



Technical Service Bulletin

GROUP

**ENGINE
MECHANICAL**

NUMBER

25-EM-007H

DATE

DECEMBER 2025

MODEL(S)

SEE BELOW

SUBJECT:

**ITM THERMOSTAT SPRING INSTALLATION &
ECU SOFTWARE UPDATE – DTC P218100**

★ IMPORTANT

This field action requires justification in the form of a customer concern, and a confirmed case for the related symptom outlined in the TSB, prior to any repair work. If justification requirements are not met, any submitted claims are subject to debit. 8/80,000 Emission Warranty applies. See Warranty Information section for more details.

Description: Some Elantra (CN7, CN7A), Kona (OS, SX2), and Sonata Hybrid (DN8 HEV) vehicles equipped with 2.0L engines may illuminate a warning lamp for DTC P218100 (Cooling System Performance) related to the Integrated Thermal-Management Module (ITM).

Follow the service procedure in this bulletin to install a spring onto the thermostat within the ITM, in order to prevent premature opening, and perform an ECU software update on affected vehicles.



Information

Completion of **BOTH** the ITM thermostat spring installation and the ECU software update are required for the repair of DTC P218100.

Applicable Vehicles:

Model Year	Model	Engine	Production Dates	VIN Starts with
2021 - 2023	Elantra (CN7)	2.0 L	09/12/2020 – 08/17/2023	KMH
	Elantra (CN7A)		09/25/2020 – 06/02/2023	5NP
2022 - 2023	Kona (OS)		03/02/2021 – 08/17/2023	KM8
2024 - 2025	Kona (SX2)		07/26/2023 – 04/30/2025	
2020 - 2023	Sonata Hybrid (DN8 HEV)		01/29/2020 – 12/14/2023	KMH

Parts Information:

Model	Part Name	Part Number	Figure	Remarks
Elantra (CN7, CN7A), Kona (OS), Sonata Hybrid (DN8 HEV), & Kona (SX2)	Spring	25689-2J001QQH		Qty: 1
	Gasket - Thermostat Housing	25623-2J000QQH		Qty: 1
	Pink, Antifreeze/Coolant	00232-19098		Qty: 1 gal (Select ONLY one)

NOTE: Ensure that the green antifreeze/coolant (if applicable) has been fully evacuated from the vehicle and replenished with pink antifreeze/coolant.

SST Information:

Tool Name	Tool Number	Figure	Ordering Information
VCI 3	G0VHNNN06		Website: https://hyundaiaessentialtools.com/ Email: Hyundaitools@snapon.com Phone: 1-855-763-9199 Hours: 7 AM – 7 PM CST
VCI 2	G1XDDMN001		

NOTE : VCI 2 can **NO** longer be ordered but can be used for the updates in this TSB.

GDS Information:

System	Event Number*	Description
Engine	1213	DN8 HEV ECU UPGRADE FOR EARLY INTERVENTION OF ITM ISSUES
	1214	CN7(a) ECU UPGRADE FOR EARLY INTERVENTION OF ITM ISSUES
	1216	OS PE ECU UPGRADE FOR EARLY INTERVENTION OF ITM ISSUES
	1287	SX2 ITM ECU UPGRADE FOR EARLY INTERVENTION OF ITM ISSUES

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

Warranty Information:

Model	Op. Code	Operation	Op. Time	Causal Part	Nature Code	Cause Code
Elantra (CN7)	50D030R0	ITM Thermostat Spring Installation and ECU Update (Using Pink Coolant, P/N 00232-19098)	1.9 M/H	39171-2JCB0	W11	ZZ5
Kona (OS)	50D030R1		1.7 M/H	39177-2JDF0		
Sonata Hybrid (DN8 HEV)	50D030R2		1.8 M/H	39116-2J002		
Kona (SX2)	50D030R3		1.7 M/H	39130-2J262		
Elantra (CN7A)	50D030R4		1.9 M/H	39171-2JBE0		

NOTE 1: Submit claim on Claim Entry Screen as “Campaign” type.

NOTE 2: 8/80,000 Emissions Warranty applies to the part(s) and repair procedure(s) outlined in this TSB. Prior to beginning any repair work, ensure the part(s) associated with the repair procedure are within NVLW, observing mileage and Warranty Start Date or date of first use. If the subject part(s) are out of warranty coverage, the dealer has the option to submit a PA Request for goodwill consideration on a case-by-case basis.

NOTE 3: If any part(s) not subject to this TSB are found in need of replacement while performing the repair procedure, and the affected part(s) are still under warranty, the dealer may submit a separate claim using the same repair order. If the part(s) not subject to this TSB are out of warranty coverage, the dealer has the option to submit a PA Request for goodwill consideration on a case-by-case basis.

NOTE 4: This TSB includes repair justification in the form of automatically uploaded DTC(s) via GDS e-Report at the time of diagnosis. To ensure adherence to the Digital Documentation Policy before claim submission, DTC history can be reviewed via the e-Report function within the GDS.

Additionally, required photos include a capture of the ECU Update “Success” screen for the associated update events.

NOTE 5: The incident parts are subject to callback through the normal Warranty Technical Center (WTC) parts return process. **Claim is subject to debit if the part is not returned.**

NOTE 6: Each dealer will be reimbursed 1 gallon of coolant under each operation code.

Service Procedure:

DIGITAL DOCUMENTATION



This TSB includes repair justification in the form of an automatically uploaded DTC via GDS e-Report at the time of diagnosis. To ensure adherence to the Digital Documentation Policy prior to claim submission, DTC history can be reviewed via the e-Report function within GDS. Additionally, required photos include a capture of the ECU Update “Success” screen for the associated update events.

NOTICE

Applying the recommended torque to all fasteners is essential to reduce potential issues from occurring after the service procedure.

Table of Contents

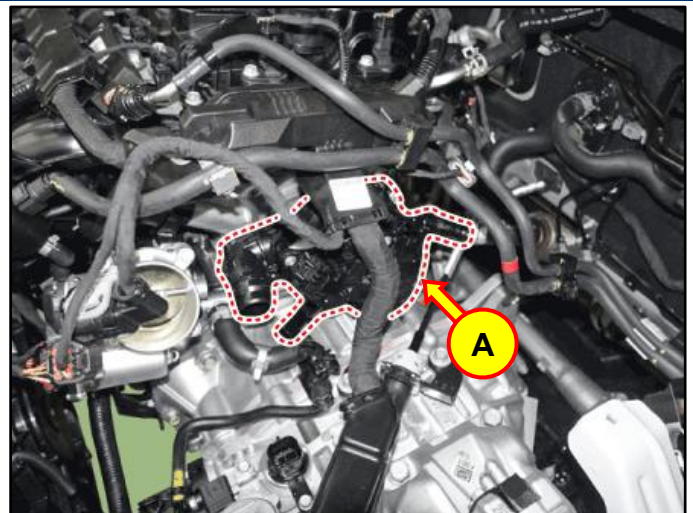
- ITM Thermostat Spring Installation.....4
- ECU Update Procedure.....6

ITM Thermostat Spring Installation

1. Remove the Integrated Thermal Management Module (ITM) (A).

Refer to the shop manual:

- **Engine Mechanical System > Cooling System > Integrated Thermal Management Module (ITM) > Repair procedures**



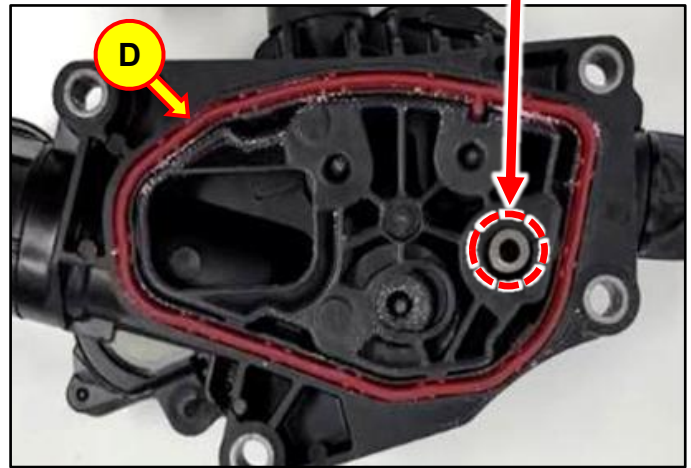
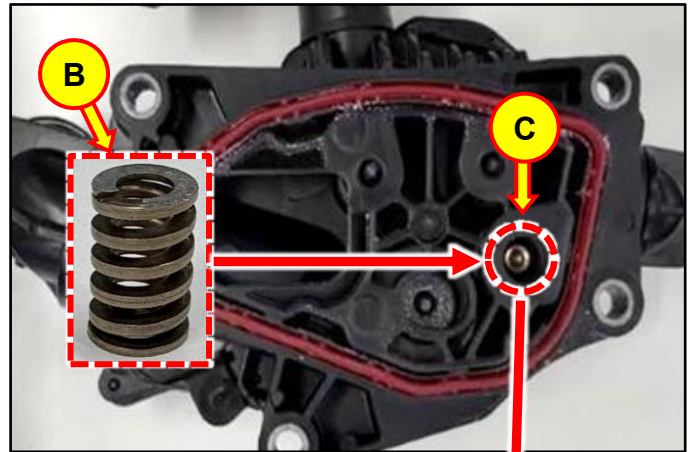
2. Insert the spring (B) into the ITM thermostat hole (C).
3. Install the new thermostat housing gasket (D) onto the ITM.

NOTICE

Clean the gasket surfaces prior to final installation.

i Information

Ensure that the gasket is properly installed and pushed into the grooves of the ITM housing.



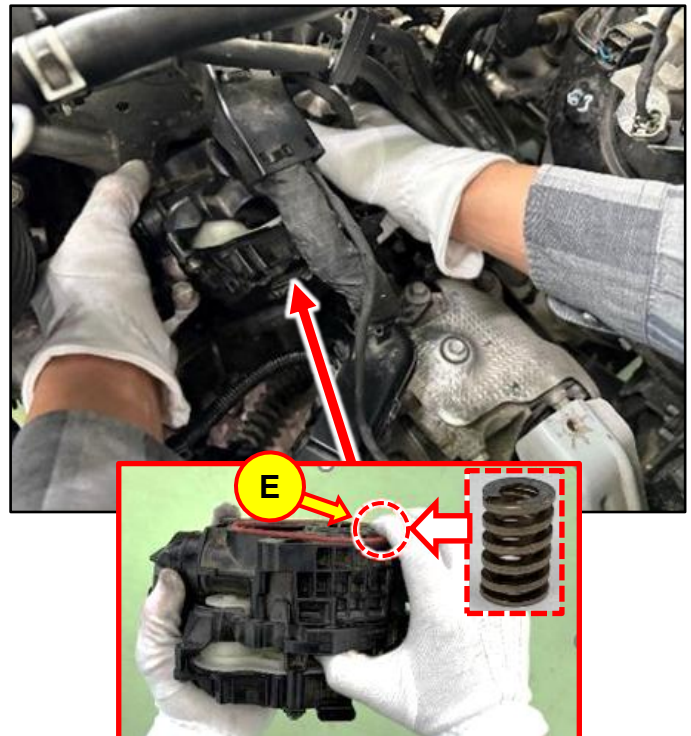
4. Install the ITM in the reverse order of removal.

NOTICE

When installing the ITM assembly, hold the spring down with your finger as shown (E) to prevent the spring from falling out.

NOTICE

When reconnecting the ITM connector, ensure **NO** water, oil, or foreign material is present in or around the connector.



5. Install all remaining components in the reverse order of removal.

ECU Update Procedure**NOTICE**

For proper engine operation, ECU update must be completed **before** the coolant bleeding process.

NOTICE

Ensure the vehicle's battery charge is **above 11.0 Volts** and the tablet's battery charge is **above 30%** before performing a software update to avoid the update from failing.

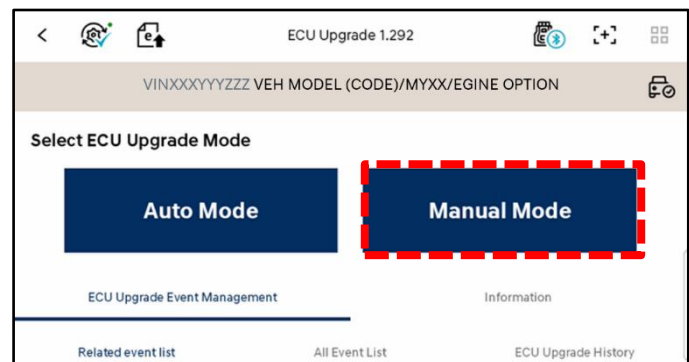
***i* Information**

- Turn **OFF** all lamps (do **NOT** leave head lamp switch in auto mode) and all accessories.
- Perform update with the ignition switch in the **ON** position.
- Do **NOT** disconnect any cables connected to the vehicle or scan tool during update.
- Do **NOT** start the engine OR place in **Ready** mode during update.
- Do **NOT** turn **OFF** the ignition switch during update.

1. Perform the ECU update in **Manual Mode**.

***i* Information**

Refer to **TSB # 25-GI-011H**, “**ECU Update Procedure for Tablet-Based GDS-Smart**”, for additional information.



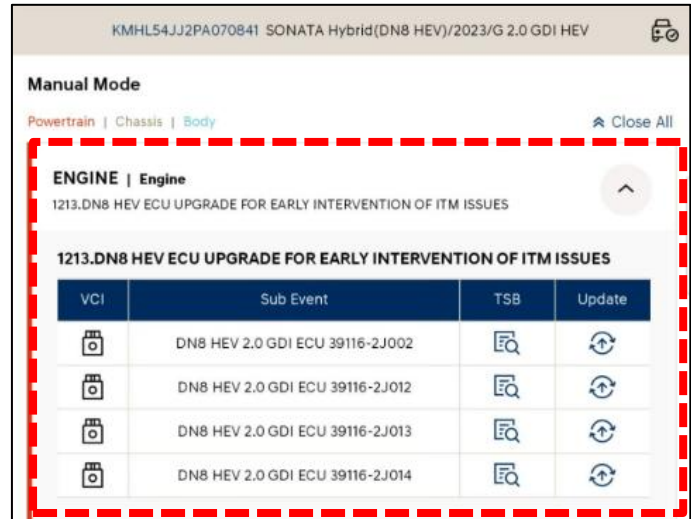
2. Select the **Engine** system and perform the ECU update selecting the correct ECU subevent.

NOTICE

Check the current ROM ID version and compare it to the [ROM ID Information](#) table before attempting to perform the software update.

NOTICE

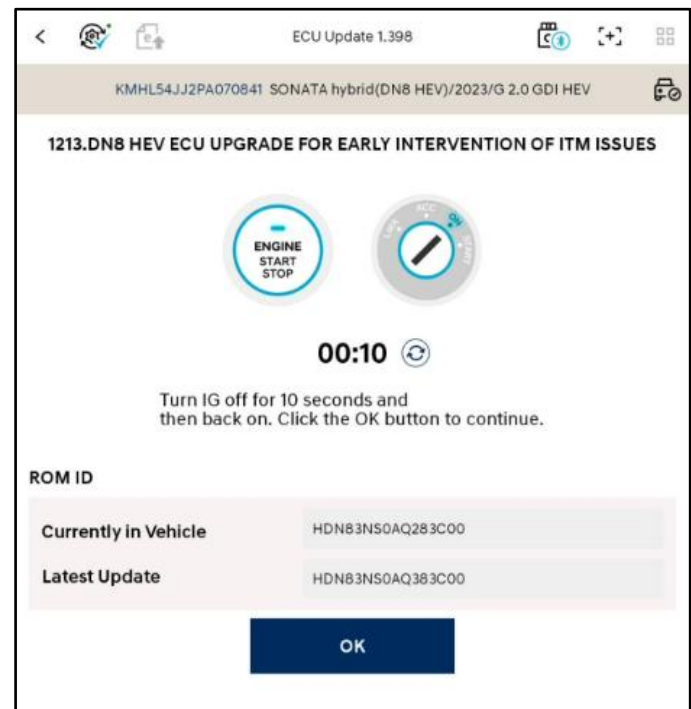
If the update fails, remove the power connector from the in-cabin fuse box for at least **5 seconds**. Alternatively, disconnect the negative (–) **12V** battery terminal, wait at least **5 seconds**. Reassemble and retry the update.



3. After the ECU update process shows 100% complete, follow the prompts on the screen to cycle the ignition **OFF** for at least **10 seconds** to reset the control unit (certain models may take up to **30 seconds**).

Information

Use the **Refresh** button to reset the timer.



4.

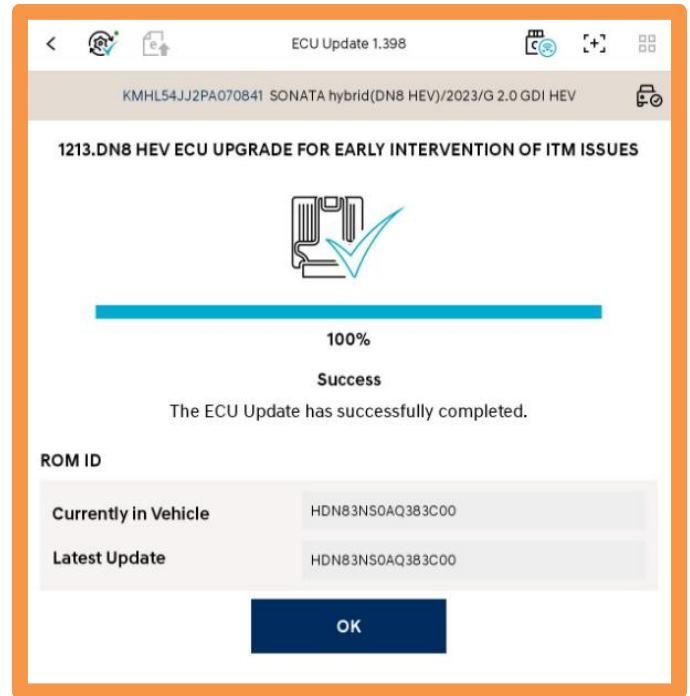
**DIGITAL
DOCUMENTATION**



Using the tablet or GDS screen capture function, take a screenshot of the ECU Update “Success” result screen.

Upload the photo to STUI.

NOTE: The VIN/Date/Time/Mileage photo imprint is **NOT** required for GDS screenshots.



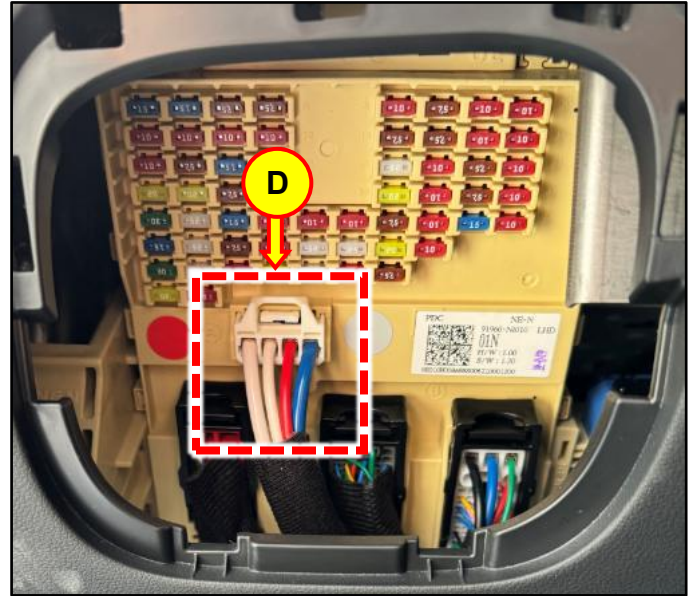
5. Turn **OFF** the ignition for at least **10 seconds** to reset the control unit.
6. Perform an **All Systems Fault Code** search and erase DTC history that had incidentally occurred from the ECU update.



7. Remove the power connector (D) from the in-cabin fuse box for at least **5 seconds**, then reconnect it.

i Information

Alternatively, disconnect the negative (–) **12V** battery terminal, wait at least **5 seconds**, then reconnect it.



8. Start the engine OR place in **Ready** mode to confirm proper operation of the vehicle.
9. Perform the ITM Coolant Filling Method to fully bleed the cooling system using GDS to enter the **Integrated Thermal Module Coolant Filling Mode**.

Refer to the shop manual:

- **Engine Mechanical System > Cooling System > Coolant > Repair procedures**

! WARNING

NEVER remove the radiator cap when the engine is hot. Serious scalding could be caused by hot fluid under high pressure escaping from the radiator.

NOTICE

Failure to follow the ITM bleeding procedure under **S/W Management** in GDS may result in air pockets and overheating of the engine.

Integrated Thermal Module Coolant Filling Mode	
Purpose	This mode assists coolant refilling by opening the coolant flow line for the engine equipped with an ITM.
Enable Condition	1. IG ON, ENG RUN 2. Transmission position P / Parking brake ON 3. Vehicle speed 0km/h (0 mile/h) 4. Coolant temperature is 90°C or under
Concerned Component	ITM
Concerned DTC	-
Fail Safe	-
Etc	-

10. The service procedure is now complete.

Manual Mode Passwords:

Event	ECM Menu	Password
1213	DN8 HEV 2.0 GDI ECU 39116-2J002	2002
	DN8 HEV 2.0 GDI ECU 39116-2J012	2012
	DN8 HEV 2.0 GDI ECU 39116-2J013	2013
	DN8 HEV 2.0 GDI ECU 39116-2J014	2014
1214	2.CN7 2.0 ATK CVT ECU 39171-2JCB0/BDC	7121
	3.CN7 2.0 ATK CVT ECU 39173/1-2JCB0/BE0	7122
	4.CN7 2.0 ATK CVT ECU 39171-2JCC0/BB0	7123
	5.CN7 2.0 ATK CVT ECU 39173/1-2JCC0/BC0	7124
	6.CN7 2.0 ATK CVT ECU 39171-2JCB5/BD5	7125
	8.CN7 2.0 ATK CVT ECU 39171-2JCC5/BB5	7127
	9.CN7 2.0 ATK CVT ECU 39173/1-2JCC5/BC5	7128
	10.CN7 2.0 ATK 6MT ECU 39171-2JCA1/BA1	7129
	11.CN7 2.0 ATK CVT ECU 39171-2JCB1/BD1	7130
	12.CN7 2.0 ATK CVT ECU 39173-2JCB1/BE1	7131
	13.CN7 2.0 ATK CVT ECU 39171-2JCC1/BB1	7132
	14.CN7 2.0 ATK CVT ECU 39173/1-2JCC1/BC1	7133
	15.CN7 2.0 ATK CVT ECU 39171-2JCB6/BD6	7134
	17.CN7 2.0 ATK CVT ECU 39171-2JCC6/BB6	7136
	19.CN7 2.0 ATK CVT ECU 39171-2JCD1/BG1	7138
	20.CN7 2.0 ATK CVT ECU 39171-2JCE1/BF1	7139
	26.CN7 2.0 ATK CVT ECU 39171-2JCC2/BB2	7145
	28.CN7 2.0 ATK CVT ECU 39171-2JCB7/BD7	7147
	30.CN7 2.0 ATK CVT ECU 39171-2JCC7/BB7	7149
	32.CN7 2.0 ATK CVT ECU 39171-2JCD2/BG2	7151
	33.CN7 2.0 ATK CVT ECU 39171-2JCE2/BF2	7152
1216	OS PE 2.0ATK ECU 39177/3-2JDF0	7320
	OS PE 2.0ATK ECU 39175/1-2JDF0	5120
	OS PE 2.0ATK ECU 39175/1-2JDF1	5121
1287	SX2 ITM ECU 39130-2J262	5321
	SX2 ITM ECU 39130-2J263	5322
	SX2 ITM ECU 39130-2J264	5323
	SX2 ITM ECU 39130-2J265	5324
	SX2 ITM ECU 39130-2J266	5325
	SX2 ITM ECU 39130-2J268	5327

ROM ID Information:

Model	Event	System	ECU Part Number	ROM ID	
				Current	Latest
2021MY Elantra (CN7, CN7A)	1214	Engine	39171-2JCB0	CNBVD0AMF3XCMF0A	CNCVD0AMF3XCFG8A
				CNBVD0AMF3XCMFCA	
				CNBVD0AMF3XCSFDA	
				CNCVD0AMF3XCSFEA	
				CNCVD0AMF3XCSFFA	
				CNCVD0AMF3XCSFFB	
			39173-2JCB0 39171-2JBE0	CNBVD0ASF3XCMF0A	CNCVD0ASF3XCFG8A
				CNBVD0ASF3XCMFCA	
				CNBVD0ASF3XCSFDA	
				CNCVD0ASF3XCSFEA	
				CNCVD0ASF3XCSFFA	
				CNCVD0ASF3XCSFFB	
			39171-2JCC0 39171-2JBB0	CNBWD0AMF3XCMF0A	CNCWD0AMF3XCFG8A
				CNBWD0AMF3XCMFCA	
				CNBWD0AMF3XCSFDA	
				CNCWD0AMF3XCSFEA	
				CNCWD0AMF3XCSFFA	
				CNCWD0AMF3XCSFFB	
			39173-2JCC0 39171-2JBC0	CNBWD0ASF3XCMF0A	CNCWD0ASF3XCFG8A
				CNBWD0ASF3XCMFCA	
				CNBWD0ASF3XCSFDA	
				CNCWD0ASF3XCSFEA	
				CNCWD0ASF3XCSFFA	
				CNCWD0ASF3XCSFFB	
			39171-2JCB5 39171-2JBD5	CNBVD0AMFCXCMF0A	CNCVD0AMFCXCFG8A
				CNBVD0AMFCXCMFCA	
				CNBVD0AMFCXCSFDA	
				CNCVD0AMFCXCSFEA	
				CNCVD0AMFCXCSFFA	
				CNCVD0AMFCXCSFFB	
			39171-2JCC5	CNBWD0AMFCXCMF0A	CNCWD0AMFCXCFG8A
				CNBWD0AMFCXCMFCA	
				CNBWD0AMFCXCSFDA	
				CNCWD0AMFCXCSFEA	
				CNCWD0AMFCXCSFFA	
				CNCWD0AMFCXCSFFB	

ROM ID Information (continued):

Model	Event	System	ECU Part Number	ROM ID				
				Current	Latest			
2022MY Elantra (CN7, CN7A)	1214	Engine	39171-2JCB1	CNDVD0AMF3XCSG8A	CNDVD0AMF3XCFG8C			
			39173-2JCB1	CNDVD0ASF3XCSG8A	CNDVD0ASF3XCFG8B			
			39171-2JCC1	CNDWD0AMF3XCSG8A	CNDWD0AMF3XCFG8C			
			39171-2JBB1					
			39173-2JCC1	CNDWD0ASF3XCSG8A	CNDWD0ASF3XCFG8B			
			39171-2JBC1					
			39171-2JCB6	CNDVD0AMFCXCSG8A	CNDVD0AMFCXCFG8C			
			39171-2JBD6					
			39171-2JCC6	CNDWD0AMFCXCSG8A	CNDWD0AMFCXCFG8C			
			39171-2JBB6					
			39171-2JCD1	CNDVD0ANF3XCSG8A	CNDVD0ANF3XCFG8C			
			39171-2JBG1					
			39171-2JCE1	CNDWD0ANF3XCSG8A	CNDWD0ANF3XCFG8C			
			39171-2JBF1					
2023MY Elantra (CN7, CN7A)			39171-2JCC2	CNEWD0AMF3XXSHCA	CNEWD0AMF3XXFHCC			
			39171-2JCB7	CNEVD0AMFCXXSHCA	CNEVD0AMFCXXFHCC			
			39171-2JBD7	CNEVD0AMFCXXFHCB				
			39171-2JCC7	CNEWD0AMFCXXSHCA	CNEWD0AMFCXXFHCC			
			39171-2JBB7	CNEWD0AMFCXXFHCB				
			39171-2JCD2	CNEVD0ANF3XXSHCA	CNEVD0ANF3XXFHCC			
			39171-2JBG2	CNEVD0ANF3XXFHCB				
			39171-2JCE2	CNEWD0ANF3XXSHCA	CNEWD0ANF3XXFHCC			
			39171-2JBF2	CNEWD0ANF3XXFHCB				
2022MY Kona (OS)	1216				39177-2JDF0	OSCVD0ASF3XCFG7C		
					39173-2JDF0		OSCVD0ASF3XCSG7B	
					39175-2JDF0	OSCVD0AMF3XCSG7A	OSCVD0AMF3XCFG7C	
					39171-2JDF0	OSCVD0AMF3XCSG7B		
2023MY Kona (OS)							39175-2JDF1	OSEVD0AMF3XCFHCC
							39171-2JDF1	

ROM ID Information (continued):

Model	Event	System	Detail	ECU Part Number	ROM ID	
					Current	Latest
2024MY Kona (SX2)	1287	Engine	SBC/ 2WD	39130-2J262	SXEVD0AMFCXCSPGA	SXEVD0AMFCXCFPGB
			SBW/ 2WD	39130-2J263	SXEVD0AMFCXWSPGA	SXEVD0AMFCXWFPGB
			SBC/ 4WD	39130-2J264	SXEVD0AMLCXCSPGA	SXEVD0AMLCXCFPGB
			SBW/ 4WD	39130-2J265	SXEVD0AMLCXWSPGA	SXEVD0AMLCXWFPGB
			SBC/ 2WD	39130-2J266	SXEVD0AMF3XCSPGA	SXEVD0AMF3XCFPGB
			SBC/ 4WD	39130-2J268	SXEVD0AML3XCSPGA	SXEVD0AML3XCFPGB
2WD			391X2-2J280	SXGVD0AMFCXCSPJA	SXGVD0AMFCXCFPJD	
				SXGVD0AMFCXCSPJB		
				SXGVD0AMFCXCSPJC		
			391X2-2J281	SXGVD0AMFCXWSPJA	SXGVD0AMFCXWFPJD	
				SXGVD0AMFCXWSPJB		
				SXGVD0AMFCXWSPJC		
			4WD	391X2-2J282	SXGVD0AMLCXCSPJA	SXGVD0AMLCXCFPJD
					SXGVD0AMLCXCSPJB	
					SXGVD0AMLCXCSPJC	
				391X2-2J283	SXGVD0AMLCXWSPJA	SXGVD0AMLCXWFPJD
					SXGVD0AMLCXWSPJB	
					SXGVD0AMLCXWSPJC	
2WD	391X2-2J284	SXGVD0AMF3XCSPJA	SXGVD0AMF3XCFPJD			
		SXGVD0AMF3XCSPJB				
		SXGVD0AMF3XCSPJC				
	391X2-2J285	SXGVD0AMF3XWSPJA	SXGVD0AMF3XWFPJD			
		SXGVD0AMF3XWSPJB				
		SXGVD0AMF3XWSPJC				
4WD	391X2-2J286	SXGVD0AML3XCSPJA	SXGVD0AML3XCFPJD			
		SXGVD0AML3XCSPJB				
		SXGVD0AML3XCSPJC				

ROM ID Information (continued):

Model	Event	System	ECU Part Number	ROM ID	
				Current	Latest
2020- 2023MY Sonata Hybrid (DN8 HEV)	1213	Engine	39116-2J002	HDN80NS0AQ30RC00	HDN80NS0AQ880C00
				HDN80NS0AQ470C00	
				HDN80NS0AQ580C00	
				HDN80NS0AQ680C00	
				HDN80NS0AQ780C00	
			39116-2J012	HDN81NS0AQ10SC00	HDN81NS0AQ780C00
				HDN81NS0AQ20TC00	
				HDN81NS0AQ370C00	
				HDN81NS0AQ480C00	
				HDN81NS0AQ580C00	
				HDN81NS0AQ680C00	
			39116-2J013	HDN82NS0AQ20TC00	HDN82NS0AQ780C00
				HDN82NS0AQ370C00	
				HDN82NS0AQ480C00	
				HDN82NS0AQ580C00	
				HDN82NS0AQ680C00	
			39116-2J014	HDN83NS0AQV80C00	HDN83NS0AQ383C00
				HDN83NS0AQ082C00	
				HDN83NS0AQ183C00	
				HDN83NS0AQ283C00	