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|  HYUNDAI NEW THINKING. NEW POSSIBILITIES. Technical Service Bulletin | GROUP | NUMBER |
| | FUEL SYSTEM | 13-FL-007 |
| | DATE | MODEL(S) |
| | AUGUST, 2013 | SANTA FE SPORT (AN) |
| SUBJECT: | ECM UPDATE – DTC P0451 AND P0455 | |

ECU Update

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

2013MY

- P0451: Evaporative Emission System-Pressure Sensor Range/Performance
- P0455: Evaporative Emission System-Leak detected (Large leak)

NOTE: There are no vehicle performance issues associated with this update.

Applicable Vehicles: 2013 SANTA FE SPORT (AN) 2.0/2.4L

GDS Information:

| EVENT # | DESCRIPTION |
|---------|---|
| 308 | "308.DMA 2.0/2.4 P0451 DTC LOGIC IMPROVEMENT" |

Warranty Information:

| Model | Op Code | Operation | Op Time | Causal Part # | Nature Code | Cause Code |
|-----------------------------------|----------|----------------|---------|--------------------|-------------|------------|
| SANTA FE SPORT(AN) 2.0/2.4L | 39110F8U | ECM UPGRADE | 0.3 M/H | (See NOTE) | N69 | C40 |

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

SUBJECT:**ECM UPDATE – DTC P0451 AND P0455****ECM ROM ID INFORMATION TABLE:**

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

| Model | MY | ECM P/N | TM | Drive Type | IMMO | ROM ID | |
|---------------------|----------------|-------------|----|------------|----------------------------|--|----------|
| | | | | | | Previous | New |
| AN 2.4L GDI | 13MY (ULEV) | 39100-2GAE0 | AT | 2WD | YES (Start-Stop Button) | BDC4RE5A BDC4RE5B BDC4RE5C BDC4RE5D | BDC4RG0A |
| | | 39100-2GAE5 | | 4WD | | | |
| | | 39100-2GAG0 | AT | 2WD | NO (Key Start) | BDC4ME5A BDC4ME5B BDC4ME5C BDC4ME5D | BDC4MG0A |
| | | 39100-2GAG5 | | 4WD | | | |
| AN 2.0L T-GDI | 13MY (ULEV) | 39100-2GBB0 | AT | 2WD | YES (Start-Stop Button) | BDC0RE3A BDC0RE5A BDC0RE5B BDC0RF2A | BDC0RG0A |
| | | 39100-2GBC0 | | 4WD | | | |
| | | 39100-2GBD0 | | 2WD | NO (Key Start) | BDC0ME3A BDC0ME5A BDC0ME5B BDC0MF2A | BDC0MG0A |
| | | 39100-2GBE0 | | 4WD | | | |

GENERAL PRECAUTIONS:

- Connect the USB cable between the GDS and the VCI.
- Connect the 16-pin DLC connector from the VCI 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.

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- 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, "ECM ROM ID Information".
- NOTE:** Record the ECM ROM ID in case the auto update fails and a manual update is needed.



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5. Update event "308.DMA 2.0/2.4 P0451 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 **ON** 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 "**308.DMA 2.0/2.4 P0451 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 |
|---|----------|
| DMA 2.4 IMMO : 39100-2GAE0/5, 39110-2GAE0 | 1020 |
| DMA 2.4 NON IMMO : 39100-2GAG0/5, 39110-2GAG0 | 1021 |
| DMA 2.0 IMMO : 39100-2GBB0/C0 | 0200 |
| DMA 2.0 NON IMMO : 39100-2GBD0/E0 | 0201 |

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