HYUNDAI
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Technical Service Bulletin

GROUP	NUMBER
CAMPAIGN	**18-01-027**
DATE	MODEL(S)
AUGUST 2018	**SONATA (LF)**

SUBJECT: SONATA ECM & CLUSTER UPDATE – ENGINE MONITORING LOGIC PRODUCT IMPROVEMENT (SERVICE CAMPAIGN 953)

★ IMPORTANT

*** Retail Vehicles ***

Dealers must perform this Campaign on all affected vehicles 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: Hyundai is conducting a product improvement campaign to enhance the knock sensor software on certain 2015 MY Sonata vehicles to detect abnormal engine bearing noise before potentially severe engine damage occurs. If abnormal engine bearing noise is detected, the Malfunction Indicator Lamp (MIL) will blink continuously, a chime will sound, and the vehicle will be placed in Limp Home Mode allowing the customer to drive to the nearest Hyundai dealer for diagnosis and repair. In addition, DTC P132600 will be recorded in the ECM. The vehicle can continue to be operated for a limited time in Limp Home Mode, but it will accelerate slower and have a reduced maximum speed. Engine RPMs will be limited to approximately 1800-2000 RPM.

Applicable Vehicles: Certain 2015 MY Sonata (LF) vehicles with 2.4L and 2.0L Turbo engines

NOTICE

- **Ensure BOTH the Engine ECM and Cluster are updated to complete this TSB.**
- **Reference the ROM ID Information tables below before attempting any updates.**

GDS Information:
ROM ID Information Table
Engine ECM - Upgrade Event #480

Engine	Immobilizer	Part Number	OLD ROM ID	NEW ROM ID
2.4L (ULEV)	Yes	39111-2GGK5	LFAFNC4ER86A LFAFNC4ER86B LFAFNC4ER86C LFAFNC4ER87A LFAFNC4ER87B LFAFNC4ER88A LFAFNC4ERA51 LFAFNC4ERA53 LFAFNC4ERC0A	LFAFNC4ERC0K

2.4L (ULEV)	No	39111-2GGK0	LFAFNC4EM86A LFAFNC4EM86B LFAFNC4EM86C LFAFNC4EM87A LFAFNC4EM87B LFAFNC4EM88A LFAFNC4EMA51 LFAFNC4EMA53 LFAFNC4EMC0A	LFAFNC4EMC0K
2.4L (SULEV)	Yes	39111-2GGL5	LFAFNS4ER86A LFAFNS4ER86B LFAFNS4ER86C LFAFNS4ER87A LFAFNS4ER87B LFAFNS4ER88A LFAFNS4ERA51 LFAFNS4ERA53 LFAFNS4ERC0A	LFAFNS4ERC0K
	No	39111-2GGL0	LFAFNS4EM86A LFAFNS4EM86B LFAFNS4EM86C LFAFNS4EM87A LFAFNS4EM87B LFAFNS4EM88A LFAFNS4EMA51 LFAFNS4EMA53 LFAFNS4EMC0A	LFAFNS4EMC0K
2.0T (ULEV)	Yes	39111-2GTE5	LFAFNC0ER87A LFAFNC0ER87B LFAFNC0ER88A	LFAFNC0ER88K

GDS Information:
ROM ID Information Table
Cluster – Upgrade Event #481/482

Event / Cluster Type	Part Number	OLD ROM ID	NEW ROM ID
EVENT #481 STANDARD CLUSTER (BASE - 2.4L)	94001-C2000	94001-C2000_A03	94001-C2000_103
		94001-C2000_110	94001-C2000_104
EVENT #481 STANDARD CLUSTER (SPORTS PACK - 2.0T)	94021-C2000	94021-C2000_A02	94021-C2000_103
		94021-C2000_100	94021-C2000_104
EVENT #482 SUPER VISION CLUSTER (BASE - 2.4L)	94011-C2000	94011-C2000_101 94011-C2000_102	94011-C2000_103
EVENT #482 SUPER VISION CLUSTER (SPORTS PACK - 2.0T)	94031-C2000	94031-C2000_100 94031-C2000_101	94031-C2000_103

Warranty Information:

Model	Op. Code	Operation	Op. Time	Causal Part No.	Nature Code	Cause Code
SONATA (LF)	80CA08R0	ECM & CLUSTER UPDATE	0.5 M/H	39111-2GGK5	E13	ZZ3

NOTE 1: Submit Claim on Campaign Claim Entry Screen

NOTE 2: If a part is found in need of replacement while performing this campaign and the affected part is still under warranty, submit a separate claim using the same Repair Order. If the affected part(s) are out of warranty, request a Prior Authorization # for goodwill consideration prior to completing the Campaign.
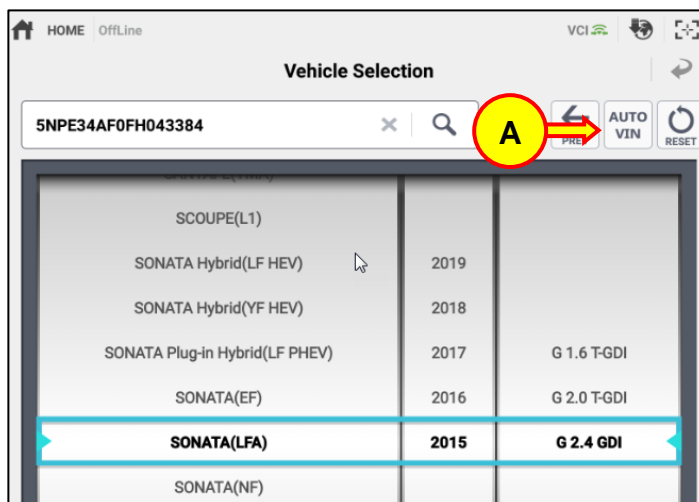
Service Procedure:

> ## NOTICE
>
> - **Ensure the GDS Mobile and the vehicle's battery are fully charged. Run the engine to charge the battery if necessary before attempting any updates.**
> - **Turn off all lamps and do not leave the head lamp switch in auto mode. Turn off all accessories (including heater, A/C, blower, radio, seat warmer, defroster, etc.). Do not allow the battery to be discharged during update.**
> - **Perform update with the ignition switch in the ON position.**
> - **Be careful not to disconnect any cables connected to the vehicle or scan tool during update.**
> - **Do not start the engine during update.**
> - **Do not turn off the ignition switch during update unless specifically directed by the GDS Mobile.**
> - **Ensure BOTH the Engine ECM and Cluster are updated to complete this TSB.**
> - **Check the ROM ID of the vehicle's ECM and cluster and reference the ROM ID Information Table before attempting any updates.**

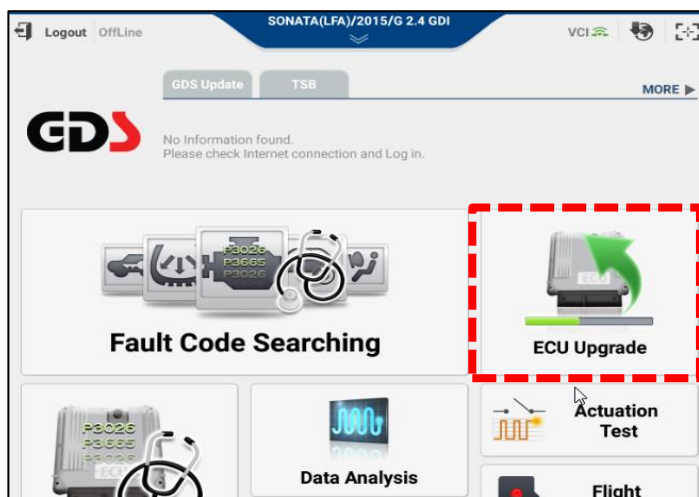1. Connect the VCI-II into the vehicle's DLC connector under the driver side instrument panel.

OBD-II

DO NOT set up the Trigger Module

2. **With the ignition in the ON position**, open the GDS app on the GDS Mobile. Confirm GDS communication with the vehicle and use the **AUTO VIN** button (A) to detect the vehicle's VIN.

3. Select **ECU Upgrade** from the GDS main screen and then select **Auto Mode**.

NOTICE

Do not update using Manual Mode unless the Auto Mode fails.

4. Under **System**, select **Engine** to update the engine ECM. Then select **ID Check** to search for available updates.

5. Confirm the ROM IDs match those in the ROM Information table for the vehicle specification. Select the event under **Event Group** and then select **Upgrade** to start the update.

The update is performed in two parts. Follow the prompts on the GDS to complete the update.
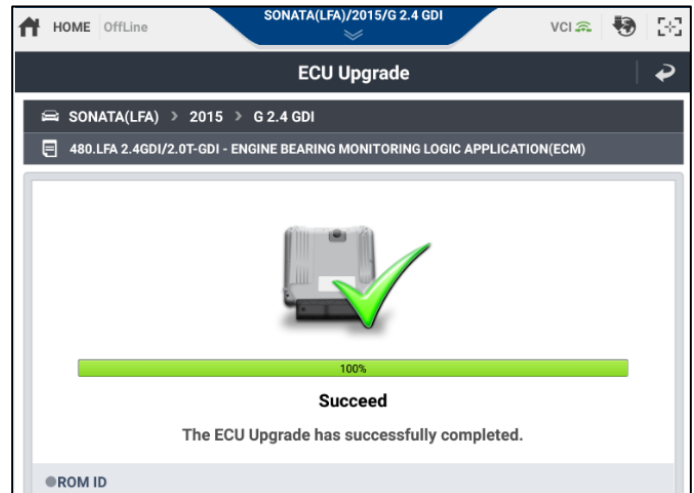
> ## NOTICE
>
> **Do not touch the GDS buttons ('Back', 'Home', etc) while performing the update. Do not start the engine.**

6. Once the update is performed successfully, select **OK** to continue. When prompted to run a fault code search, select **Yes** to check for DTCs. Clear all DTCs if any are stored.

> ## NOTICE
>
> **Various warning messages may appear in the instrument cluster during the update. Clear any DTCs after the update.**
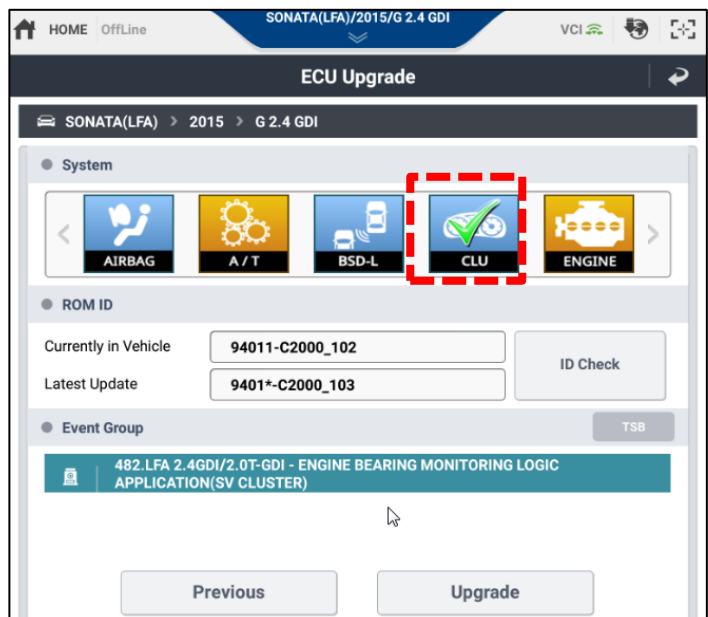

7. Next update the cluster software starting with the process outlined in Step 3. Under **System** in the **ECU Upgrade** menu, select **CLU** to update the cluster.

> ## NOTICE
>
> **Ensure BOTH the Engine ECM and Cluster are updated to complete this TSB.**
>
> **Do not update using Manual Mode unless the Auto Mode fails.**

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8. When both the engine ECM and cluster updates are completed, start the engine to confirm proper operation.

9. Check for any DTCs and perform the appropriate diagnostic service. Ensure no warning lights are present to complete the procedure.

Manual Update Procedure:

NOTICE

The manual update should be performed only when the automatic update fails.

If automatic update fails, turn the ignition off for about 10 seconds and then place it back in the on position to reset the control unit before performing a manual update.

1. Select **ECU Upgrade** from the GDS main screen and then select **Manual Mode**.
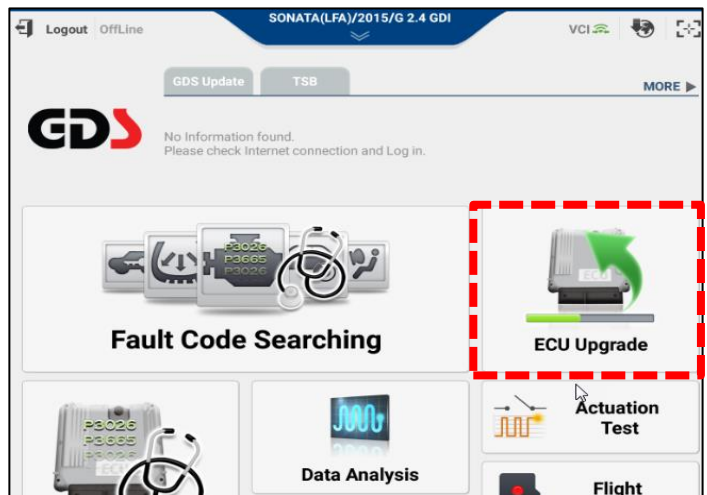
NOTICE

Do not update using Manual Mode unless the Auto Mode fails.

Do not touch the GDS buttons ('Back', 'Home', etc) while performing the update.
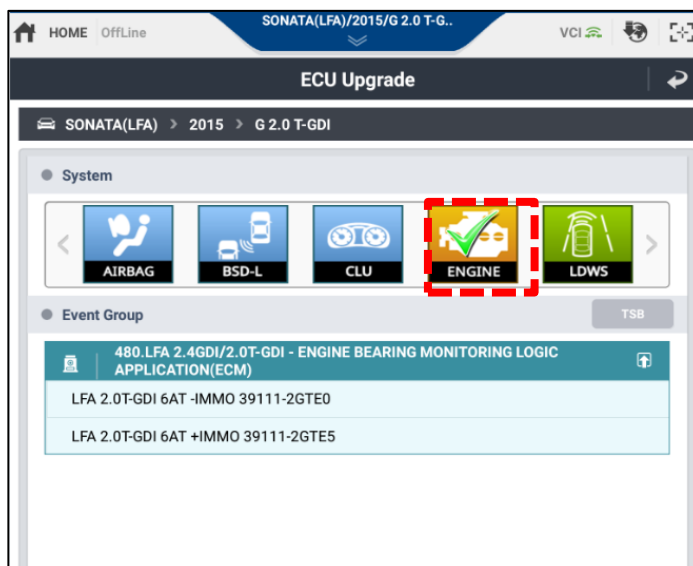
Do not start the engine.

Various warning messages may appear in the instrument cluster during the update. Clear any DTCs after the update.

2. Under **System**, select **Engine** to update the engine ECM and **CLU** to update the cluster. Select the appropriate update by referencing the ROM ID Information and password tables. Select **Upgrade** and follow the prompts on the GDS to complete the update.

NOTICE

Ensure the correct update is performed by using the ROM ID Info tables. Any attempt to update using an incorrect ROM ID may cause the ECU to be inoperative.

3. When both the engine ECM and cluster updates are completed, start the engine to confirm proper operation.

4. Check for any DTCs and perform the appropriate diagnostic service. Ensure no warning lights are present to complete the procedure.

Manual Mode Update Passwords:

Engine ECM

Update Name	Password
LFA 2.4GDI 6AT -IMMO 39111-2GGK0	1120
LFA 2.4GDI 6AT -IMMO 39111-2GGL0	1121
LFA 2.4GDI 6AT +IMMO 39111-2GGK5	1122
LFA 2.4GDI 6AT +IMMO 39111-2GGL5	1123
LFA 2.0T-GDI 6AT +IMMO 39111-2GTE5	1125

Cluster

Update Name	Password
LFA STD CLUSTER(BASE) 94001-C2000 (ROM ID : 94001-C2000_A03)	2000
LFA STD CLUSTER(BASE) 94001-C2000 (ROM ID : 94001-C2000_110)	2001
LFA STD CLUSTER(SPORTS PACK) 94021-C2000 (ROM ID : 94021-C2000_A02)	2002
LFA STD CLUSTER(SPORTS PACK) 94021-C2000 (ROM ID : 94021-C2000_100)	2003
LFA SV CLUSTER(BASE) 94011-C2000	2004
LFA SV CLUSTER(SPORTS PACK) 94031-C2000	2005