MH26	TEC0MH27
15MY Opt. (TF)	2.0T (ULEV)	Yes	39108-2GBG7	TFC0RH4K TFC0RH4L TFC0RH45 TFC0RH46	TFC0RH47

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
14MY Spo. (SL)	2.4 (ULEV)	Yes	39107-2GCD0 39107-2GCE0 39117-2GCD0 39117-2GCE0	SEC4RH2A SEC4RH2B SEC4RH2C SEC4RH2D SEC4RH2K	SEC4RH2L
		No	39107-2GCD5 39107-2GCE5 39117-2GCD5 39117-2GCE5	SEC4MH2A SEC4MH2B SEC4MH2C SEC4MH2D SEC4MH2K	SEC4MH2L
	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	SFC4RH4L
		No	39107-2GCD6 39107-2GCD7 39107-2GCE6 39107-2GCE7 39117-2GCD6 39117-2GCE6	SFC4MH4A SFC4MH4B SFC4MH4K	SFC4MH4L
	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	SEC0RH2L
		No	39107-2GCC5	SEC0MH2A SEC0MH2K	SEC0MH2L
15MY Spo. (SL)	2.0T (ULEV)	Yes	39107-2GCC1 39107-2GCC2	SFC0RH4A SFC0RH4K	SFC0RH4L
		No	39107-2GCC6 39107-2GCC7	SFC0MH4A SFC0MH4K	SFC0MH4L

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
15MY Opt. (QF)	2.4 (ULEV)	Yes	39108-2GBJ1 39108-2GBJ2 39118-2GBJ1	TFC4RH4A TFC4RH4B TFC4RH41 TFC4RH42	TFC4RH43
		No	39108-2GBH1 39108-2GBH2 39118-2GBH1	TFC4MH4A TFC4MH4B TFC4MH41 TFC4MH42	TFC4MH43
15MY Opt. (QF)	2.4 (SULEV)	Yes	39108-2GBJ6 39108-2GBJ7	TFS4RH4A TFS4RH4B TFS4RH41 TFS4RH42	TFS4RH43
		No	39108-2GBH6 39108-2GBH7	TFS4MH4A TFS4MH4B TFS4MH41 TFS4MH42	TFS4MH43
	2.0T (ULEV)	Yes	39108-2GBK7 39108-2GBK8	TFC0RH4A TFC0RH4B TFC0RH41 TFC0RH42	TFC0RH43
		No	39108-2GBK2 39108-2GBK3	TFC0MH4A TFC0MH4B TFC0MH41 TFC0MH42	TFC0MH43

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
16MY Sor. (UMa) <u>2WD</u>	2.4 (ULEV)	Yes	39100-2GGF5	UMAFNC4ER91A UMAFNC4ER92A UMAGNC4ERA31 UMAFNC4ERA51 UMAFNC4ERA52 UMAFNC4ERA6K	UMAFNC4ERA6Q
			39100-2GGF6	UMAFNC4ERA3A UMAFNC4ERA5A UMAFNC4ERA5B UMAFNC4ERA5C UMAFNC4ERA6M	UMAFNC4ERA6S
			39100-2GGF6 39100-2GGF7	UMAHNC4ERA6B UMAHNC4ERA6K UMAHNC4ERA6O UMAHNC4ERA5A UMAHNC4ERA5B UMAHNC4ERA6A UMAHNC4ERA6M	UMAHNC4ERA6Q
		No	39100-2GGF0	UMAFNC4EM91A UMAFNC4EM92A UMAGNC4EMA31 UMAFNC4EMA51 UMAFNC4EMA52 UMAFNC4EMA6K	UMAFNC4EMA6Q
			39100-2GGF1	UMAFNC4EMA3A UMAFNC4EMA5A UMAFNC4EMA5B UMAFNC4EMA5C UMAFNC4EMA6M	UMAFNC4EMA6S
		16MY Sor. (UMa) <u>4WD</u>	2.4 (ULEV)	Yes	39100-2GGH5
39100-2GGH6	UMAFNC4ERA3A UMAFNC4ERA5A UMAFNC4ERA5B UMAFNC4ERA5C UMAFNC4ERA6P				UMAFNC4ERA6T
39100-2GGH6	UMAHNC4ERA6B UMAHNC4ERA6L				UMAHNC4ERA6R
No	39100-2GGH0			UMAFNC4EM91A UMAFNC4EM92A UMAGNC4EMA31 UMAFNC4EMA51 UMAFNC4EMA52 UMAFNC4EMA6O	UMAFNC4EMA6R
	39100-2GGH1			UMAFNC4EMA3A UMAFNC4EMA5A UMAFNC4EMA5B UMAFNC4EMA5C UMAFNC4EMA6P	UMAFNC4EMA6T
	39100-2GGH1			UMAHNC4EMA6B UMAHNC4EMA6L	UMAHNC4EMA6R

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
16MY Sor. (UMa) <u>2WD</u>	2.0T (ULEV)	Yes	39100-2GTC6	UMAGNC0ERA3A UMAGNC0ERA5A UMAGNC0ERA61 UMAGNC0ERA6K	UMAGNC0ERA6M
			39100-2GTC5	UMAFNC0ER92A UMAFNC0ER921 UMAFNC0ER91A UMAFNC0ER92K	UMAFNC0ER92M
		No	39100-2GTC1	UMAGNC0EMA3A UMAGNC0EMA5A UMAGNC0EMA61 UMAGNC0EMA6K	UMAGNC0EMA6M
			39100-2GTC0	UMAFNC0EM92A UMAFNC0EM921 UMAFNC0EM91A UMAFNC0EM92K	UMAFNC0EM92M
16MY Sor. (UMa) <u>4WD</u>	2.0T (ULEV)	Yes	39100-2GTD6	UMAGNC0ERA3A UMAGNC0ERA5A UMAGNC0ERA61 UMAGNC0ERA6L	UMAGNC0ERA6N
			39100-2GTD5	UMAFNC0ER92A UMAFNC0ER921 UMAFNC0ER91A UMAFNC0ER92L	UMAFNC0ER92N
		No	39100-2GTD1	UMAGNC0EMA3A UMAGNC0EMA5A UMAGNC0EMA61 UMAGNC0EMA6L	UMAGNC0EMA6N
			39100-2GTD0	UMAFNC0EM92A UMAFNC0EM921 UMAFNC0EM91A UMAFNC0EM92L	UMAFNC0EM92N

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	JFAGNC4ERC3L
			39108-2GGC5	JFAGNC4ERD11 JFAGNC4ERD1K	JFAGNC4ERD1L
		No	39108-2GGC0	JFAGNC4EMB0A JFAGNC4EMB0B JFAGNC4EMC0A JFAGNC4EMC3A JFAGNC4EMC3K	JFAGNC4EMC3L
			39108-2GGC0	JFAGNC4EMD11 JFAGNC4EMD1K	JFAGNC4EMD1L
	2.4 (SULEV)	Yes	39108-2GGD5	JFAGNS4ERB0A JFAGNS4ERB0B JFAGNS4ERC0A JFAGNS4ERC3A JFAGNS4ERC3K	JFAGNS4ERC3L
			39108-2GGD5	JFAGNS4ERD11 JFAGNS4ERD1K	JFAGNS4ERD1L
		No	39108-2GGD0	JFAGNS4EMB0A JFAGNS4EMB0B JFAGNS4EMC0A JFAGNS4EMC3A JFAGNS4EMC3K	JFAGNS4EMC3L
			39108-2GGD0	JFAGNS4EMD11 JFAGNS4EMD1K	JFAGNS4EMD1L
16MY Opt. (JFa)	2.0T (ULEV)	Yes	39108-2GTK5	JFAGNC0ERB0A JFAGNC0ERB0B JFAGNC0ERB4A JFAGNC0ERB4K	JFAGNC0ERB4L
		No	39108-2GTK0	JFAGNC0EMB0A JFAGNC0EMB0B JFAGNC0EMB4A JFAGNC0EMB4K	JFAGNC0EMB4L
16MY Spo. (SL)	2.4 (ULEV)	Yes	39107-2GCD3 39107-2GCE3 39117-2GCD3 39117-2GCE3	SGC4RH4A SGC4RH4B SGC4RH4K	SGC4RH4L
		No	39107-2GCD8 39107-2GCE8 39117-2GCD8 39117-2GCE8	SGC4MH4A SGC4MH4B SGC4MH4K	SGC4MH4L
	2.0T (ULEV)	Yes	39107-2GCC3	SGC0RH4A SGC0RH4K	SGC0RH4L
		No	39107-2GCC8	SGC0MH4A SGC0MH4K	SGC0MH4L
	2.4 (SULEV)	Yes	39107-2GCG3	SGS4RH4A SGS4RH4B	SGS4RH4K
		No	39107-2GCG8	SGS4MH4A SGS4MH4B	SGS4MH4K



SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
17MY Sor. (UMa) <u>2WD</u>	2.4 (ULEV)	Yes	39100-2GGF7	UMAHNC4ERA5A UMAHNC4ERA5B UMAHNC4ERA6A UMAHNC4ERA6B UMAHNC4ERA6K	UMAHNC4ERA6Q
		No	39100-2GGF2	UMAHNC4EMA5A UMAHNC4EMA5B UMAHNC4EMA6A UMAHNC4EMA6B UMAHNC4EMA6K	UMAHNC4EMA6Q
17MY Sor. (UMa) <u>4WD</u>	2.4 (ULEV)	Yes	39100-2GGH7	UMAHNC4ERA5A UMAHNC4ERA5B UMAHNC4ERA6A UMAHNC4ERA6B UMAHNC4ERA6L	UMAHNC4ERA6R
		No	39100-2GGH2	UMAHNC4EMA5A UMAHNC4EMA5B UMAHNC4EMA6A UMAHNC4EMA6B UMAHNC4EMA6L	UMAHNC4EMA6R
17MY Sor. (UMa) <u>2WD</u>	2.0T (ULEV)	Yes	39100-2GTC7	UMAHNC0ERA5A UMAHNC0ERA6A UMAHNC0ERA6B UMAHNC0ERA6K	UMAHNC0ERA6Q
		No	39100-2GTC2	UMAHNC0EMA5A UMAHNC0EMA6A UMAHNC0EMA6B UMAHNC0EMA6K	UMAHNC0EMA6K
17MY Sor. (UMa) <u>4WD</u>	2.0T (ULEV)	Yes	39100-2GTD7	UMAHNC0ERA5A UMAHNC0ERA6A UMAHNC0ERA6B UMAHNC0ERA6L	UMAHNC0ERA6R
		No	39100-2GTD2	UMAHNC0EMA5A UMAHNC0EMA6A UMAHNC0EMA6B UMAHNC0EMA6L	UMAHNC0EMA6R

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
17MY Opt. (JF/JFa)	2.4 (ULEV)	Yes	39108-2GGC6	JFAHNC4ERC3A JFAHNC4ERC3B JFAHNC4ERC31 JFAHNC4ERC32	JFAHNC4ERC34
			39108-2GGC8	JFAHNC4ERD1A JFAHNC4ERD11 JFAHNC4ERD12	JFAHNC4ERD14
		No	39108-2GGC1	JFAHNC4EMC3A JFAHNC4EMC3B JFAHNC4EMC31 JFAHNC4EMC32	JFAHNC4EMC34
			39108-2GGC3	JFAHNC4EMD1A JFAHNC4EMD11 JFAHNC4EMD12	JFAHNC4EMD14
			39108-2GGL1	JFAHNC4EMC3K JFAHNC4EMC3L JFAHNC4EMC35 JFAHNC4EMC35	JFAHNC4EMC38
			39108-2GGL2	JFAHNC4EMD1K JFAHNC4EMD15 JFAHNC4EMD16	JFAHNC4EMD18
	2.4 (SULEV)	Yes	39108-2GGD6	JFAHNS4ERC3A JFAHNS4ERC3B JFAHNS4ERC31 JFAHNS4ERC32	JFAHNS4ERC34
			39108-2GGD8	JFAHNS4ERD1A JFAHNS4ERD11 JFAHNS4ERD12	JFAHNS4ERD14
		No	39108-2GGD1	JFAHNS4EMC3A JFAHNS4EMC3B JFAHNS4EMC31 JFAHNS4EMC32	JFAHNS4EMC34
			39108-2GGD3	JFAHNS4EMD1A JFAHNS4EMD11 JFAHNS4EMD12	JFAHNS4EMD14
			39108-2GGM1	JFAHNS4EMC3K JFAHNS4EMC3L JFAHNS4EMC35 JFAHNS4EMC36	JFAHNS4EMC38
			39108-2GGM2	JFAHNS4EMD1K JFAHNS4EMD15 JFAHNS4EMD16	JFAHNS4EMD18

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
17MY Opt. (JFa)	2.0T (ULEV)	Yes	39108-2GTK6	JFAHNC0ERC3A JFAHNC0ERC3B JFAHNC0ERC3K JFAHNC0ERC3L	JFAHNC0ERC3N
		No	39108-2GTK1	JFAHNC0EMC3A JFAHNC0EMC3B JFAHNC0EMC3K JFAHNC0EMC3L	JFAHNC0EMC3N
17MY Spo. (QL) <u>2WD</u>	2.4 (ULEV)	Yes	39100-2GHR5	QLDHNC4ERB2A QLDHNC4ERB4A QLDHNC4ERB4B QLDGNC4ERB2A QLDHNC4ERB41 QLDHNC4ERB42	QLDHNC4ERB44
		No	39100-2GHS0	QLDHNC4EMB2A QLDHNC4EMB4A QLDHNC4EMB4B QLDGNC4EMB2A QLDHNC4EMB41 QLDHNC4EMB42	QLDHNC4EMB44
	2.4 (SULEV)	Yes	39100-2GHT5	QLDHNS4ERB2A QLDHNS4ERB4A QLDHNS4ERB4B QLDGNS4ERB2A QLDHNS4ERB41 QLDHNS4ERB42	QLDHNS4ERB44
		No	39100-2GHV0	QLDHNS4EMB2A QLDHNS4EMB4A QLDHNS4EMB4B QLDGNS4EMB2A QLDHNS4EMB41 QLDHNS4EMB42	QLDHNS4EMB44
17MY Spo. (QL) <u>4WD</u>	2.4 (ULEV)	Yes	39100-2GHS5	QLDHNC4ERB2K QLDHNC4ERB4K QLDHNC4ERB4L QLDGNC4ERB2K QLDHNC4ERB45 QLDHNC4ERB46	QLDHNC4ERB48
		No	39100-2GHT0	QLDHNC4EMB2K QLDHNC4EMB4K QLDHNC4EMB4L QLDGNC4EMB2K QLDHNC4EMB45 QLDHNC4EMB46	QLDHNC4EMB48
	2.4 (SULEV)	Yes	39100-2GHV5	QLDHNS4ERB2K QLDHNS4ERB4K QLDHNS4ERB4L QLDGNS4ERB2K QLDHNS4ERB45 QLDHNS4ERB46	QLDHNS4ERB48
		No	39100-2GHW0	QLDHNS4EMB2K QLDHNS4EMB4K QLDHNS4EMB4L QLDGNS4EMB2K QLDHNS4EMB45 QLDHNS4EMB45	QLDHNS4EMB48

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
17MY Spo. (QL) <u>2WD</u>	2.0T (ULEV)	Yes	39100-2GHJ0	QLDGNC0ERB2A QLDHNC0ERB4A QLDHNC0ERB4B QLDHNC0ERB4C QLDHNC0ERB41 QLDHNC0ERB42	QLDHNC0ERB44
		No	39100-2GHJ5	QLDGNC0EMB2A QLDHNC0EMB4A QLDHNC0EMB4B QLDHNC0EMB4C QLDHNC0EMB41 QLDHNC0EMB42	QLDHNC0EMB44
17MY Spo. (QL) <u>4WD</u>	2.0T (ULEV)	Yes	39100-2GHK0	QLDGNC0ERB2K QLDHNC0ERB4K QLDHNC0ERB4L QLDHNC0ERB4M QLDHNC0ERB45 QLDHNC0ERB46	QLDHNC0ERB48
		No	39100-2GHK5	QLDGNC0EMB2K QLDHNC0EMB4K QLDHNC0EMB4L QLDHNC0EMB4M QLDHNC0EMB45 QLDHNC0EMB45	QLDHNC0EMB48
18MY Sor. (UMa) <u>2WD</u>	2.4 (ULEV)	Yes	39100-2GGF8	UMAINC4ERA6A UMAINC4ERA7A UMAINC4ERA7B UMAINC4ERD5A UMAINC4ERD5B UMAINC4ERD5K UMAINC4ERD5M UMAINC4ERD5O	UMAINC4ERD5Q
		No	39100-2GGF3	UMAINC4EMA6A UMAINC4EMA7A UMAINC4EMA7B UMAINC4EMD5A UMAINC4EMD5B UMAINC4EMD5K UMAINC4EMD5M UMAINC4EMD5O	UMAINC4EMD5Q
18MY Sor. (UMa) <u>4WD</u>	2.4 (ULEV)	Yes	39100-2GGH8	UMAINC4ERA6A UMAINC4ERA7A UMAINC4ERA7B UMAINC4ERD5A UMAINC4ERD5B UMAINC4ERD5L UMAINC4ERD5N UMAINC4ERD5P	UMAINC4ERD5R
		No	39100-2GGH3	UMAINC4EMA6A UMAINC4EMA7A UMAINC4EMA7B UMAINC4EMD5A UMAINC4EMD5B UMAINC4EMD5L UMAINC4EMD5L	UMAINC4EMD5R

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
18MY Sor. (UMa) <u>2WD</u>	2.0T (ULEV)	Yes	39100-2GTC8	UMAINC0ERA6A UMAINC0ERA7A UMAINC0ERA7B UMAINC0ERA7C UMAINC0ERA8K UMAINC0ERA8M UMAINC0ERA8O	UMAINC0ERA8Q
		No	39100-2GTC3	UMAINC0EMA6A UMAINC0EMA7A UMAINC0EMA7B UMAINC0EMA7C UMAINC0EMA8K UMAINC0EMA8M UMAINC0EMA8O	UMAINC0EMA8Q
18MY Sor. (UMA) 4WD		Yes	39100-2GTD8	UMAINC0ERA6A UMAINC0ERA7A UMAINC0ERA7B UMAINC0ERA7C UMAINC0ERA8L UMAINC0ERA8N UMAINC0ERA8P	UMAINC0ERA8R
		No	39100-2GTD3	UMAINC0EMA6A UMAINC0EMA7A UMAINC0EMA7B UMAINC0EMA7C UMAINC0EMA8L UMAINC0EMA8N UMAINC0EMA8P	UMAINC0EMA8R
18MY Opt. (JF/JFa)	2.4 (ULEV)	Yes	39108-2GGC7	JFAINC4ERDAA JFAINC4ERDAB JFAINC4ERD5A JFAINC4ERD5B JFAINC4ERD5K JFAINC4ERD5L	JFAINC4ERD5N
		No	39108-2GGC2	JFAINC4EMDAA JFAINC4EMDAB JFAINC4EMD5A JFAINC4EMD5B JFAINC4EMD5K JFAINC4EMD5L	JFAINC4EMD5N
	2.4 (SULEV)	Yes	39108-2GGD7	JFAINS4ERDAA JFAINS4ERDAB JFAINS4ERD5A JFAINS4ERD5B JFAINS4ERD5K JFAINS4ERD5L	JFAINS4ERD5N
		No	39108-2GTK7	JFAINC0ERCAA JFAINC0ERCAB JFAINC0ERCAC JFAINC0ERCAK JFAINC0ERCAL	JFAINC0ERCAN

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
18MY Opt. (JFa)	2.0T (ULEV)	Yes	39108-2GTK7	JFAINC0ERCAA JFAINC0ERCAB JFAINC0ERCAC	JFAINC0ERCAN
		No	39108-2GTK2	JFAINC0EMCAA JFAINC0EMCAB JFAINC0EMCAC JFAINC0EMCAK JFAINC0EMCAL	JFAINC0EMCAN
18MY Spo. (QL) <u>2WD</u>	2.4 (ULEV)	Yes	39100-2GHR6	QLDINC4ERC3A QLDINC4ERCAA QLDINC4ERCAB QLDINC4ERD5A QLDINC4ERD51 QLDINC4ERD52	QLDINC4ERD54
		No	39100-2GHS1	QLDINC4EMC3A QLDINC4EMCAA QLDINC4EMCAB QLDINC4EMD5A QLDINC4EMD51 QLDINC4EMD52	QLDINC4EMD54
	2.4 (SULEV)	Yes	39100-2GHT6	QLDINS4ERC3A QLDINS4ERCAA QLDINS4ERCAB QLDINS4ERD5A QLDINS4ERD51 QLDINS4ERD52	QLDINS4ERD54
		No	39100-2GHV1	QLDINS4EMC3A QLDINS4EMCAA QLDINS4EMCAB QLDINS4EMD5A QLDINS4EMD51 QLDINS4EMD52	QLDINS4EMD54
18MY Spo. (QL) <u>4WD</u>	2.4 (ULEV)	Yes	39100-2GHS6	QLDINC4ERC3K QLDINC4ERCAK QLDINC4ERCAM QLDINC4ERD5K QLDINC4ERD55 QLDINC4ERD56	QLDINC4ERD58
		No	39100-2GHT1	QLDINC4EMC3K QLDINC4EMCAK QLDINC4EMCAM QLDINC4EMD5K QLDINC4EMD55 QLDINC4EMD56	QLDINC4EMD58
	2.4 (SULEV)	Yes	39100-2GHV6	QLDINS4ERC3K QLDINS4ERCAK QLDINS4ERCAM QLDINS4ERD5K QLDINS4ERD55 QLDINS4ERD56	QLDINS4ERD58
		No	39100-2GHW1	QLDINS4EMC3K QLDINS4EMCAK QLDINS4EMCAM QLDINS4EMD5K QLDINS4EMD55 QLDINS4EMD55	QLDINS4EMD58

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	ENG	IMMO	ECU P/No.	ROM ID	
				Previous	New
18MY Spo. (QL) <u>2WD</u>	2.0T (ULEV)	Yes	39100-2GHJ1	QLDINC0ERB4A QLDINC0ERB5A QLDINC0ERB5B QLDINC0ERD5A QLDINC0ERD51 QLDINC0ERD52	QLDINC0ERD54
		No	39100-2GHJ6	QLDINC0EMB4A QLDINC0EMB5A QLDINC0EMB5B QLDINC0EMD5A QLDINC0EMD51 QLDINC0EMD52	QLDINC0EMD54
18MY Spo. (QL) <u>4WD</u>	2.0T (ULEV)	Yes	39100-2GHK1	QLDINC0ERB4K QLDINC0ERB5K QLDINC0ERB5M QLDINC0ERD5K QLDINC0ERD55 QLDINC0ERD56	QLDINC0ERD58
		No	39100-2GHK6	QLDINC0EMB4K QLDINC0EMB5K QLDINC0EMB5M QLDINC0EMD5K QLDINC0EMD55 QLDINC0EMD56	QLDINC0EMD58

**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.**

**\* 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**

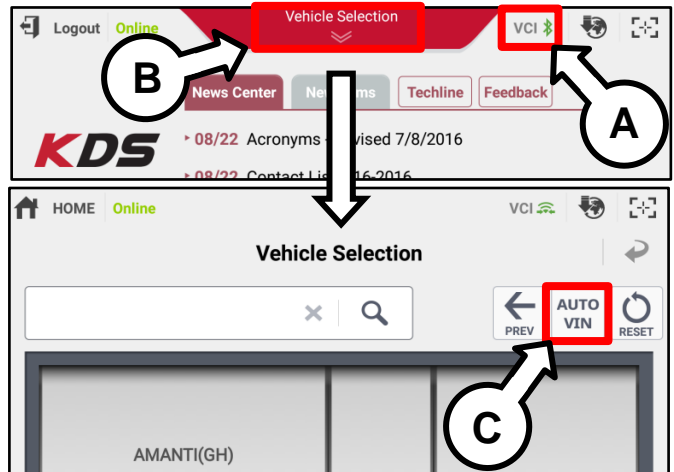
The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.



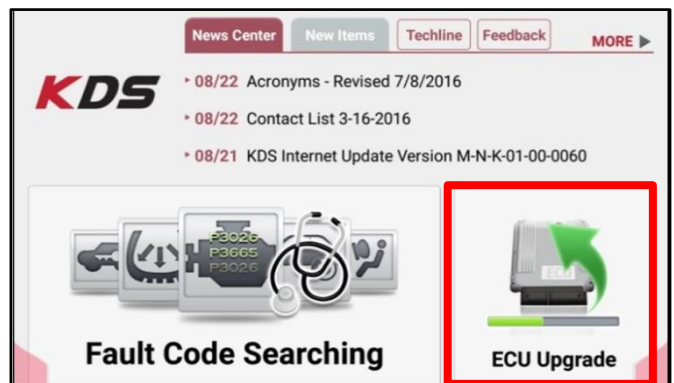
2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.



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



4. Select **ECU Upgrade**.





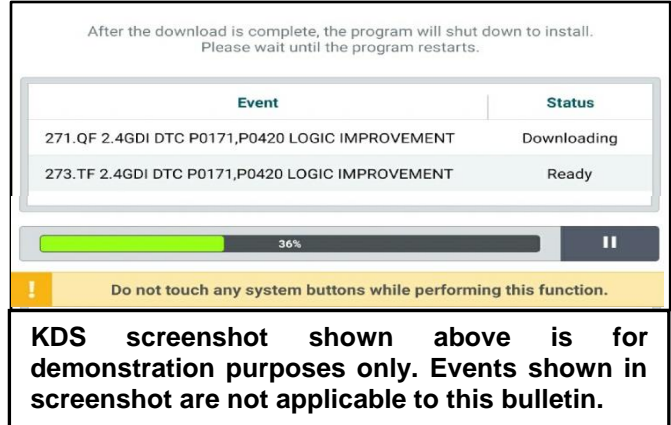
SUBJECT:

# KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

- The KDS will check the server for recently uploaded Events and then automatically download the applicable Upgrade Event, listed on page 3.

## ★ NOTICE

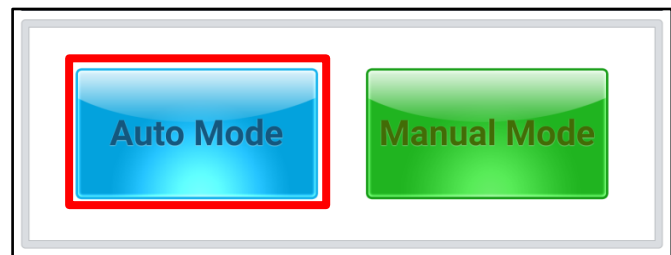
The vehicle must be identified in Vehicle Selection to download an Event for that vehicle.



- Select **Auto Mode**.

## ★ NOTICE

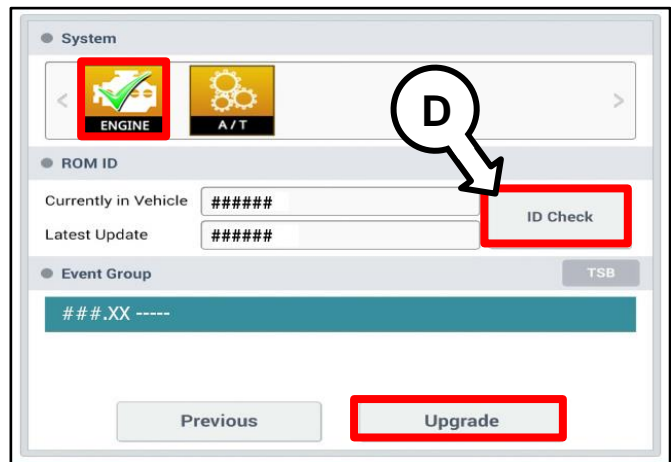
Do NOT attempt to perform a Manual Mode upgrade UNLESS Auto Mode fails. Always follow the instructions given on the KDS in either Auto or Manual mode.



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

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

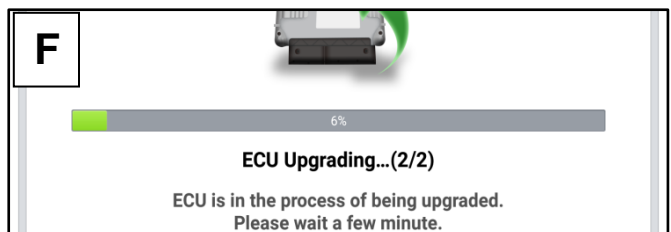
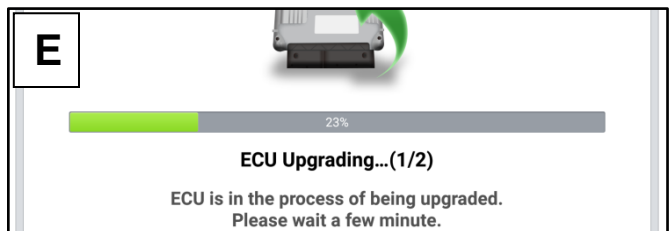
Select the applicable Upgrade Event and select **Upgrade** to continue.



- 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.

## ★ NOTICE

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



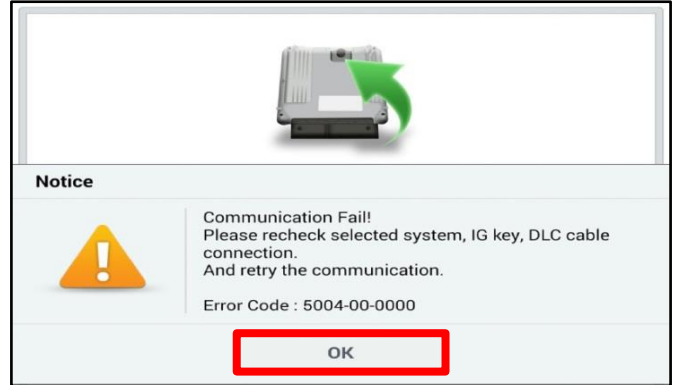
SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

- 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

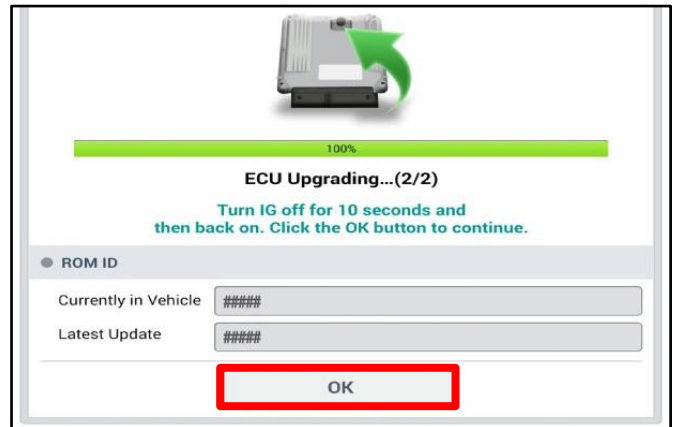
If an error notice continues to appear or if the upgrade cannot be performed, **DO NOT** disconnect the KDS/VCI-II. Contact **GIT America Help Desk** at (888) 542-4371 or Techline.



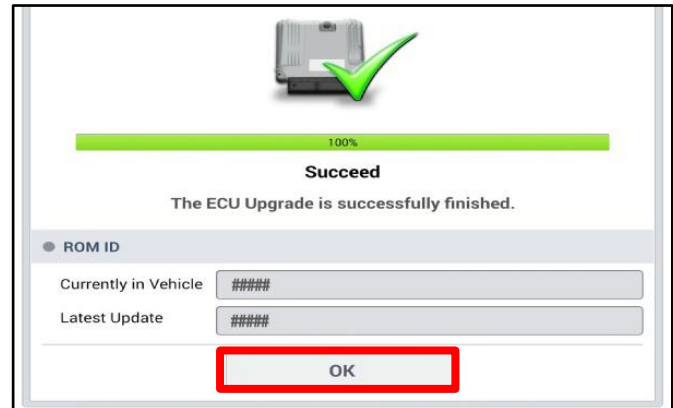
- When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.

### \* NOTICE

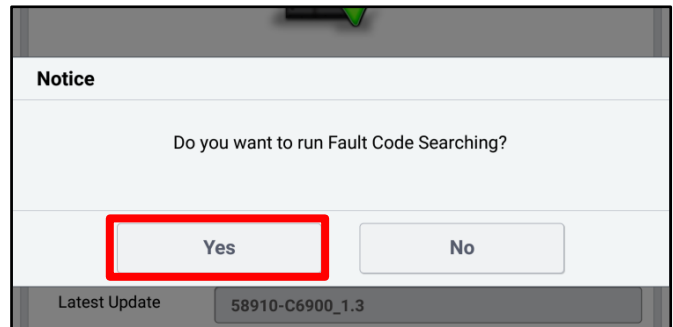
If applicable and instructed on the KDS, leave the ignition **ON** for five (5) seconds to perform **ETC Adaptive Learning**.



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



- 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.



- 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 (14-18MY)

Model	Menu	Pass.
XMa 2.4	XMA 2.4GDI -IMMO 15MY(4WD) : 39113-2GBK1/K2/L1/L2 [4WD_FFC4MH2A/AA/AB/AK/AL]	4501
	XMA 2.4GDI +IMMO/SMK 15MY(4WD) : 39113-2GBK6/K7/L6/L7 [4WD_FFC4RH2A/AA/AB/AK/AL]	4502
TF 2.0T	TF F/L 2.0 TGDI -IMMO 14MY(ULEV/4WD) : 39108-2GBG0/G1	4608
	TF F/L 2.0 TGDI +IMMO/SMK 14MY(ULEV/4WD) : 39108-2GBG5/G6	4609
	TF F/L 2.0 TGDI +IMMO/SMK 15MY(ULEV/4WD) : 39108-2GBG7	4610
TF 2.4	TF F/L 2.4 GDI -IMMO 14MY(ULEV/4WD) : 39108/18-2GBE0	4601
	TF F/L 2.4 GDI +IMMO/SMK 14MY(ULEV/4WD) : 39108/18-2GBF0	4602
	TF F/L 2.4 GDI -IMMO 14MY(SULEV/4WD) : 39108-2GBE5	4603
	TF F/L 2.4 GDI +IMMO/SMK 14MY(SULEV/4WD) : 39108-2GBF5	4604
	TF F/L 2.4 GDI -IMMO 15MY(ULEV/4WD) : 39108/18-2GBE1	4605
	TF F/L 2.4 GDI +IMMO/SMK 15MY(ULEV/4WD) : 39108-2GBF1	4606
	TF F/L 2.4 GDI -IMMO 15MY(SULEV/4WD) : 39108-2GBE6	4607
SL 2.0T	SL 2.0T-GDI -IMMO 14MY(ULEV/4WD) : 39107-2GCC5	4813
	SL 2.0T-GDI +IMMO/SMK 14MY(ULEV/4WD) : 39107-2GCC0	4814
	SL 2.0T-GDI -IMMO 15MY(ULEV/4WD) : 39107-2GCC6/C7	4815
	SL 2.0T-GDI +IMMO/SMK 15MY(ULEV/4WD) : 39107-2GCC1/C2	4816
	SL 2.0T-GDI -IMMO 15MY(ULEV/4WD) : 39107-2GCC8	4817
	SL 2.0T-GDI +IMMO/SMK 15MY(ULEV/4WD) : 39107-2GCC3	4818
SL 2.4	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(SULEV) -IMMO : 39107-2GCG6/G7	7268
	SL 2.4 GDI 15MY(SULEV) +IMMO/SMK : 39107-2GCG1/G2	7213
	SL 2.4 GDI -IMMO 14MY(ULEV/4WD) : 39107-2GCD5/E5, 39117-2GCD5/E5	4801
	SL 2.4 GDI +IMMO/SMK 14MY(ULEV/4WD) : 39107-2GCD0/E0, 39117-2GCD0/E0	4802
	SL 2.4 GDI -IMMO 15MY(ULEV/4WD) : 39107-2GCD6/D7/E6/E7, 39117-2GCD6/E6	4805
	SL 2.4 GDI +IMMO/SMK 15MY(ULEV/4WD) : 39107-2GCD1/D2/E1/E2, 39117-2GCD1/E1	4806
	SL 2.4 GDI -IMMO 16MY(ULEV/4WD) : 39107-2GCD8/E8, 39117-2GCD8/E8	4809
	SL 2.4 GDI +IMMO/SMK 16MY(ULEV/4WD) : 39107-2GCD3/E3, 39117-2GCD3/E3	4810
QF 2.4	QF 2.4 GDI -IMMO 15MY(ULEV/4WD) : 39108-2GBH1/H2, 39118-2GBH1	4701
	QF 2.4 GDI +IMMO/SMK 15MY(ULEV/4WD) : 39108-2GBJ1/J2, 39118-2GBJ1	4702
	QF 2.4 GDI -IMMO 15MY(SULEV/4WD) : 39108-2GBH6/H7	4703
	QF 2.4 GDI +IMMO/SMK 15MY(SULEV/4WD) : 39108-2GBJ6/J7	4704
QF 2.0T	QF 2.0 T-GDI -IMMO 15MY(ULEV/4WD) : 39108-2GBK2/K3	4705
	QF 2.0 T-GDI +IMMO/SMK 15MY(ULEV/4WD) : 39108-2GBK7/K8	4706

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

### Manual Mode ECU Upgrade Passwords

Model	Menu	Pass.
UMa 2.4	UMA 2.4 GDI -IMMO 15~16MY(ULEV/2WD) : 39100-2GGF0 [2WD_UMAFNC4EM91A/92A/A31/A51/A52/A6K]	4901
	UMA 2.4 GDI -IMMO 15~16MY(ULEV/4WD) : 39100-2GGH0 [4WD_UMAFNC4EM91A/92A/A31/A51/A52/A6L/A6O]	4902
	UMA 2.4 GDI -IMMO 15~16MY(ULEV/2WD) : 39100-2GGF1 [2WD_UMAFNC4EMA3A/A5A/A5B/A5C/A6M]	4903
	UMA 2.4 GDI -IMMO 15~16MY(ULEV/4WD) : 39100-2GGH1 [4WD_UMAFNC4EMA3A/A5A/A5B/A5C/A6N/A6P]	4904
	UMA 2.4 GDI -IMMO 15~16MY(ULEV/2WD) : 39100-2GGF1 [2WD_UMAHNC4EMA6B/A6K/A6O]	4905
	UMA 2.4 GDI -IMMO 15~16MY(ULEV/4WD) : 39100-2GGH1 [4WD_UMAHNC4EMA6B/A6L/A6P]	4906
	UMA 2.4 GDI +IMMO/SMK 15~16MY(ULEV/2WD) : 39100-2GGF5 [2WD_UMAFNC4ER91A/92A/A31/A51/A52/A6K]	4907
	UMA 2.4 GDI +IMMO/SMK 15~16MY(ULEV/4WD) : 39100-2GGH5 [4WD_UMAFNC4ER91A/92A/A31/A51/A52/A6L/A6O]	4908
	UMA 2.4 GDI +IMMO/SMK 15~16MY(ULEV/2WD) : 39100-2GGF6 [2WD_UMAFNC4ERA3A/A5A/A5B/A5C/A6M]	4909
	UMA 2.4 GDI +IMMO/SMK 15~16MY(ULEV/4WD) : 39100-2GGH6 [4WD_UMAFNC4ERA3A/A5A/A5B/A5C/A6N/A6P]	4910
	UMA 2.4 GDI +IMMO/SMK 15~16MY(ULEV/2WD) : 39100-2GGF6 [2WD_UMAHNC4ERA6B/A6K/A6O]	4911
	UMA 2.4 GDI +IMMO/SMK 15~16MY(ULEV/4WD) : 39100-2GGH6 [4WD_UMAHNC4ERA6B/A6L/A6P]	4912
	UMA 2.4 GDI -IMMO 17MY(ULEV/2WD) : 39100-2GGF2 [2WD_UMAHNC4EMA5A/A5B/A6A/A6B/A6K/A6M]	4913
	UMA 2.4 GDI -IMMO 17MY(ULEV/4WD) : 39100-2GGH2 [4WD_UMAHNC4EMA5A/A5B/A6A/A6B/A6L/A6N]	4914
	UMA 2.4 GDI +IMMO/SMK 17MY(ULEV/2WD) : 39100-2GGF7 [2WD_UMAHNC4ERA5A/A5B/A6A/A6B/A6K/A6M]	4915
	UMA 2.4 GDI +IMMO/SMK 17MY(ULEV/4WD) : 39100-2GGH7 [4WD_UMAHNC4ERA5A/A5B/A6A/A6B/A6L/A6N]	4916
	UMA 2.4 GDI -IMMO 18MY(ULEV/2WD) : 39100-2GGF3 [2WD_UMAINC4EMA6A/A7A/A7B/D5A/D5B/D5K/D5M]	4917
	UMA 2.4 GDI -IMMO 18MY(ULEV/4WD) : 39100-2GGH3 [4WD_UMAINC4EMA6A/A7A/A7B/D5A/D5B/D5L/D5N]	4918
UMa 2.0T	UMA 2.0 T-GDI -IMMO 15MY(ULEV/2WD) : 39100-2GTC0 [2WD_UMAFNC0EM91A/92A/921/92K]	4921
	UMA 2.0 T-GDI -IMMO 15MY(ULEV/4WD) : 39100-2GTD0 [4WD_UMAFNC0EM91A/92A/921/92L]	4922
	UMA 2.0 T-GDI +IMMO/SMK 15MY(ULEV/2WD) : 39100-2GTC5 [2WD_UMAFNC0ER91A/92A/921/92K]	4923
	UMA 2.0 T-GDI +IMMO/SMK 15MY(ULEV/4WD) : 39100-2GTD5 [4WD_UMAFNC0ER91A/92A/921/92L]	4924
	UMA 2.0 T-GDI -IMMO 16MY(ULEV/2WD) : 39100-2GTC1 [2WD_UMAGNC0EMA3A/A5A/A61/A6K]	4925
	UMA 2.0 T-GDI -IMMO 16MY(ULEV/4WD) : 39100-2GTD1 [4WD_UMAGNC0EMA3A/A5A/A61/A6L]	4926
	UMA 2.0 T-GDI +IMMO/SMK 16MY(ULEV/2WD) : 39100-2GTC6 [2WD_UMAGNC0ERA3A/A5A/A61/A6K]	4927
	UMA 2.0 T-GDI +IMMO/SMK 16MY(ULEV/4WD) : 39100-2GTD6 [4WD_UMAGNC0ERA3A/A5A/A61/A6L]	4928
	UMA 2.0 T-GDI -IMMO 17MY(ULEV/2WD) : 39100-2GTC2 [2WD_UMAHNC0EMA5A/A6A/A6B/A6K/A6M]	4929
	UMA 2.0 T-GDI -IMMO 17MY(ULEV/4WD) : 39100-2GTD2 [4WD_UMAHNC0EMA5A/A6A/A6B/A6L/A6N]	4930
	UMA 2.0 T-GDI +IMMO/SMK 17MY(ULEV/2WD) : 39100-2GTC7 [2WD_UMAHNC0ERA5A/A6A/A6B/A6K/A6M]	4931
	UMA 2.0 T-GDI +IMMO/SMK 17MY(ULEV/4WD) : 39100-2GTD7 [4WD_UMAHNC0ERA5A/A6A/A6B/A6L/A6N]	4932
JF/JFa 2.4	JF/JFA 2.4 GDI -IMMO 16MY(ULEV/4WD) : 39108-2GGC0	5001
	JF/JFA 2.4 GDI +IMMO/SMK 16MY(ULEV/4WD) : 39108-2GGC5	5002
	JF/JFA 2.4 GDI -IMMO 16MY(SULEV/4WD) : 39108-2GGD0	5003
	JF/JFA 2.4 GDI +IMMO/SMK 16MY(SULEV/4WD) : 39108-2GGD5	5004
	JF/JFA 2.4 GDI -IMMO 16MY(ULEV/4WD) : 39108-2GGC0	5005
	JF/JFA 2.4 GDI +IMMO/SMK 16MY(ULEV/4WD) : 39108-2GGC5	5006
	JF/JFA 2.4 GDI -IMMO 16MY(SULEV/4WD) : 39108-2GGD0	5007
	JF/JFA 2.4 GDI +IMMO/SMK 16MY(SULEV/4WD) : 39108-2GGD5	5008
	JF/JFA 2.4 GDI -IMMO 17MY(ULEV) : 39108-2GGC1	5009
	JF/JFA 2.4 GDI -IMMO 17MY(ULEV) : 39108-2GGC3	5010
	JF/JFA 2.4 GDI -IMMO 17MY(ULEV) : 39108-2GGL1	5011
	JF/JFA 2.4 GDI -IMMO 17MY(ULEV) : 39100-2GGL2	5012
	JF/JFA 2.4 GDI +IMMO/SMK 17MY(ULEV) : 39108-2GGC6	5013
	JF/JFA 2.4 GDI +IMMO/SMK 17MY(ULEV) : 39108-2GGC8	5014

SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

Model	Menu	Pass.
JF/JFa 2.4	JF/JFA 2.4 GDI -IMMO 17MY(SULEV) : 39108-2GGD1	5015
	JF/JFA 2.4 GDI -IMMO 17MY(SULEV) : 39108-2GGD3	5016
	JF/JFA 2.4 GDI -IMMO 17MY(SULEV) : 39108-2GGM1	5017
	JF/JFA 2.4 GDI -IMMO 17MY(SULEV) : 39100-2GGM2	5018
	JF/JFA 2.4 GDI +IMMO/SMK 17MY(SULEV) : 39108-2GGD6	5019
	JF/JFA 2.4 GDI +IMMO/SMK 17MY(SULEV) : 39108-2GGD8	5020
	JF/JFA 2.4 GDI -IMMO 18MY(ULEV) : 39108-2GGC2	5021
	JF/JFA 2.4 GDI +IMMO/SMK 18MY(ULEV) : 39108-2GGC7	5022
	JF/JFA 2.4 GDI -IMMO 18MY(SULEV) : 39108-2GGD2	5023
	JF/JFA 2.4 GDI +IMMO/SMK 18MY(SULEV) : 39108-2GGD7	5024
JFa 2.0T	JF/JFA 2.0 TGDI -IMMO 16MY(ULEV) : 39108-2GTK0	5025
	JF/JFA 2.0 TGDI +IMMO/SMK 16MY(ULEV) : 39108-2GTK5	5026
	JF/JFA 2.0 TGDI -IMMO 17MY(ULEV) : 39108-2GTK1	5027
	JF/JFA 2.0 TGDI +IMMO/SMK 17MY(ULEV) : 39108-2GTK6	5028
	JF/JFA 2.0 TGDI -IMMO 18MY(ULEV) : 39108-2GTK2	5029
	JF/JFA 2.0 TGDI +IMMO/SMK 18MY(ULEV) : 39108-2GTK7	5030
QL 2.4	QL 2.4 GDI -IMMO 17MY(ULEV/2WD) : 39100-2GHS0	5101
	QL 2.4 GDI +IMMO/SMK 17MY(ULEV/2WD) : 39100-2GHR5	5102
	QL 2.4 GDI -IMMO 17MY(ULEV/4WD) : 39100-2GHT0	5103
	QL 2.4 GDI +IMMO/SMK 17MY(ULEV/4WD) : 39100-2GHS5	5104
	QL 2.4 GDI -IMMO 17MY(SULEV/2WD) : 39100-2GHV0	5105
	QL 2.4 GDI +IMMO/SMK 17MY(SULEV/2WD) : 39100-2GHT5	5106
	QL 2.4 GDI -IMMO 17MY(SULEV/4WD) : 39100-2GHW0	5107
	QL 2.4 GDI +IMMO/SMK 17MY(SULEV/4WD) : 39100-2GHV5	5108
	QL 2.4 GDI -IMMO 18MY(ULEV/2WD) : 39100-2GHS1	5109
	QL 2.4 GDI +IMMO/SMK 18MY(ULEV/2WD) : 39100-2GHR6	5110
	QL 2.4 GDI -IMMO 18MY(ULEV/4WD) : 39100-2GHT1	5111
	QL 2.4 GDI +IMMO/SMK 18MY(ULEV/4WD) : 39100-2GHS6	5112
	QL 2.4 GDI -IMMO 18MY(SULEV/2WD) : 39100-2GHV1	5113
	QL 2.4 GDI +IMMO/SMK 18MY(SULEV/2WD) : 39100-2GHT6	5114
	QL 2.4 GDI -IMMO 18MY(SULEV/4WD) : 39100-2GHW1	5115
QL 2.4 GDI +IMMO/SMK 18MY(SULEV/4WD) : 39100-2GHV6	5116	
QL 2.0T	QL 2.0 TGDI -IMMO 17MY(ULEV/2WD) : 39100-2GHJ5	5117
	QL 2.0 TGDI +IMMO/SMK 17MY(ULEV/2WD) : 39100-2GHJ0	5118
	QL 2.0 TGDI -IMMO 17MY(ULEV/4WD) : 39100-2GHK5	5119
	QL 2.0 TGDI +IMMO/SMK 17MY(ULEV/4WD) : 39100-2GHK0	5120
	QL 2.0 TGDI -IMMO 18MY(ULEV/2WD) : 39100-2GHJ6	5121
	QL 2.0 TGDI +IMMO/SMK 18MY(ULEV/2WD) : 39100-2GHJ1	5122
	QL 2.0 TGDI -IMMO 18MY(ULEV/4WD) : 39100-2GHK6	5123
	QL 2.0 TGDI +IMMO/SMK 18MY(ULEV/4WD) : 39100-2GHK1	5124

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **ENGINE** system under the System selection menu. Select the applicable Upgrade Event listed on page 3 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
15-18MY Optima (TF/QF/JF/JFa)	April 16, 2014 through July 11, 2018
14-18MY Sportage (SL/QL)	September 30, 2013 through April 5, 2018
15-18MY Sorento (XMa/UMa)	January 3, 2014 through March 7, 2018

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	(PI1802 <u>B</u> ) KSDS - ECU Logic Improvement	180108R0	0.3 M/H	N/A	0
JF (16MY)	R	39108 2GGC5	0	(PI1802 <u>B</u> ) KSDS - ECU Logic Improvement	180109R0	0.3 M/H	N/A	0
JFa (16MY)	R	39108 2GTK5	0	(PI1802 <u>B</u> ) KSDS - ECU Logic Improvement	180A25R0	0.3 M/H	N/A	0
UMa (16MY)	R	39100 2GGF0	0	(PI1802 <u>B</u> ) KSDS - ECU Logic Improvement	180A26R0	0.3 M/H	N/A	0

WARRANTY INFORMATION (PI1802C):**N Code: N99 C Code: C99**

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
QL (17MY)	R	39100 2GHS0	0	(PI1802 <u>C</u> ) KSDS - ECU Logic Improvement	180110R0	0.3 M/H	N/A	0
JF (17MY)	R	39108 2GGC5	0	(PI1802 <u>C</u> ) KSDS - ECU Logic Improvement	180109R0	0.3 M/H	N/A	0
JFa (17MY)	R	39108 2GTK5	0	(PI1802 <u>C</u> ) KSDS - ECU Logic Improvement	180A27R0	0.3 M/H	N/A	0
UMa (17MY)	R	39100 2GGF0	0	(PI1802 <u>C</u> ) KSDS - ECU Logic Improvement	180A28R0	0.3 M/H	N/A	0



SUBJECT:

## KNOCK SENSOR DETECTION SYSTEM – ECU LOGIC IMPROVEMENT (PI1802)

WARRANTY INFORMATION (PI1802D):

**N Code: N99 C Code: C99**

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
QL (18MY)	R	39100 2GHS0	0	(PI1802D) KSDS - ECU Logic Improvement	180110R0	0.3 M/H	N/A	0
JF (18MY)	R	39108 2GGC5	0	(PI1802D) KSDS - ECU Logic Improvement	180109R0	0.3 M/H	N/A	0
JFa (18MY)	R	39108 2GTK5	0	(PI1802D) KSDS - ECU Logic Improvement	180A29R0	0.3 M/H	N/A	0
UMa (18MY)	R	39100 2GGF0	0	(PI1802D) KSDS - ECU Logic Improvement	180A30R0	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.