

|                                                                                   |                                           |                                          |
|-----------------------------------------------------------------------------------|-------------------------------------------|------------------------------------------|
|  | GROUP<br><b>Product Improvement</b>       | MODEL<br><b>See Model List on Page 1</b> |
|                                                                                   | NUMBER<br><b>1802 (Rev 7, 09/30/2019)</b> | DATE<br><b>July 2018</b>                 |
| <b>PRODUCT IMPROVEMENT CAMPAIGN</b>                                               |                                           |                                          |
| <b>SUBJECT:</b> KNOCK SENSOR DETECTION SYSTEM - ECU<br>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>**

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**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<br>Sor. (XMa) | 2.4<br>(ULEV)  | Yes  | 39113-2GBK6<br>39113-2GBK7<br>39113-2GBL6<br>39113-2GBL7 | FFC4RH2A<br>FFC4RHAA<br>FFC4RHAB<br>FFC4RHAL | FFC4RHAM |
|                    |                | No   | 39113-2GBK1<br>39113-2GBK2<br>39113-2GBL1<br>39113-2GBL2 | FFC4MH2A<br>FFC4MHAA<br>FFC4MHAB<br>FFC4RHAL | FFC4MHAM |
| 14MY<br>Opt. (TF)  | 2.4<br>(ULEV)  | Yes  | 39108-2GBF0<br>39118-2GBF0                               | TEC4RH2K<br>TEC4RH2L<br>TEC4RH25<br>TEC4RH26 | TEC4RH27 |
|                    |                | No   | 39108-2GBE0<br>39118-2GBE0                               | TEC4MH2K<br>TEC4MH2L<br>TEC4MH25<br>TEC4MH26 | TEC4MH27 |
|                    | 2.4<br>(SULEV) | Yes  | 39108-2GBF5                                              | TES4RH2K<br>TES4RH2L<br>TES4RH25<br>TES4RH26 | TES4RH27 |
|                    |                | No   | 39108-2GBE5                                              | TES4MH2K<br>TES4MH2L<br>TES4MH25<br>TES4MH26 | TES4MH27 |
| 15MY<br>Opt. (TF)  | 2.4<br>(ULEV)  | Yes  | 39108-2GBF1                                              | TFC4RH4K<br>TFC4RH4L<br>TFC4RH45<br>TFC4RH46 | TFC4RH47 |
|                    |                | No   | 39108-2GBE1<br>39118-2GBE1                               | TFC4MH4K<br>TFC4MH4L<br>TFC4MH45<br>TFC4MH46 | TFC4MH47 |
|                    | 2.4<br>(SULEV) | No   | 39108-2GBE6                                              | TFS4MH4K<br>TFS4MH4L<br>TFS4MH45<br>TFS4MH46 | TFS4MH47 |
| 14MY<br>Opt. (TF)  | 2.0T<br>(ULEV) | Yes  | 39108-2GBG5<br>39108-2GBG6                               | TEC0RH2K<br>TEC0RH2L<br>TEC0RH25<br>TEC0RH26 | TEC0RH27 |
|                    |                | No   | 39108-2GBG0<br>39108-2GBG1                               | TEC0MH2K<br>TEC0MH2L<br>TEC0MH25<br>TEC0MH26 | TEC0MH27 |
| 15MY<br>Opt. (TF)  | 2.0T<br>(ULEV) | Yes  | 39108-2GBG7                                              | TFC0RH4K<br>TFC0RH4L<br>TFC0RH45<br>TFC0RH46 | TFC0RH47 |

SUBJECT:

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

| Model             | ENG            | IMMO | ECU P/No.                                                                              | ROM ID                                                   |          |
|-------------------|----------------|------|----------------------------------------------------------------------------------------|----------------------------------------------------------|----------|
|                   |                |      |                                                                                        | Previous                                                 | New      |
| 14MY Spo.<br>(SL) | 2.4<br>(ULEV)  | Yes  | 39107-2GCD0<br>39107-2GCE0<br>39117-2GCD0<br>39117-2GCE0                               | SEC4RH2A<br>SEC4RH2B<br>SEC4RH2C<br>SEC4RH2D<br>SEC4RH2K | SEC4RH2L |
|                   |                | No   | 39107-2GCD5<br>39107-2GCE5<br>39117-2GCD5<br>39117-2GCE5                               | SEC4MH2A<br>SEC4MH2B<br>SEC4MH2C<br>SEC4MH2D<br>SEC4MH2K | SEC4MH2L |
|                   | 2.4<br>(SULEV) | Yes  | 39107-2GCG0                                                                            | SES4RH2A<br>SES4RH2B<br>SES4RH2C<br>SES4RH2D             | SES4RH2K |
|                   |                | No   | 39107-2GCG5                                                                            | SES4MH2A<br>SES4MH2B<br>SES4MH2C<br>SES4MH2D             | SES4MH2K |
| 15MY Spo.<br>(SL) | 2.4 (ULEV)     | Yes  | 39107-2GCD1<br>39107-2GCD2<br>39107-2GCE1<br>39107-2GCE2<br>39117-2GCD1<br>39117-2GCE1 | SFC4RH4A<br>SFC4RH4B<br>SFC4RH4K                         | SFC4RH4L |
|                   |                | No   | 39107-2GCD6<br>39107-2GCD7<br>39107-2GCE6<br>39107-2GCE7<br>39117-2GCD6<br>39117-2GCE6 | SFC4MH4A<br>SFC4MH4B<br>SFC4MH4K                         | SFC4MH4L |
|                   | 2.4<br>(SULEV) | Yes  | 39107-2GCG1<br>39107-2GCG2                                                             | SFS4RH4A<br>SFS4RH4B                                     | SFS4RH4K |
|                   |                | No   | 39107-2GCG6<br>39107-2GCG7                                                             | SFS4MH4A<br>SFS4MH4B                                     | SFS4MH4K |
| 14MY Spo.<br>(SL) | 2.0T<br>(ULEV) | Yes  | 39107-2GCC0                                                                            | SEC0RH2A<br>SEC0RH2K                                     | SEC0RH2L |
|                   |                | No   | 39107-2GCC5                                                                            | SEC0MH2A<br>SEC0MH2K                                     | SEC0MH2L |
| 15MY<br>Spo. (SL) | 2.0T<br>(ULEV) | Yes  | 39107-2GCC1<br>39107-2GCC2                                                             | SFC0RH4A<br>SFC0RH4K                                     | SFC0RH4L |
|                   |                | No   | 39107-2GCC6<br>39107-2GCC7                                                             | SFC0MH4A<br>SFC0MH4K                                     | SFC0MH4L |

SUBJECT:

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

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

SUBJECT:

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

| Model                            | ENG           | IMMO | ECU P/No.                  | ROM ID                                                                                                       |              |
|----------------------------------|---------------|------|----------------------------|--------------------------------------------------------------------------------------------------------------|--------------|
|                                  |               |      |                            | Previous                                                                                                     | New          |
| 16MY<br>Sor. (UMa)<br><u>2WD</u> | 2.4<br>(ULEV) | Yes  | 39100-2GGF5                | UMAFNC4ER91A<br>UMAFNC4ER92A<br>UMAGNC4ERA31<br>UMAFNC4ERA51<br>UMAFNC4ERA52<br>UMAFNC4ERA6K                 | UMAFNC4ERA6Q |
|                                  |               |      | 39100-2GGF6                | UMAFNC4ERA3A<br>UMAFNC4ERA5A<br>UMAFNC4ERA5B<br>UMAFNC4ERA5C<br>UMAFNC4ERA6M                                 | UMAFNC4ERA6S |
|                                  |               |      | 39100-2GGF6<br>39100-2GGF7 | UMAHNC4ERA6B<br>UMAHNC4ERA6K<br>UMAHNC4ERA6O<br>UMAHNC4ERA5A<br>UMAHNC4ERA5B<br>UMAHNC4ERA6A<br>UMAHNC4ERA6M | UMAHNC4ERA6Q |
|                                  |               | No   | 39100-2GGF0                | UMAFNC4EM91A<br>UMAFNC4EM92A<br>UMAGNC4EMA31<br>UMAFNC4EMA51<br>UMAFNC4EMA52<br>UMAFNC4EMA6K                 | UMAFNC4EMA6Q |
|                                  |               |      | 39100-2GGF1                | UMAFNC4EMA3A<br>UMAFNC4EMA5A<br>UMAFNC4EMA5B<br>UMAFNC4EMA5C<br>UMAFNC4EMA6M                                 | UMAFNC4EMA6S |
|                                  |               |      |                            |                                                                                                              |              |
| 16MY<br>Sor. (UMa)<br><u>4WD</u> | 2.4<br>(ULEV) | Yes  | 39100-2GGH5                | UMAFNC4ER91A<br>UMAFNC4ER92A<br>UMAGNC4ERA31<br>UMAFNC4ERA51<br>UMAFNC4ERA52<br>UMAFNC4ERA6O                 | UMAFNC4ERA6R |
|                                  |               |      | 39100-2GGH6                | UMAFNC4ERA3A<br>UMAFNC4ERA5A<br>UMAFNC4ERA5B<br>UMAFNC4ERA5C<br>UMAFNC4ERA6P                                 | UMAFNC4ERA6T |
|                                  |               |      | 39100-2GGH6                | UMAHNC4ERA6B<br>UMAHNC4ERA6L                                                                                 | UMAHNC4ERA6R |
|                                  |               | No   | 39100-2GGH0                | UMAFNC4EM91A<br>UMAFNC4EM92A<br>UMAGNC4EMA31<br>UMAFNC4EMA51<br>UMAFNC4EMA52<br>UMAFNC4EMA6O                 | UMAFNC4EMA6R |
|                                  |               |      | 39100-2GGH1                | UMAFNC4EMA3A<br>UMAFNC4EMA5A<br>UMAFNC4EMA5B<br>UMAFNC4EMA5C<br>UMAFNC4EMA6P                                 | UMAFNC4EMA6T |
|                                  |               |      | 39100-2GGH1                | UMAHNC4EMA6B<br>UMAHNC4EMA6L                                                                                 | UMAHNC4EMA6R |

SUBJECT:

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

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

SUBJECT:

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

| Model                    | ENG            | IMMO | ECU P/No.                                                | ROM ID                                                                       |              |
|--------------------------|----------------|------|----------------------------------------------------------|------------------------------------------------------------------------------|--------------|
|                          |                |      |                                                          | Previous                                                                     | New          |
| 16MY<br>Opt.<br>(JF/JFa) | 2.4<br>(ULEV)  | Yes  | 39108-2GGC5                                              | JFAGNC4ERB0A<br>JFAGNC4ERB0B<br>JFAGNC4ERC0A<br>JFAGNC4ERC3A<br>JFAGNC4ERC3K | JFAGNC4ERC3L |
|                          |                |      | 39108-2GGC5                                              | JFAGNC4ERD11<br>JFAGNC4ERD1K                                                 | JFAGNC4ERD1L |
|                          |                | No   | 39108-2GGC0                                              | JFAGNC4EMB0A<br>JFAGNC4EMB0B<br>JFAGNC4EMC0A<br>JFAGNC4EMC3A<br>JFAGNC4EMC3K | JFAGNC4EMC3L |
|                          |                |      | 39108-2GGC0                                              | JFAGNC4EMD11<br>JFAGNC4EMD1K                                                 | JFAGNC4EMD1L |
|                          | 2.4<br>(SULEV) | Yes  | 39108-2GGD5                                              | JFAGNS4ERB0A<br>JFAGNS4ERB0B<br>JFAGNS4ERC0A<br>JFAGNS4ERC3A<br>JFAGNS4ERC3K | JFAGNS4ERC3L |
|                          |                |      | 39108-2GGD5                                              | JFAGNS4ERD11<br>JFAGNS4ERD1K                                                 | JFAGNS4ERD1L |
|                          |                | No   | 39108-2GGD0                                              | JFAGNS4EMB0A<br>JFAGNS4EMB0B<br>JFAGNS4EMC0A<br>JFAGNS4EMC3A<br>JFAGNS4EMC3K | JFAGNS4EMC3L |
|                          |                |      | 39108-2GGD0                                              | JFAGNS4EMD11<br>JFAGNS4EMD1K                                                 | JFAGNS4EMD1L |
| 16MY<br>Opt. (JFa)       | 2.0T<br>(ULEV) | Yes  | 39108-2GTK5                                              | JFAGNC0ERB0A<br>JFAGNC0ERB0B<br>JFAGNC0ERB4A<br>JFAGNC0ERB4K                 | JFAGNC0ERB4L |
|                          |                | No   | 39108-2GTK0                                              | JFAGNC0EMB0A<br>JFAGNC0EMB0B<br>JFAGNC0EMB4A<br>JFAGNC0EMB4K                 | JFAGNC0EMB4L |
| 16MY<br>Spo. (SL)        | 2.4<br>(ULEV)  | Yes  | 39107-2GCD3<br>39107-2GCE3<br>39117-2GCD3<br>39117-2GCE3 | SGC4RH4A<br>SGC4RH4B<br>SGC4RH4K                                             | SGC4RH4L     |
|                          |                | No   | 39107-2GCD8<br>39107-2GCE8<br>39117-2GCD8<br>39117-2GCE8 | SGC4MH4A<br>SGC4MH4B<br>SGC4MH4K                                             | SGC4MH4L     |
|                          | 2.0T<br>(ULEV) | Yes  | 39107-2GCC3                                              | SGC0RH4A<br>SGC0RH4K                                                         | SGC0RH4L     |
|                          |                | No   | 39107-2GCC8                                              | SGC0MH4A<br>SGC0MH4K                                                         | SGC0MH4L     |
|                          | 2.4<br>(SULEV) | Yes  | 39107-2GCG3                                              | SGS4RH4A<br>SGS4RH4B                                                         | SGS4RH4K     |
|                          |                | No   | 39107-2GCG8                                              | SGS4MH4A<br>SGS4MH4B                                                         | SGS4MH4K     |

SUBJECT:

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

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

SUBJECT:

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

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

SUBJECT:

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

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

SUBJECT:

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

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

SUBJECT:

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

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

SUBJECT:

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

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

SUBJECT:

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

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

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.**

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

### ★ NOTICE

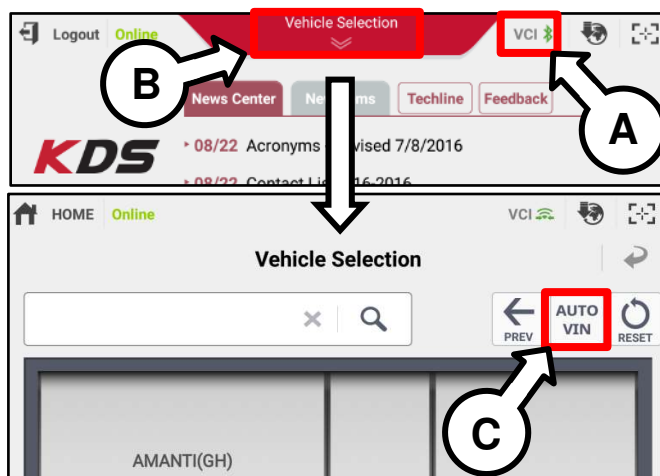
**The ECU upgrade function on KDS operates wirelessly. It is not necessary to perform the upgrade via USB cable.**



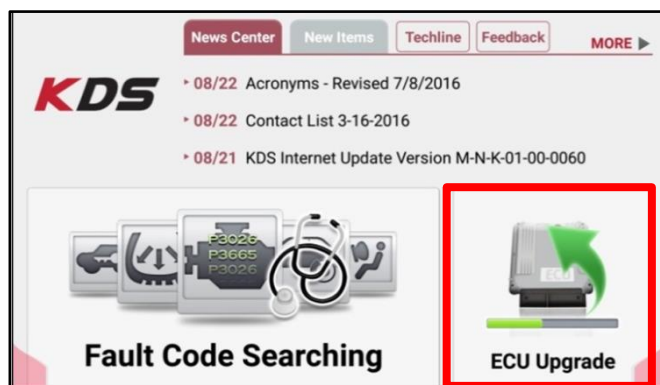
2. With the ignition ON, turn ON the KDS tablet. Select **KDS** from the home screen.



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



4. Select **ECU Upgrade**.



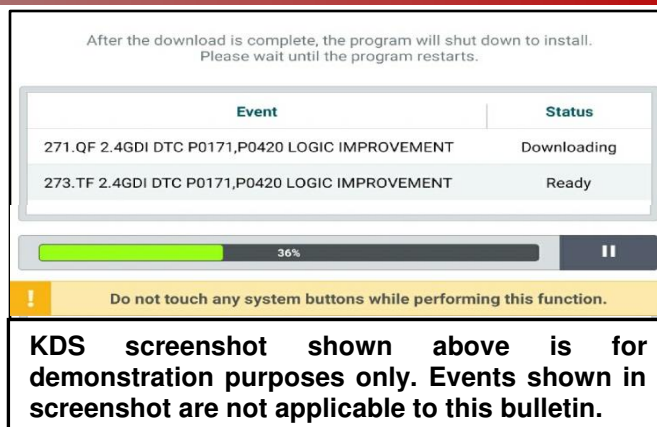
SUBJECT:

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

5. 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.



6. Select **Auto Mode**.

### ★ NOTICE

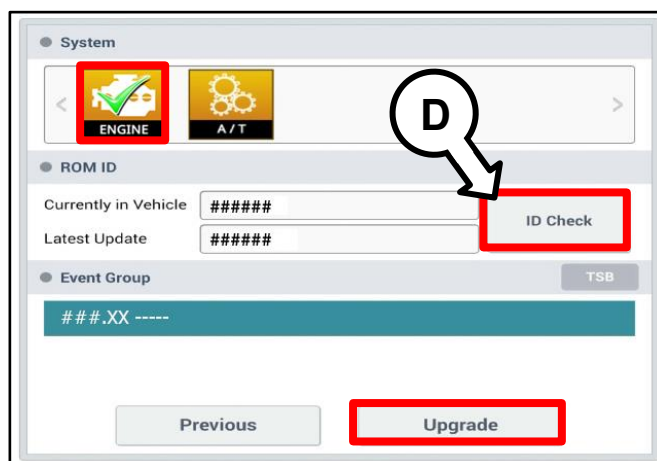
Do NOT attempt to perform a Manual Mode upgrade UNLESS Auto Mode fails. Always follow the instructions given on the KDS in either Auto or Manual mode.



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

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

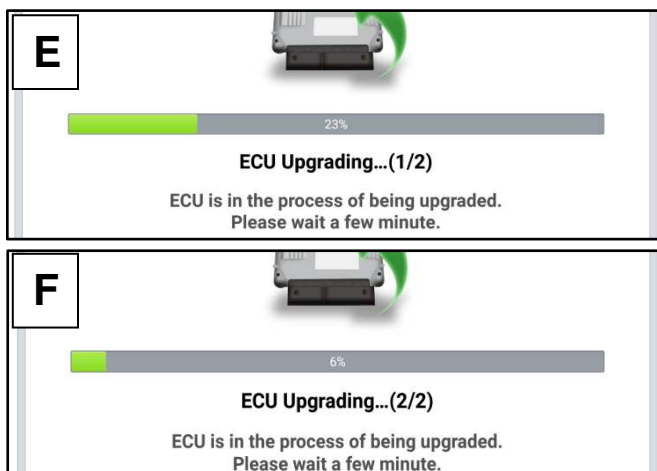
Select the applicable Upgrade Event and select **Upgrade** to continue.



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.



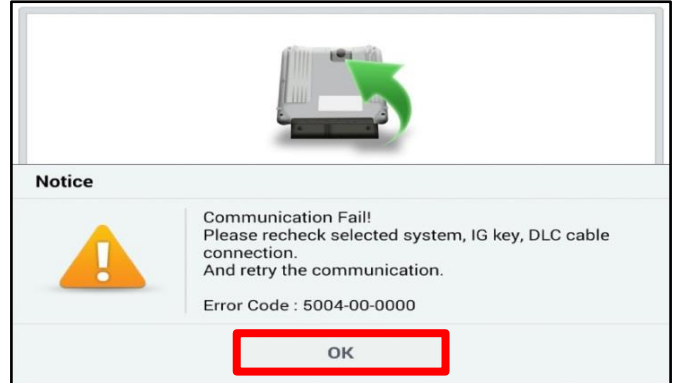
SUBJECT:

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

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

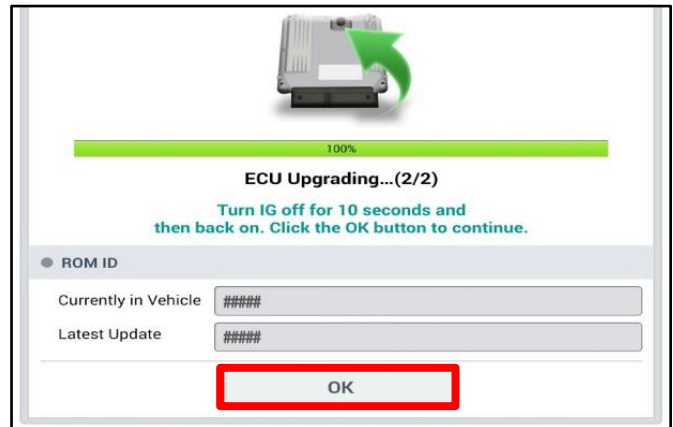
**If an error notice continues to appear or if the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.**



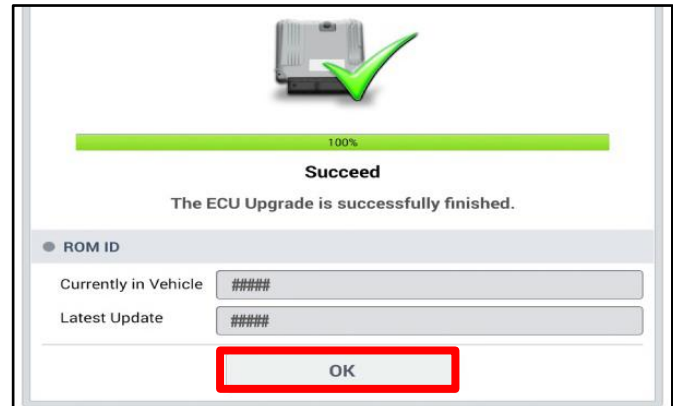
10. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.

### ★ NOTICE

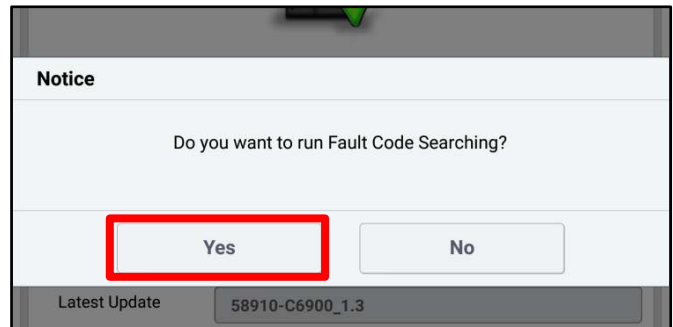
**If applicable and instructed on the KDS, leave the ignition ON for five (5) seconds to perform ETC Adaptive Learning.**



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



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.



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 (14-18MY)

| 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<br>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<br>[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<br>[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<br>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<br>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<br>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<br>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<br>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<br>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  |

SUBJECT:

KNOCK SENSOR DETECTION SYSTEM – ECU  
LOGIC IMPROVEMENT (PI1802)

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)<br>KSDS - ECU Logic Improvement | 180A10R0      | 0.3 M/H | N/A             | 0    |
| TF (14-15MY) | R          | 39108 2GBE0 | 0    | (PI1802A)<br>KSDS - ECU Logic Improvement | 180107R0      | 0.3 M/H | N/A             | 0    |
| QF (15MY)    | R          | 39108 2GBH1 | 0    | (PI1802A)<br>KSDS - ECU Logic Improvement | 180A15R0      | 0.3 M/H | N/A             | 0    |
| SL (14-15MY) | R          | 39107 2GCD5 | 0    | (PI1802A)<br>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)<br>KSDS - ECU Logic Improvement | 180119R0      | 0.3 M/H | N/A             | 0    |
| QF (15MY)    | R          | 39108 2GBH1 | 0    | (PI1802A1)<br>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<br>(16MY)  | R          | 39107<br>2GCD5 | 0    | (PI1802B)<br>KSDS - ECU Logic Improvement | 180108R0      | 0.3<br>M/H | N/A             | 0    |
| JF<br>(16MY)  | R          | 39108<br>2GGC5 | 0    | (PI1802B)<br>KSDS - ECU Logic Improvement | 180109R0      | 0.3<br>M/H | N/A             | 0    |
| JFa<br>(16MY) | R          | 39108<br>2GTK5 | 0    | (PI1802B)<br>KSDS - ECU Logic Improvement | 180A25R0      | 0.3<br>M/H | N/A             | 0    |
| UMa<br>(16MY) | R          | 39100<br>2GGF0 | 0    | (PI1802B)<br>KSDS - ECU Logic Improvement | 180A26R0      | 0.3<br>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<br>(17MY)  | R          | 39100<br>2GHS0 | 0    | (PI1802C)<br>KSDS - ECU Logic Improvement | 180110R0      | 0.3<br>M/H | N/A             | 0    |
| JF<br>(17MY)  | R          | 39108<br>2GGC5 | 0    | (PI1802C)<br>KSDS - ECU Logic Improvement | 180109R0      | 0.3<br>M/H | N/A             | 0    |
| JFa<br>(17MY) | R          | 39108<br>2GTK5 | 0    | (PI1802C)<br>KSDS - ECU Logic Improvement | 180A27R0      | 0.3<br>M/H | N/A             | 0    |
| UMa<br>(17MY) | R          | 39100<br>2GGF0 | 0    | (PI1802C)<br>KSDS - ECU Logic Improvement | 180A28R0      | 0.3<br>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<br>(18MY)  | R          | 39100<br>2GHS0 | 0    | (PI1802D)<br>KSDS - ECU Logic Improvement | 180110R0      | 0.3<br>M/H | N/A             | 0    |
| JF<br>(18MY)  | R          | 39108<br>2GGC5 | 0    | (PI1802D)<br>KSDS - ECU Logic Improvement | 180109R0      | 0.3<br>M/H | N/A             | 0    |
| JFa<br>(18MY) | R          | 39108<br>2GTK5 | 0    | (PI1802D)<br>KSDS - ECU Logic Improvement | 180A29R0      | 0.3<br>M/H | N/A             | 0    |
| UMa<br>(18MY) | R          | 39100<br>2GGF0 | 0    | (PI1802D)<br>KSDS - ECU Logic Improvement | 180A30R0      | 0.3<br>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.