

**HYUNDAI**NEW THINKING.
NEW POSSIBILITIES.**Technical Service Bulletin**

GROUP	NUMBER
CAMPAIGN	14-01-051
DATE	MODEL(S)
NOVEMBER 2014	SONATA (LF)

SUBJECT:**TCM/ECM UPDATES – 4-3 DOWNSHIFT AND ENGINE IDLE RPM IMPROVEMENT (SERVICE CAMPAIGN TV3)****★ IMPORTANT******* DEALER STOCK ONLY *****

Dealers must perform this Service Campaign on all affected vehicles prior to customer retail delivery.

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 a TCM (Transaxle Control Module) and an ECM (Engine Control Module) software update for 2015MY Sonata vehicles equipped with the 2.4L and automatic transmission to revise the logic for the following:

TCM

- 4-3 downshift feeling

ECM

- Engine idle improvement diagnostic logic revision for DTC P0605 [Internal Control Module Read Only Memory (ROM) Error] and P0017 [Crankshaft Position-Camshaft Position Correlation (Bank 1 Sensor B)]

NOTICE

The software updates **MUST** be performed in sequence.
Update the TCM (GDS Event #331) first, and then update the ECM (GDS Event #332).

Applicable Vehicles: 2015 SONATA (LF) EQUIPPED WITH 2.4L ENGINE**GDS Information:**

EVENT #	DESCRIPTION
331	"331. LFA 2.4GDI AT DOWN SHIFT FEELING IMPROVEMENT"
332	"332. LFA 2.4GDI AT IDLE RPM STABILITY IMPROVEMENT"

Warranty Information:

Op Code	Operation	Op Time
40CA14R1	TCU & ECU UPGRADE	0.5 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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(SERVICE CAMPAIGN TV3)**

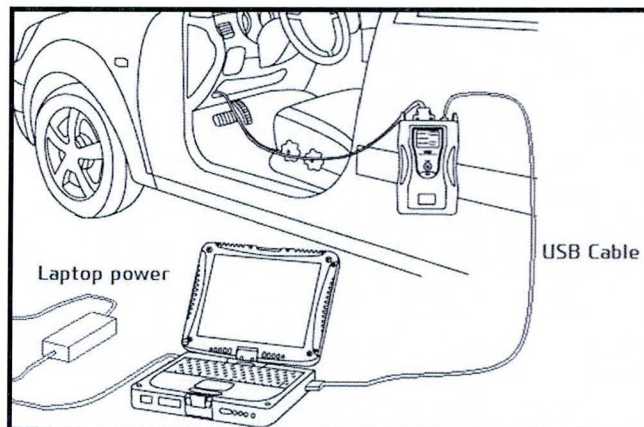
TCM & ECM ROM ID INFORMATION TABLE

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

ECM P/N (Emission)	IMMO	TCM ROM ID		ECM ROM ID	
		Previous	New	Previous	New
39111-2GGK0 (ULEV)	NO (Key Start)	TLF0G24NB0 TLF0G24NB1	TLF0G24NB2	LFAFNC4EM86A LFAFNC4EM86B LFAFNC4EM86C LFAFNC4EM87A	LFAFNC4EM87B
39111-2GGK5 (ULEV)	YES (Start-Stop Button)	TLF0G24NB0 TLF0G24NB1	TLF0G24NB2	LFAFNC4ER86A LFAFNC4ER86B LFAFNC4ER86C LFAFNC4ER87A	LFAFNC4ER87B
39111-2GGL0 (SULEV)	NO (Key Start)	TLF0G24SB0 TLF0G24SB1	TLF0G24SB2	LFAFNS4EM86A LFAFNS4EM86B LFAFNS4EM86C LFAFNS4EM87A	LFAFNS4EM87B
39111-2GGL5 (SULEV)	YES (Start-Stop Button)	TLF0G24SB0 TLF0G24SB1	TLF0G24SB2	LFAFNS4ER86A LFAFNS4ER86B LFAFNS4ER86C LFAFNS4ER87A	LFAFNS4ER87B

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. (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.

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.

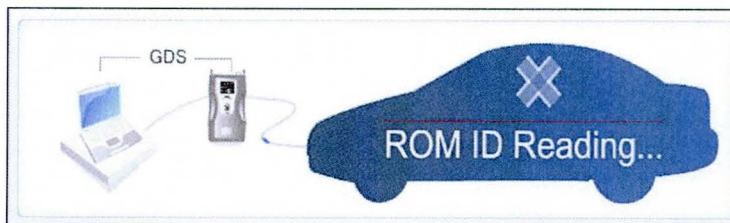
SERVICE PROCEDURE:

GDS AUTO MODE TCM/ECM UPDATE PROCEDURE

1. From the GDS home page, select **ECU Upgrade**. If necessary, select the VIN.
2. Select **A/T** as the system and then select **OK**.



3. Select **Auto Mode** and then select **Next**.
4. From the **System** tab, select **A/T** and then select **OK**. The GDS will read the ROM ID. Confirm the ROM is applicable as shown on Page 2, "TCM ROM ID Information".
NOTE: Record the TCM ROM ID in case the auto update fails and a manual update is needed.



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5. Update event "**331. LFA 2.4GDI AT DOWN SHIFT FEELING IMPROVEMENT**" will display. Select **Upgrade**.

Event Group	Event List	TSB
Current ROM ID	TLF0G24NB1	
Latest ROM ID	TLF0G24NB2	
331.LFA 2.4GDI AT DOWN SHIFT FEELING IMPROVEMENT		

Previous 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 TCU reprogramming has successfully finished. Select **OK**.
9. Return to the ECU Upgrade page upon successful completion of the TCM update.
10. Then select **ENGINE** as the system and click **OK** to continue with "**332. LFA 2.4GDI AT IDLE RPM STABILITY IMPROVEMENT**" and repeat the steps 3~8.
11. If the TCM or ECM update was not successful, go to **GDS MANUAL MODE ECM UPDATE PROCEDURE**.
12. Check for DTC in all systems and erase all DTC that stored due to loss of CAN communication during the ECM Update.
13. Turn **OFF the ignition for 10 seconds** then turn **ON** before going to engine start.
14. Start the engine to confirm proper operation.
15. Clear any DTCs in the BlueLink system per instructions of TSB 12-BE-005-2.

NOTICE

In the event of AUTO MODE update failure:

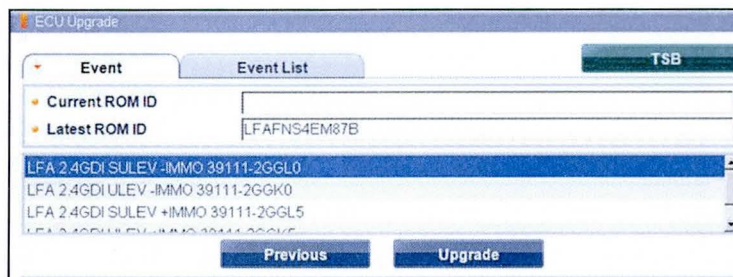
- You must attempt MANUAL MODE. Use the ECM P/N from the vehicle's ECM label if it is not clear from the ROM ID Table as to the correct ECM P/N to use for your vehicle.
- Replacing an ECM without carefully documenting that a MANUAL MODE update attempt was made may result in claims charged back.

GDS MANUAL MODE TCM/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 **A/T** or **Engine** as the system and then select **OK**.
3. Select **Manual Mode** and then select **Next**.
4. From the **System** tab, select appropriate **A/T** or **Engine** system and then select **OK**.
5. Select corresponding update event;
"331. LFA 2.4GDI AT DOWN SHIFT FEELING IMPROVEMENT" or
"332. LFA 2.4GDI AT IDLE RPM STABILITY IMPROVEMENT", then select **Next**.
6. Be certain to select the exact appropriate ECM P/N of the vehicle, select **Upgrade**, enter corresponding password from the table below and select **OK**.



MENU (ECM P/N)	KEY TYPE	TCM PASSWORD	ECM PASSWORD
LFA 2.4GDI SULEV -IMMO 39111-2GGL0	Key Start	1126	1120
LFA 2.4GDI ULEV -IMMO 39111-2GGK0	Key Start	1125	1121
LFA 2.4GDI SULEV +IMMO 39111-2GGL5	Start-Stop Button	1126	1125
LFA 2.4GDI ULEV +IMMO 39111-2GGK5	Start-Stop Button	1125	1126

7. The remaining steps are the same as Steps 6~15 of the Auto Procedure.