SUBJECT: ENGINE MONITORING LOGIC (SERVICE CAMPAIGN 982)

★ IMPORTANT

*** Retail Vehicles ***

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 the "Vehicle Information" screen via WEBDCS to identify open campaigns.

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.

NOTICE

Applicable vehicles with previous ECU Update under Campaign 966 will need new ECU Update to revise the engine monitoring logic to meet Campaign 982 requirements.

Applicable Vehicles:

- Certain 2017-2018 MY Sonata Hybrid/Plug-In (LF HEV/PHEV) vehicles with Nu 2.0L GDI engines

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GDS Information:

Event #	Description
797	**LF HEV/PHEV 2.0GDI (17-18MY) - IMPROVED KSDS LOGIC APPLICATION (BASE)**

NOTES:

- Refer to TSB 15-GI-001 for additional tablet-based Mobile GDS ECU update information.
- After the ECU Upgrade process shows 100% complete, **cycle the ignition key to OFF for at least 30 seconds to reset the control unit**. This step is important for establishing normal powertrain communication and to prevent system errors.
- Clear DTC(s) present after the ECU update.
- Start engine to confirm proper operation of the vehicle.

⚠️ **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.

Warranty Information:

MY / Engine / Model	Op Code	Operation	Op Time	Causal P/N	Nature	Cause
17-18MY Nu 2.0L GDI **Sonata Hybrid/Plug-In (LF HEV/PHEV)**	20D008R0	**ECM UPGRADE**	0.3 M/H	39161-2EEB1	E13	ZZ3

NOTE 1: Submit claim on Campaign Claim Entry Screen
NOTE 2: If a part that is not covered by this campaign 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 is out of warranty, submit a Prior Approval request for goodwill consideration prior to performing the work.

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:

- <u>Perform the ECM Update.</u>
- 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	MY	ENG	ECU P/N	ROM ID	
				OLD	NEW (Event #797)
Sonata Hybrid/Plug-In (LF HEV/PHEV) Nu 2.0L GDI	17MY	HEV	39161-2EEB1	LF7UPHMS690A LF7UPHMF6A0K	LF7UPHMF6A2K
		PHEV	39161-2EEG1	LF7SPPMS690A LF7SPPMF6A0K	LF7SPPMF6A2K
		HEV	39161-2EEB2	LF7UPHMS6A0A LF7UPHMF6A1K	LF7UPHMF6A3K
		PHEV	39161-2EEG2	LF7SPPMS6A0A LF7SPPMF6A1K	LF7SPPMF6A3K
Sonata Hybrid/Plug-In (LF HEV/PHEV) Nu 2.0L GDI	18MY	HEV	39161-2ELF0	LF8SPHMS6D1A LF8SPHMS6D1B LF8SPHMS6D1C LF8SPHMF6D4K	LF8SPHMF6D5K
		PHEV	39161-2ELH0	LF8SPPMS6D1A LF8SPPMS6D1B LF8SPPMF6D4K	LF8SPPMF6D5K

If the Automatic ECU Upgrade process fails, **cycle the ignition key to OFF for at least 30 seconds to reset the control unit**. Then resume programming using the Manual ECU Upgrade processes.

After the ECU Upgrade process shows 100% complete, **cycle the ignition key again to OFF for at least 30 seconds to reset the control unit**. This step is important for establishing normal powertrain communication and to prevent system errors.

MODE PASSWORD INFORMATION TABLE: #797 Sonata Hybrid/Plug-In (LF HEV/PHEV) 2.0L

ECU MENU (#797)	PASSWORD
LF HEV 2.0GDI 39161-2EEB1 (17MY)	7971
LF PHEV 2.0GDI 39161-2EEG1 (17MY)	7972
LF HEV 2.0GDI 39161-2EEB2 (17MY)	7973
LF PHEV 2.0GDI 39161-2EEG2 (17MY)	7974
LF HEV 2.0GDI 39161-2ELF0 (18MY)	7975
LF PHEV 2.0GDI 39161-2ELH0 (18MY)	7976

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.