

 <b>HYUNDAI</b> <b>Technical Service Bulletin</b>	GROUP <b>CAMPAIGN</b>	NUMBER <b>21-01-023H</b>
	DATE <b>MARCH 2021</b>	MODEL(S) <b>APPLICABLE VEHICLES BELOW</b>
<b>SUBJECT: ENGINE MONITORING LOGIC (SERVICE CAMPAIGN 966)</b>		

<b>★ IMPORTANT</b>
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**\*\*\* Retail Vehicles \*\*\***

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

**Description:**

Hyundai is conducting a campaign to enhance the knock sensor software 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, and the vehicle will be placed in Engine Protection 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 Engine Protection 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 2011-2012 MY Santa Fe (CM) vehicles with Theta II 2.4L MPI engines
- Certain 2012-2017 MY Veloster (FS) vehicles with Gamma 1.6L GDI engines

**GDS Information:**

Event #	Description
<b>644</b>	<b>CMA 2.4MPI - IMPROVED KSDS LOGIC APPLICATION</b>
<b>663</b>	<b>FS 1.6 GDI - IMPROVED KSDS LOGIC APPLICATION</b>

**NOTES:**

- Refer to TSB **15-GI-001** for additional tablet-based Mobile GDS ECU update information.
- Clear DTC(s) present after the ECU update.

**Warranty Information:**

Model	Op Code	Operation	Op Time	Causal P/N	Nature	Cause
Santa Fe (CM)	10D021R0	<b>ECM UPGRADE</b>	0.3 M/H	39104-2G341	E13	ZZ3
Veloster (FS)	10D021R1			39110-2BBH3		

**NOTE 1:** Submit claim on Campaign Claim Entry Screen

**NOTE 2:** If a part is found in need of replacement while performing this recall and the affected part is still under warranty, submit a separate claim using the Same Repair Order. If the affected part is out of warranty, submit a Prior Approval Request for goodwill consideration prior to performing the work.

**WARNING****GDS Vehicle Battery Voltage Warning:**

If voltage is below 12 volts as per the GDS warning, then select **Back** and run the engine at least 15 minutes to reach an adequate battery state of charge to prevent ECU Update failure. Cycle the ignition **OFF/ON** before retrying ECU update again.

**NOTICE**

**You must initially perform all GDS ECU Updates in Auto Mode.**

If the ECU Update starts but then fails in Auto Mode, perform the update in Manual Mode to recover.

**ROM ID Information Table:**

- Perform the ECM Update.
- Verify the ECM ROM ID before updating the software. Refer to the table below.
- **IMMO (O)** = Start Stop Button
- **NON IMMO (X)** = Key Start

MODEL	TM	IMMO	ECM P/N	ECM ROM ID	
				OLD	NEW (EVENT #644)
Santa Fe (CM) 2.4L MPI	AT	O	39104-2G331	FBC4RM2A FBC4RM2B FBC4RQ0A	FBC4RQKA
		X	39104-2G341	FBC4MM2A FBC4MM2B FBC4MQ0A	FBC4MQKA
	MT	O	39114-2G331	FBC4RM2A FBC4RM2B FBC4RQ0A	FBC4RQ1K
		X	39114-2G341	FBC4MM2A FBC4MM2B FBC4MQ0A	FBC4MQ1K
	AT	O	39104-2G332	FCC4RQ0A FCC4RR1A	FCC4RRKA
		X	39104-2G342	FCC4MQ0A FCC4MR1A	FCC4MRKA
	MT	O	39114-2G332	FCC4RQ0A FCC4RR1A	FCC4RR1K
		X	39114-2G342	FCC4MQ0A FCC4MR1A	FCC4MR1K

[ECM ROM ID table for Veloster (FS) continued on next page.]

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MODEL	TM	IMMO	ECM P/N	ECM ROM ID	
				OLD	NEW (EVENT #663)
Veloster (FS) 1.6L GDI	DCT	X	39110-2BBH3 39110-2BBC7 39110-2BBR3	GGFS-BFU6ES00H00 GGFS-BFU6ES01H00 GGFS-BFU6ES02H00 GGFS-BFU6ES03H00 GGFS-BFU6ES04H00 GGFS-BFU6ES05H00 GGFS-BFU6ES06H00 GGFS-BFU6EF00H00 GGFS-DFU6ES00H00 GGFS-DFU6ES01H00 GGFS-DFU6ES02H00 GGFS-DFU6ES03H00 GGFS-DFU6ES04H00 GGFS-DFU6ES05H00 GGFS-EFU6ES00H00 GGFS-EFU6ES01H00 GGFS-EFU6EF01H00 GGFS-EFU6EF02H00 GGFS-EFU6EF03H00	GGFS-EFU6EK33H00
		O	39110-2BBH0 39110-2BBB7 39110-2BBR0	GGFS-BFU6FS00H00 GGFS-BFU6FS01H00 GGFS-BFU6FS02H00 GGFS-BFU6FS03H00 GGFS-BFU6FS04H00 GGFS-BFU6FS05H00 GGFS-BFU6FS06H00 GGFS-BFU6FF00H00 GGFS-DFU6FS00H00 GGFS-DFU6FS01H00 GGFS-DFU6FS02H00 GGFS-DFU6FS03H00 GGFS-DFU6FS04H00 GGFS-DFU6FS05H00 GGFS-EFU6FS00H00 GGFS-EFU6FS01H00 GGFS-EFU6FF01H00 GGFS-EFU6FF02H00 GGFS-EFU6FF03H00	GGFS-EFU6FK33H00
Veloster (FS) 1.6L GDI	MT	X	39110-2BBF3 39110-2BBN9 39110-2BBR9	GGFS-BFU6ES00600 GGFS-BFU6ES01600 GGFS-BFU6ES02600 GGFS-BFU6ES03600 GGFS-BFU6ES04600 GGFS-BFU6ES05600 GGFS-DFU6ES00600 GGFS-DFU6ES01600 GGFS-DFU6ES02600 GGFS-DFU6ES03600	GGFS-EFU6EK33600

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Veloster (FS) 1.6L GDI				GGFS-EFU6ES01600 GGFS-EFU6EF01600 GGFS-EFU6EF02600 GGFS-EFU6EF03600	
		O	39110-2BBF0 39110-2BBN6 39110-2BBR6	GGFS-BFU6FS00600 GGFS-BFU6FS01600 GGFS-BFU6FS02600 GGFS-BFU6FS03600 GGFS-BFU6FS04600 GGFS-BFU6FS05600 GGFS-DFU6FS00600 GGFS-DFU6FS01600 GGFS-DFU6FS02600 GGFS-DFU6FS03600 GGFS-EFU6FS01600 GGFS-EFU6FF01600 GGFS-EFU6FF02600 GGFS-EFU6FF03600	GGFS-EFU6FK33600
	DCT	X	39110-2BBR4	GGFS-FFU6ES00H00 GGFS-FFU6ES01H00 GGFS-FFU6EF01H00 GGFS-FFU6EF02H00	GGFS-FFU6EK32H00
		O	39110-2BBR1	GGFS-FFU6FS00H00 GGFS-FFU6FS01H00 GGFS-FFU6FF01H00 GGFS-FFU6FF02H00	GGFS-FFU6FK32H00
	MT	X	39110-2BBR8	GGFS-FFU6ES00600 GGFS-FFU6ES01600 GGFS-FFU6ES02600 GGFS-FFU6EF02600 GGFS-FFU6EF03600	GGFS-FFU6EK33600
		O	39110-2BBR5	GGFS-FFU6FS00600 GGFS-FFU6FS01600 GGFS-FFU6FS02600 GGFS-FFU6FF02600 GGFS-FFU6FF03600	GGFS-FFU6FK33600
	DCT	X	39125-2BFK5	GGFS-GFU6ES00H00 GGFS-GFU6ES01H00 GGFS-GFU6ES02H00	GGFS-GFU6EK32H00
		O	39125-2BFK0	GGFS-GFU6FS00H00 GGFS-GFU6FS01H00 GGFS-GFU6FS02H00	GGFS-GFU6FK32H00
	MT	X	39121-2BFK5	GGFS-GFU6ES00600 GGFS-GFU6ES01600 GGFS-GFU6ES02600	GGFS-GFU6EK32600
		O	39121-2BFK0	GGFS-GFU6FS00600 GGFS-GFU6FS01600 GGFS-GFU6FS02600	GGFS-GFU6FK32600

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If the Automatic ECU Upgrade process fails, cycle the ignition key to OFF for at least 10 seconds to reset the control unit. Then resume programming using the Manual ECU Upgrade processes.

**MODE PASSWORD INFORMATION TABLE: #644 Santa Fe (CM)**

<b>ECM MENU (#644 ECM)</b>	<b>PASSWORD</b>
CMA 11MY 2.4MPI AT -IMMO 39104-2G341	6441
CMA 11MY 2.4MPI AT +IMMO 39104-2G331	6442
CMA 11MY 2.4MPI MT -IMMO 39114-2G341	6443
CMA 11MY 2.4MPI MT +IMMO 39114-2G331	6444
CMA 12MY 2.4MPI AT -IMMO 39104-2G342	6445
CMA 12MY 2.4MPI AT +IMMO 39104-2G332	6446
CMA 12MY 2.4MPI MT -IMMO 39114-2G342	6447
CMA 12MY 2.4MPI MT +IMMO 39114-2G332	6448

**MODE PASSWORD INFORMATION TABLE: #663 Veloster (FS)**

<b>ECM MENU (#663 ECM)</b>	<b>PASSWORD</b>
FS 12~14MY -IMMO 39110-2BBH3/C7/R3	6301
FS 12~14MY +IMMO 39110-2BBH0/B7/R0	6302
FS 12~14MY -IMMO 39110-2BBF3/N9/R9	6303
FS 12~14MY +IMMO 39110-2BBF0/N6/R6	6304
FS 15MY -IMMO 39110-2BBR4	6305
FS 15MY +IMMO 39110-2BBR1	6306
FS 15MY -IMMO 39110-2BBR8	6307
FS 15MY +IMMO 39110-2BBR5	6308
FS 16MY-17MY -IMMO 39125-2BFK5	6309
FS 16MY-17MY +IMMO 39125-2BFK0	6310
FS 16MY-17MY -IMMO 39121-2BFK5	6311
FS 16MY-17MY +IMMO 39121-2BFK0	6312

**NOTE:** After the ECU update has been completed:

- Clear any ECM DTC(s) after the ECU update, if present.
- Start the engine to confirm proper operation of the vehicle.