

## CDS ${ }^{\text {®urunapi }}$ ECU Update

Description: This bulletin provides an ECM update to revise the logic for the following DTC(s):
2011-2012MY

- P2096: Post Catalyst Fuel Trim System too Lean(Bank1)
- P0301/2/3/4: Cylinder-1/2/3/4 Misfire detected


## 2013MY

- P2096: Post Catalyst Fuel Trim System too Lean(Bank1)

Applicable Vehicles: 2011-2013 ELANTRA (MD/UD)
NOTE: There are no vehicle performance issues associated with this update.

GDS Information:

| EVENT \# | DESCRIPTION |
| :---: | :---: |
| 306 | "306. UD/MD 1.8 P2096 DTC LOGIC IMPROVEMENT" |

Warranty Information:

| Model | Op Code | Operation | Op Time | Causal Part \# | Nature Code | Cause Code |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| ELANTRA <br> (MD/UD) | 39110F8Q | ECM <br> UPGRADE | $0.3 \mathrm{M} / \mathrm{H}$ | (See NOTE) | N69 | C40 |

NOTE: Use the applicable ECM P/N listed in the ECM ROM ID Information Table from the following pages.

## ECM ROM ID INFORMATION TABLE:

Verify the ECM ROM ID before updating the vehicle's software. Refer to the table below.

| Model | MY | Emission | ECM P/N | T/M | IMMO | ROM ID |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Previous | New |
| $\begin{aligned} & \text { ELANTRA } \\ & 1.8 \mathrm{~L} \\ & \text { (MD/UD) } \end{aligned}$ | 11MY | SULEV | 39101-2EMAO (MD/UD) | AT | YES <br> (Start- <br> Stop <br> Button) | MD1SP1MS294B MD1SP1MS294C MD1SP1MS294D MD1SP1MS294E MD1SP1MS296A | MD1SP1MF2E3A |
|  |  |  | $\begin{aligned} & \text { 39103-2EMAO } \\ & \text { (MD/UD) } \end{aligned}$ |  | $\begin{aligned} & \text { NO } \\ & \text { (Key } \\ & \text { Start) } \end{aligned}$ | MD1SP1NS294B MD1SP1NS294C MD1SP1NS294D MD1SP1NS294E MD1SP1NS296A | MD1SP1NF2E3A |
|  |  | ULEV | $\begin{aligned} & \text { 39101-2EMBO } \\ & \text { (MD/UD) } \end{aligned}$ | AT | YES <br> (Start- <br> Stop <br> Button) | MD1UP1MS294B <br> MD1UP1MS294C <br> MD1UP1MS294D <br> MD1UP1MS294E <br> MD1UP1MS296A | MD1UP1MF2E3A |
|  |  |  | $\begin{aligned} & \text { 39105-2EMB0 } \\ & \text { (MD/UD) } \end{aligned}$ | MT |  | MD1UP1MS294B MD1UP1MS294C MD1UP1MS294D MD1UP1MS294E MD1UP1MS296A |  |
|  |  |  | $\begin{aligned} & \text { 39103-2EMBO } \\ & \text { (MD/UD) } \end{aligned}$ | AT | NO (Key Start) | MD1UP1NS294B <br> MD1UP1NS294C <br> MD1UP1NS294D <br> MD1UP1NS294E <br> MD1UP1NS296A | MD1UP1NF2E3A |
|  |  |  | 39107-2EMB0 (MD/UD) | MT |  | MD1UP1NS294B <br> MD1UP1NS294C <br> MD1UP1NS294D <br> MD1UP1NS294E <br> MD1UP1NS296A |  |
|  | 12MY | SULEV | 39101-2EMA2 (MD/UD) | AT | YES <br> (Start- <br> Stop <br> Button) | MD2SP1MS2B0A MD2SP1MS2B4A MD2SP1MS2B4B MD2SP1MS2B4C MD2SP1MS2B7A | MD2SP1MF2E3A |
|  |  |  | $\begin{gathered} \text { 39101-2EMN2 } \\ \text { (MD) } \end{gathered}$ |  |  | MD2SP1MS2B7A |  |
|  |  |  | $\begin{aligned} & \text { 39103-2EMA2 } \\ & \text { (MD/UD) } \end{aligned}$ |  | $\begin{aligned} & \text { NO } \\ & \text { (Key } \\ & \text { Start) } \end{aligned}$ | MD2SP1NS2B0A MD2SP1NS2B4A MD2SP1NS2B4B MD2SP1NS2B4C MD2SP1NS2B7A | MD2SP1NF2E3A |
|  |  |  | $\begin{gathered} \text { 39103-2EMN2 } \\ \text { (MD) } \end{gathered}$ |  |  | MD2SP1NS2B7A |  |


| Model | MY | Emission | ECM P/N | T/M | IMMO | ROM ID |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  |  |  |  | Previous | New |
| ELANTRA1.8L(MD/UD) | 12MY | ULEV | 39101-2EMB2 <br> (MD/UD) <br> 39101-2EMP2 <br> (MD) | AT | YES <br> (Start- <br> Stop <br> Button) | MD2UP1MS2B0A MD2UP1MS2B4A MD2UP1MS2B4B MD2UP1MS2B4C MD2UP1MS2B7A | MD2UP1MF2E3A |
|  |  |  |  |  |  | MD2UP1MS2B7A |  |
|  |  |  | $\begin{aligned} & \text { 39103-2EMB2 } \\ & \text { (MD/UD) } \end{aligned}$ | AT | NO (Key Start) | MD2UP1NS2B0A MD2UP1NS2B4A MD2UP1NS2B4B MD2UP1NS2B4C MD2UP1NS2B7A | MD2UP1NF2E3A |
|  |  |  | $\begin{gathered} \text { 39103-2EMP2 } \\ (\mathrm{MD}) \end{gathered}$ |  |  | MD2UP1NS2B7A |  |
|  |  |  | $\begin{aligned} & \text { 39107-2EMB2 } \\ & \text { (MD/UD) } \end{aligned}$ | MT |  | MD2UP1NS2B0A MD2UP1NS2B4A MD2UP1NS2B4B MD2UP1NS2B4C MD2UP1NS2B7A |  |
|  | 13MY | SULEV | 39101-2EMA3 <br> (UD) | AT | YES <br> (Start- <br> Stop <br> Button) | MD3SP1MS2D2A MD3SP1MS2D2B MD3SP1MS2D8A | MD3SP1MS2E3A |
|  |  |  | $\begin{aligned} & \text { 39101-2EMN3 } \\ & \text { (MD) } \end{aligned}$ |  |  | MD3SP1MS2D2A MD3SP1MS2D2B MD3SP1MS2D8A |  |
|  |  |  | $\begin{aligned} & \text { 39103-2EMA3 } \\ & \text { (UD) } \end{aligned}$ |  | NO | MD3SP1NS2D2A MD3SP1NS2D2B MD3SP1NS2D8A | MD3SP1NS2E3A |
|  |  |  | $\begin{aligned} & \text { 39103-2EMN3 } \\ & \text { (MD) } \end{aligned}$ |  | Start) | MD3SP1NS2D2A MD3SP1NS2D2B MD3SP1NS2D8A | , |
|  |  |  | 39101-2EMB3 <br> (UD) | AT | YES <br> (Start- | MD3UP1MS2D2A <br> MD3UP1MS2D2B <br> MD3UP1MS2D8A | MD3UP1MS2E3A |
|  |  |  | $\begin{aligned} & \text { 39101-2EMP3 } \\ & \text { (MD) } \end{aligned}$ |  | Stop Button) | MD3UP1MS2D2A MD3UP1MS2D2B MD3UP1MS2D8A |  |
|  |  | ULEV | 39103-2EMB3 <br> (UD) |  |  | MD3UP1NS2D2A MD3UP1NS2D2B MD3UP1NS2D8A |  |
|  |  |  | $\begin{aligned} & \text { 39103-2EMP3 } \\ & (\mathrm{MD}) \end{aligned}$ | AT | $\begin{gathered} \text { NO } \\ \text { (Key } \\ \text { Start) } \end{gathered}$ | MD3UP1NS2D2A MD3UP1NS2D2B MD3UP1NS2D8A | MD3UP1NS2E3A |
|  |  |  | $\begin{aligned} & \text { 39107-2EMB3 } \\ & \text { (MD/UD) } \end{aligned}$ | MT |  | MD3UP1NS2D2A MD3UP1NS2D2B MD3UP1NS2D8A |  |

## GENERAL PRECAUTIONS:

- Connect the USB cable between the GDS and the VCI.
- Connect the 16 -pin DLC connector from the VCl into the DLC located under the driver's side dash.



## * NOTE

Make sure the battery icon at the bottom right of the GDS laptop shows at least $50 \%$; if not, charge the GDS or attach a battery charger.

- Turn off all lights (Do not leave the headlight switch in auto mode) and all accessories (including heater/air conditioner/fan, audio, heated seats, rear defroster, etc) to ensure the battery will not be discharged during the update.
- Perform the update with the ignition key in the ON position. (Turn the ignition key to ON position or press the Start-Stop Button two times without depressing the brake pedal).
- Do not disconnect any cables connected to the vehicle or the GDS during the update.
- Do not start the engine or turn the ignition switch OFF during the update.


## * NOTE

Confirm your GDS has the most recent version. If not, connect the GDS to an Internet port, open the GDS home page and select "Update". Refer to instructions on hmaservice.com if necessary.

If you encounter GDS related problems, call the GIT Helpline at 888-437-0308.

## SERVICE PROCEDURE:

## GDS AUTO MODE ECM UPDATE PROCEDURE

1. From the GDS home page, select ECU Upgrade. If necessary, select the VIN.
2. Select Engine as the system and then select OK.
3. Select Auto Mode and then select Next.
4. From the System tab, select Engine and then select OK. The GDS will read the ROM ID. Confirm the ROM is applicable as shown on Page 2-3, "ECM ROM ID Information". NOTE: Record the ECM ROM ID in case the auto update fails and a manual update is needed.

5. Update event "306. UD/MD 1.8 P2096 DTC LOGIC IMPROVEMENT" will display. Select Upgrade.

6. If the screen indicates "Voltage is OK" (voltage > 12volts), select OK. If not, select CANCEL and charge the vehicle battery by running the engine for 10 minutes.
7. Updating will occur until $100 \%$ is reached on the bar graph. At the prompt, turn the ignition key OFF for 10 seconds, then turn it ON and select OK.
8. The GDS will confirm that ECM reprogramming is successfully finished. Select OK.
9. If the ECM update was not successful, go to GDS MANUAL MODE ECM UPDATE PROCEDURE.
10. Check for DTC in all systems and Erase All DTC that stored due to loss of CAN communication during the ECM Update.
11. Turn OFF ignition for 10 seconds then turn $\mathbf{O N}$ before going to engine start.
12. Start the engine to confirm proper operation.

## * NOTE:

In the event of AUTO MODE update failure:

- You must attempt MANUAL MODE. Use the ECM P/N from the vehicle's ECM label if it is not clear from the ROM ID Table as to the correct ECM P/N to use for your vehicle.
- Replacing an ECM without carefully documenting that a MANUAL MODE update attempt was made may result in claims charged back.


## GDS MANUAL MODE ECM UPDATE PROCEDURE

## NOTE

- GDS Manual Mode is intended for recovery of an ECM Update should it begin but then later fail in process in the Auto Mode.
- The ECM connectors must be disconnected for 15 minutes to reset its contents then perform this Manual Mode Update.
- Do not force Manual Mode if you get an error in Auto Mode that the vehicle's current ROM ID did not apply.
- It is critical to identify the correct ECM Part Number in the PASSWORD table or the ECM may be permanently damaged. It is recommended to remove ECM and read the part number from the label to confirm.

1. From the GDS home page, select ECU Upgrade. If necessary, select the VIN.
2. Select Engine as the system and then select OK.
3. Select Manual Mode and then select Next.
4. From the System tab, select Engine and then select OK.
5. Select update event "306. UD/MD 1.8 P2096 DTC LOGIC IMPROVEMENT", then select Next.
6. Be certain to select the exact appropriate ECU of the vehicle, select Upgrade, enter corresponding password from the table below and select OK.

| MENU | PASSWORD |
| :--- | :---: |
| UD/MD 1.8 AT IMMO $: 39101-2 E M A 0$ | 0120 |
| UD/MD 1.8 AT NON IMMO $: 39103-2 E M A 0$ | 0320 |
| UD/MD 1.8 AT/MT IMMO $: 39101 / 39105-2 E M B 0$ | 0520 |
| UD/MD 1.8 AT/MT NON IMMO $: 39103 / 39107-2 E M B 0$ | 0720 |
| UD/MD 1.8 AT IMMO $: 39101-2 E M A 2 / 2 E M N 2$ | 0122 |
| UD/MD 1.8 AT NON IMMO $: 39103-2 E M A 2 / 2 E M N 2$ | 0322 |
| UD/MD 1.8 AT,MT IMMO $: 39101-2 E M B 2 / 2 E M P 2$ | 0722 |
| UD/MD 1.8 AT,MT NON IMMO $: 39103-2 E M B 2 / 2 E M P 2,39107-2 E M B 2$ | 0123 |
| UD/MD 1.8 AT IMMO $: 39101-2 E M A 3 / 2 E M N 3$ | 0323 |
| UD/MD 1.8 AT NON IMMO 39103-2EMA3/2EMN3 | 0523 |
| UD/MD 1.8 AT,MT IMMO $: 39101-2 E M B 3 / 2 E M P 3$ | 0723 |
| UD/MD 1.8 AT,MT NON IMMO :39103-2EMB3/2EMP3, 39107-2EMB3 |  |

7. The remaining steps are the same as Steps 6~12 of the Auto Procedure.
