 HYUNDAI NEW THINKING. NEW POSSIBILITIES.	GROUP CAMPAIGN	NUMBER 14-01-054
	DATE DECEMBER 2014	MODEL(S) SANTA FE (CM)
Technical Service Bulletin		
SUBJECT:	ECM UPDATE – P0638, LIMITED POWER MODE AND ETC MOTOR CLEANING (SERVICE CAMPAIGN TV5)	

  **ECU Update**

★ IMPORTANT

***** Retail Vehicles Only *****

Dealers must perform this Service Campaign whenever an affected vehicle is in the shop for any maintenance or repair.

When a vehicle arrives at the Service Department, access Hyundai Motor America's "Warranty Vehicle Information" screen via WEBDCS to identify open Campaigns.

Description: This bulletin provides information related to an ECM software update for certain 3.5L 2010 – 2012 Santa Fe vehicles to address a Malfunction Indicator Lamp illumination accompanied by

- DTC P0638 [Throttle Actuator Control Range/Performance (Bank 1)]
- DTC P2106 (Limp Home Mode - Force Limited Power), and
- DTC P2110 (Throttle Actuator Control System-Force Limited RPM)

and the associated limited power ("Limp Home") mode.

In addition, it also provides the Electronic Control Throttle (ECT) Motor carbon cleaning procedure.

Applicable Vehicles: Certain 2010 - 2012MY SANTA FE (CM) 3.5L

GDS Information:

EVENT #	DESCRIPTION
324	"324.CM 3.5 RPM LOGIC IMPROVEMENT"

NOTE: The ECM Update S/W is only available on the PC based GDS.

Warranty Information:

Model	Op Code	Operation	Op Time
SANTA FE (CM)	40CA10R0	ECM UPGRADE	0.4 M/H

NOTE: Submit claim on Campaign Claim Entry Screen.

Circulate To: General Manager, Service Manager, Parts Manager, Warranty Manager, Service Advisors, Technicians, Body Shop Manager, Fleet Repair

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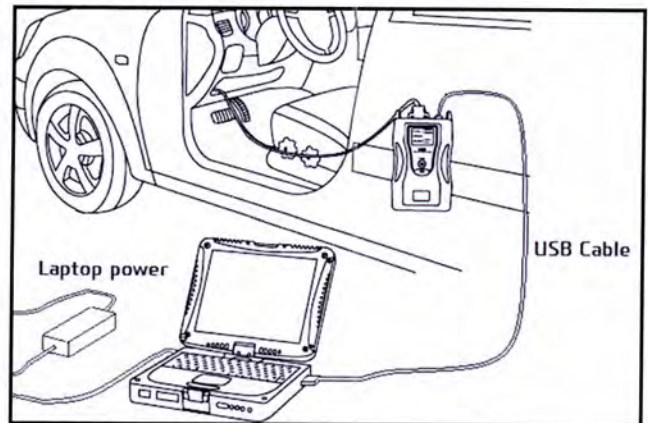
ECM ROM ID INFORMATION TABLE:

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

MY	ECM P/N	T/M	IMMO	ROM ID	
				Previous	New
10MY	39109-3C560	AT	NO (Key Start)	CMAN35*S2**AB5A* CMAN35*S2**AB5B* CMAN35*S2**AB6B* CMAN35*S2**AB8JZ CM9N35*S2**AD1BS	CM9N35*S2**AD1DS
				CMAN35*S2**AB8B* CMAN35*S2**AB8D* CMAN35*S2**AB8F* CMAN35*S2**AB8J* CM9N35*S2**AD1AS	CM9N35*S2**AD1CS
11MY	39109-3C561	AT	NO (Key Start)	CMAN35*S2**AB8G* CMAN35*S2**AC1A* CMAN35*S2**AC1B* CMAN35*S2**AC1C* CMAN35*S2**AC6A* CMAN35*S2**AD1AS	CMAN35*S2**AD1BS
12MY	39109-3C562	AT	NO (Key Start)	CMBN35*S2**AC4A* CMBN35*S2**AC4B* CMCN35*S2**AC6A* CMBN35*S2**AD1AS	CMBN35*S2**AD1BS

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.



NOTICE

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.
- 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.

NOTICE

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 ETC MOTOR CLEANING PROCEDURE

NOTICE

- The ETC Motor Cleaning procedure will take approximately 10 minutes.
- Perform the cleaning procedure with a fully charged battery.
- This procedure will not function if the DTC P2111 (Throttle actuator control system-stuck open) is present. Repair the DTC P2111 and then proceed to the ETC Motor Cleaning.
- Do not attempt to perform other work during the cleaning procedure.

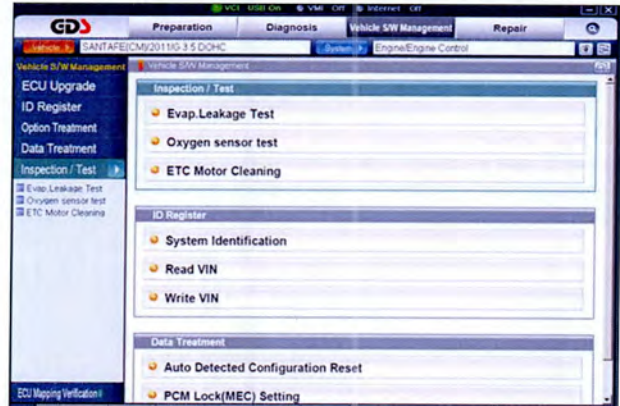
1. From the GDS home page, select **Inspection / Test**. If necessary, select the VIN.

Select **Engine** as the system and then select **OK**.

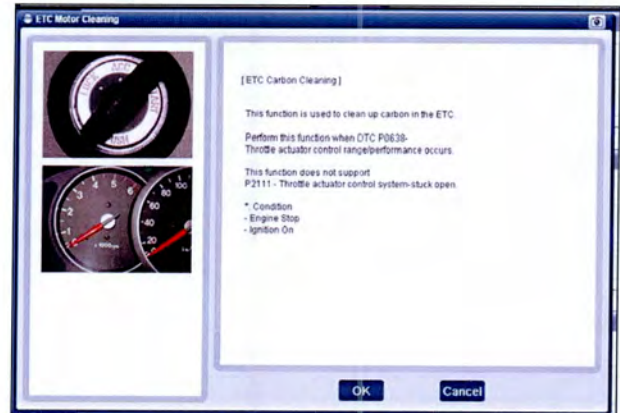


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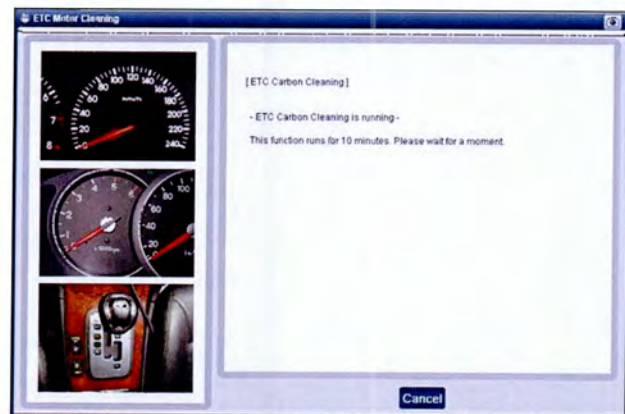
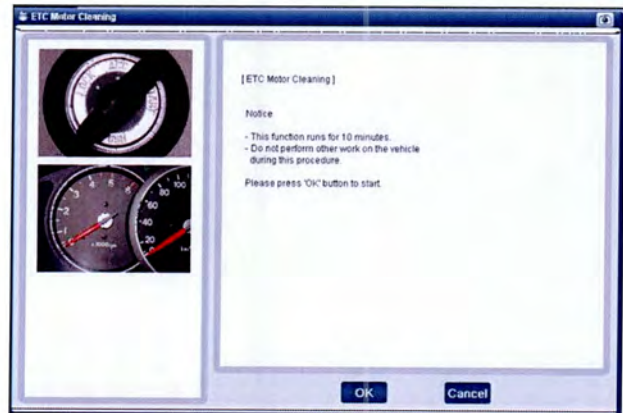
2. Select **ETC Motor Cleaning**.



3. Select **OK** to continue if the conditions are met.

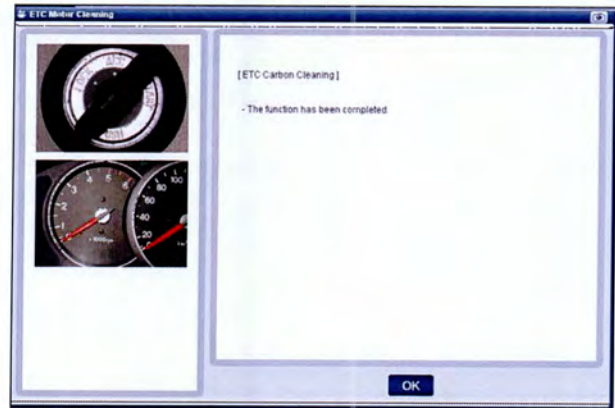


4. The ETC Motor Cleaning will take approximately 10 minutes. Select **OK** to continue.

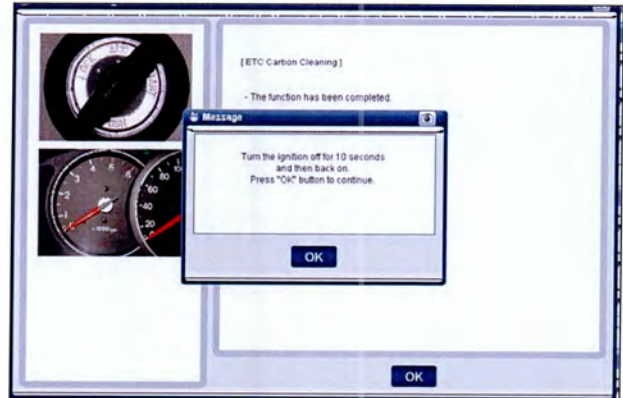


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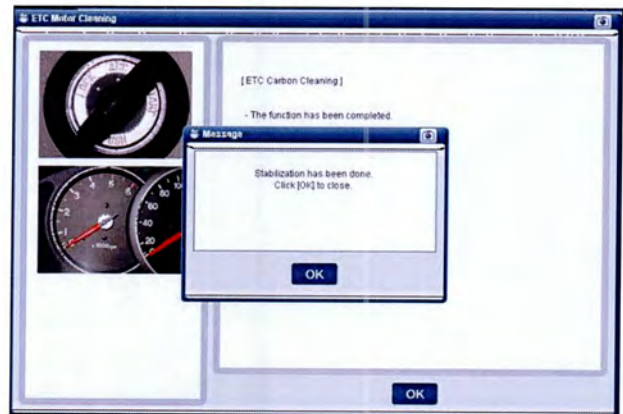
5. The GDS will confirm that the procedure has been completed. Select **OK** to continue.



6. Turn **OFF** ignition for 10 seconds and turn **ON**. Select **OK**.



7. Select **OK** to exit.



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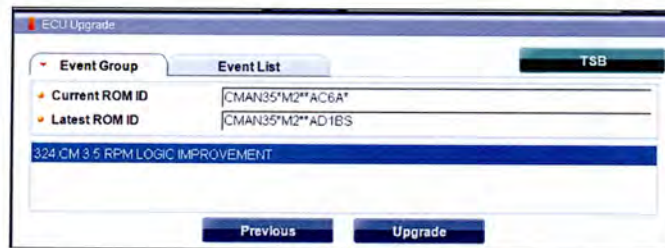
SERVICE PROCEDURE:

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.



5. Update event "**324.CM 3.5 RPM 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.

NOTICE

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

NOTICE

- 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 "**324.CM 3.5 RPM LOGIC IMPROVEMENT**", then select **Upgrade**.
6. Be certain to enter the exact appropriate password from the table below and select **OK**.

MENU	PASSWORD
10MY CM 3.5 AT NON IMMO : 39109-3C560(AB5A/AB5B/AB6B/AB8JZ/AD1BS)	3560
10MY CM 3.5 AT NON IMMO : 39109-3C560(AB8B/AB8D/AB8F/AB8H/AB8J/AD1AS)	3561
11MY CM 3.5 AT NON IMMO : 39109-3C561	3562
12MY CM 3.5 AT NON IMMO : 39109-3C562	3563

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