HYUNDAI NEW THINK NEW POSSI	GROUP	NUMBER
Technical Service Bulletin	**CAMPAIGN**	**16-01-064**
	DATE	MODEL(S)
	NOVEMBER 2016	**SONATA 2.4L (LF)**

SUBJECT: VCM INSPECTION AND ECM UPDATE - DTC P200A AND P0605 (SERVICE CAMPAIGN T1H)

GDS HYUNDAI Global Diagnostic System **ECU Update**

★ IMPORTANT

***** Dealer Stock and Retail Vehicles *****

Dealers must perform this Service Campaign on all affected vehicles prior to customer retail delivery and 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 a logic update and inspection for CEL ("Check Engine Light") ON with DTC P200A (Intake Manifold Runner Performance - Bank 1) and for P0605 (Engine Control Module - ROM Error) on certain 2015 and 2016 model year Sonata (LF) vehicles equipped with a 2.4L GDI engine.

The vehicle may exhibit one or more of the following conditions:

- DTC P200A (Intake Manifold Runner Performance - Bank 1)
  - Check Engine Light ON
  - Automatic transmission upshift hesitation
  - Clicking noise from the intake manifold VCM (Variable Charge Motion) actuator when the engine RPM is increased
- (2015 MY Only) DTC P0605 (Engine Control Module – ROM Error)
  - Check Engine Light ON
  - Electronic Stability Control (ESC) Warning Light ON
  - Limited engine power ("Limp Home") mode

Follow the Service Procedure outlined in this bulletin to perform the following:

- Confirm the proper operation of the VCM Actuator.
  - Replace the VCM Actuator, if it does not pass the inspection.
- Update the ECM.

Applicable Vehicles:

- Certain 2015-2016 SONATA (LF) with 2.4L GDI engine

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GDS Information:

Event #	Description
411*	**"LFA 2.4GDI VCM GEAR DAMAGE IMPROVEMENT (3rd)"**

(*or use a later available event as listed in the GDS ECU Update screen if one is available.)

NOTES:

- Refer to the TSB **15-GI-001** for the tablet-based Mobile GDS ECU update procedures.
- Refer to the TSB **15-GI-002** for the PC-based GDS ECU update procedures.
- Perform the VCM actuation test first and then perform the ECM update.
- Clear DTC(s) present after the ECM update.

Parts Information:

Part Name	Part Number
VCM Motor Assembly	28323-2GGA1

NOTES:

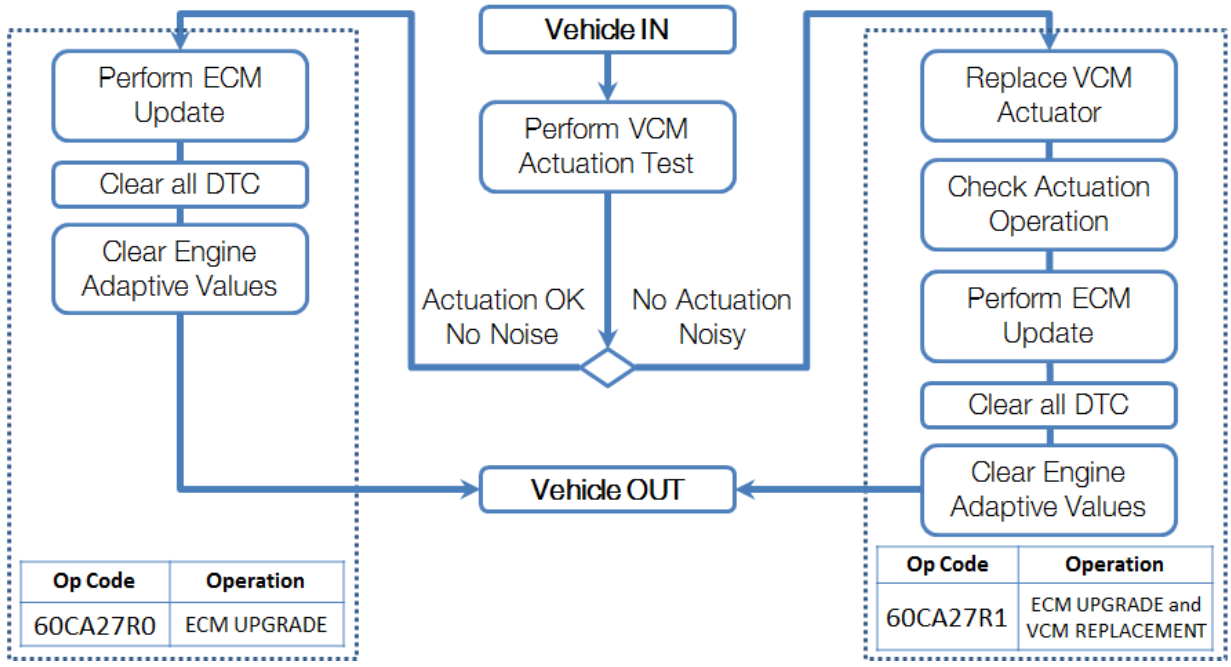
- Parts are not required if the vehicle passes the VCM actuation test with no abnormal noise.
- Parts are only required if the VCM does not pass the actuation test and/or is abnormally noisy prior to the logic update being completed. All parts will be requested back and will be tested for any abnormalities.
- The K-Ring should be reused whenever possible during VCM Motor Assembly replacement.

Warranty Information:

Model	Op Code	Operation	Op Time	Causal Part	Nature Code	Cause Code
SONATA LF 2.4L GDI	60CA27R0	ECM UPGRADE	0.3 M/H	* Refer to ROM ID Table for applicable ECM P/N	I3A	ZZ3
	60CA27R1	ECM UPGRADE and VCM REPLACEMENT	0.8 M/H			

NOTE: Submit claim on Campaign Claim Entry Screen.

Service Procedure:



1. Perform VCM actuation test using GDS at a quiet location with minimal background noise.
   - If the VCM actuation test passes with no abnormal noises, then go to Step 2 for ECM Update.
   - If there are **abnormal noises** from the VCM or the actuation test does not pass, replace the VCM Motor Assembly following all published Shop Manual procedures.
     - Whenever possible, reuse the K-Ring (this is the clip that attaches the VCM Motor Assembly to the VCM actuation arm) during VCM Motor Assembly replacement.
     - Repeat the actuation test if the VCM Motor Assembly was replaced.

2. Perform ECM Update using Event #411 or use a later available event as listed in the GDS ECU Update screen if one is available.
   - Refer to the **TSB 15-GI-001** for the tablet-based Mobile GDS ECU update procedures.
   - Refer to the **TSB 15-GI-002** for the PC-based GDS ECU update procedures.
   - Clear all DTC(s) present after the ECM update.

3. Clear engine adaptive values using GDS.

ROM ID Information Table:

Verify the ECU ROM ID before updating the software. Refer to the table below.

Model	MY	IMMOBILIZER	ECM P/N	ROM ID	
				OLD	NEW
LFA 2.4GDI	15MY	IMMO	39111-2GGK5	LFAFNC4ER86A LFAFNC4ER86B LFAFNC4ER86C LFAFNC4ER87A LFAFNC4ER87B LFAFNC4ER88A LFAFNC4ERA51 LFAFNC4ERA53	LFAFNC4ERC0A
		NON IMMO	39111-2GGK0	LFAFNC4EM86A LFAFNC4EM86B LFAFNC4EM86C LFAFNC4EM87A LFAFNC4EM87B LFAFNC4EM88A LFAFNC4EMA51 LFAFNC4EMA53	LFAFNC4EMC0A
		IMMO	39111-2GGL5	LFAFNS4ER86A LFAFNS4ER86B LFAFNS4ER86C LFAFNS4ER87A LFAFNS4ER87B LFAFNS4ER88A LFAFNS4ERA51 LFAFNS4ERA53	LFAFNS4ERC0A
		NON IMMO	39111-2GGL0	LFAFNS4EM86A LFAFNS4EM86B LFAFNS4EM86C LFAFNS4EM87A LFAFNS4EM87B LFAFNS4EM88A LFAFNS4EMA51 LFAFNS4EMA53	LFAFNS4EMC0A

Model	MY	IMMOBILIZER	ECM P/N	ROM ID	
				OLD	NEW
LFA 2.4GDI	16MY	IMMO	39111-2GGK6	LFAGNC4ERA3A LFAGNC4ERA5A LFAGNC4ERB0B	LFAGNC4ERC0A
		NON IMMO	39111-2GGK1	LFAGNC4EMA3A LFAGNC4EMA5A LFAGNC4EMB0B	LFAGNC4EMC0A
		IMMO	39111-2GGL6	LFAGNS4ERA3A LFAGNS4ERA5A LFAGNS4ERB0B	LFAGNS4ERC0A
		NON IMMO	39111-2GGL1	LFAGNS4EMA3A LFAGNS4EMA5A LFAGNS4EMB0B	LFAGNS4EMC0A

MANUAL MODE PASSWORD INFORMATION TABLE:

MENU	PASSWORD
LFA 2.4GDI **NON IMMO** 39111-2GGK0	**1120**
LFA 2.4GDI **NON IMMO** 39111-2GGL0	**1121**
LFA 2.4GDI **NON IMMO** 39111-2GGK1	**1122**
LFA 2.4GDI **NON IMMO** 39111-2GGL1	**1123**
LFA 2.4GDI **IMMO** 39111-2GGK5	**1125**
LFA 2.4GDI **IMMO** 39111-2GGL5	**1126**
LFA 2.4GDI **IMMO** 39111-2GGK6	**1127**
LFA 2.4GDI **IMMO** 39111-2GGL6	**1129**

NOTE: IMMO is for Start-Stop Button Start. NON IMMO is for Key Start.