

 HYUNDAI NEW THINKING. NEW POSSIBILITIES. Technical Service Bulletin	GROUP FUEL SYSTEM	MODEL SANTA FE (CM)
	DATE APRIL 2012	NUMBER 12-FL-004
SUBJECT ECM UPDATE – MIL ON DTC P0638		

GDS  **ECU Update**
Global Diagnostic System

Description:

This bulletin provides information related to the ECM software update of some 3.5L vehicles that may experience check engine light on with the following DTC:

- P0638: Throttle Actuator Control Range/Performance(Bank1)

In addition the following DTC related to a limp home condition may have occurred:

- P1295: ETS System Malfunction - Power management mode engaged
- P2106: Throttle Actuator Control System - Limited Performance mode

Applicable Vehicles:

- 10~12MY SANTA FE (CM) 3.5L vehicles

GDS Information:

EVENT #	DESCRIPTION
264 (or later compatible event)*	"CM 3.5 P0638 DTC LOGIC IMPROVEMENT "

(* the latest event that shows up in the Engine Auto Mode event list for the particular vehicle/engine)

*** NOTE:**

IMPORTANT REPAIR STEPS: Be sure to perform steps 10-12 ECM reset and ETC Initialization (10 secs Ign OFF/10 secs Ign ON/10secs Ign OFF) after ECM Update.

Warranty Information:

Model	Op Code	Operation	Op Time	Causal P/N	Nature	Cause
SANTA FE (CM)	39110F6F	ECM UPGRADE	0.3	(See NOTE)	N69	C40

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

*** NOTE:**

In 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, will result in charge back of your warranty claim.

ROM ID INFORMATION TABLE:

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

Model	ECM P/N	T/M	IMMO	ROM ID	
				Previous	New
CM 3.5L MPI	39109-3C560	AT	NO	CMAN35*S2**AB5A*	CMAN35*S2**AB8JZ
				CMAN35*S2**AB5B*	
	39109-3C561	AT	NO	CMAN35*S2**AB6B*	CMAN35*S2**AB8J*
				CMAN35*S2**AB8B*	
39109-3C562	AT	NO	CMAN35*S2**AB8D*	CMAN35*S2**AC1C*	
			CMAN35*S2**AB8F*		
			CMAN35*S2**AB8H*		
			CMAN35*S2**AB8G*		
			CMAN35*S2**AC1A*		
			CMAN35*S2**AC1B*		
			CMBN35*S2**AC4A*	CMBN35*S2**AC4B*	

*** NOTE**

IMMO = YES: Push Button Start
 IMMO = NO: Key Start

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.

- 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.
- 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 1, “ROM ID Information”.



5. Select update event as listed on the **GDS Event list of page-1**. 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. Turn **OFF** ignition **10 seconds** to reset the ECM.
11. Turn **ON** ignition **10 seconds** (engine not running) to perform ETC Initialization.
12. Turn **OFF** ignition.
13. Check for DTC in all systems and Erase All DTC that stored due to loss of CAN communication during the ECM Update.
14. Start the engine to confirm proper operation.

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 as per the **GDS Event List of page-1**, then select **Upgrade**.
6. Be certain to enter the exact appropriate password from the table on the next page and select **OK**. **See the important NOTE above.**
7. The remaining steps are same as Steps 6~14 of the Auto Procedure.

MENU	PASSWORD	SYSTEM
CM 3.5 AT NON IMMO : 39109-3C560[~5A*, ~5B*, ~6B*]	3560	Key Start
CM 3.5 AT NON IMMO : 39109-3C560[~8B*, ~8D*, ~8F*, ~8H*]	3561	Key Start
CM 3.5 AT NON IMMO : 39109-3C561	3562	Key Start
CM 3.5 AT NON IMMO : 39109-3C562	3563	Key Start