 <b>HYUNDAI</b> <b>Technical Service Bulletin</b>	GROUP <b>CAMPAIGN</b>	NUMBER <b>22-01-043H</b>
	DATE <b>MAY 2022</b>	MODEL(S) ELANTRA (AD) KONA (OS) VELOSTER (JS)
<b>SUBJECT:</b>	ENGINE MONITORING LOGIC (SERVICE CAMPAIGN 974)	

**\* IMPORTANT**

**\*\*\* Retail Vehicles \*\*\***

Dealer 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 Hyundai Motor America's "Vehicle Information Screen (VIS)" via WEBDCS to identify open service campaigns.

**Description:** Hyundai is conducting a service campaign to enhance the knock sensor logic with the Cylinder Noise Diagnostic System (CNDS) software update. CNDS is to detect abnormal cylinder wall scuffing or noise of the engine block before potentially severe engine damage occurs. If abnormal noise is detected, the Malfunction Indicator Lamp (MIL) will blink continuously. In addition, DTC P1327 will be recorded in the ECM.

**Applicable Vehicles:**

- Certain 2019-20MY Elantra (AD\*) vehicles with 2.0L Nu engines produced through 7/6/2020
- Certain 2019-21MY Kona (OS) vehicles with 2.0L Nu engines produced through 9/1/2020
- Certain 2019-21MY Veloster (JS) vehicles with 2.0L Nu engines produced through 5/27/2020

**NOTE:** \*Elantra (AD) vehicles have VINs starting with "KMH".

**GDS Information:**

Event #	Description
801	(19MY) OS NU 2.0 ATK ENGINE (CNDS LOGIC APPLICATION)
802	(19-20MY) JS NU 2.0 ATK ENGINE (CNDS LOGIC APPLICATION)
803	(19MY) AD PE NU 2.0 ATK ENGINE (CNDS LOGIC APPLICATION)
808	(21MY) JS NU 2.0 ATK ENGINE (CNDS LOGIC APPLICATION)
809	(20MY) AD PE NU 2.0 ATK ENGINE (CNDS LOGIC APPLICATION)
752	(20-21MY) OS NU 2.0 ATK ENGINE (CNDS LOGIC APPLICATION)

**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.

**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.

**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:**

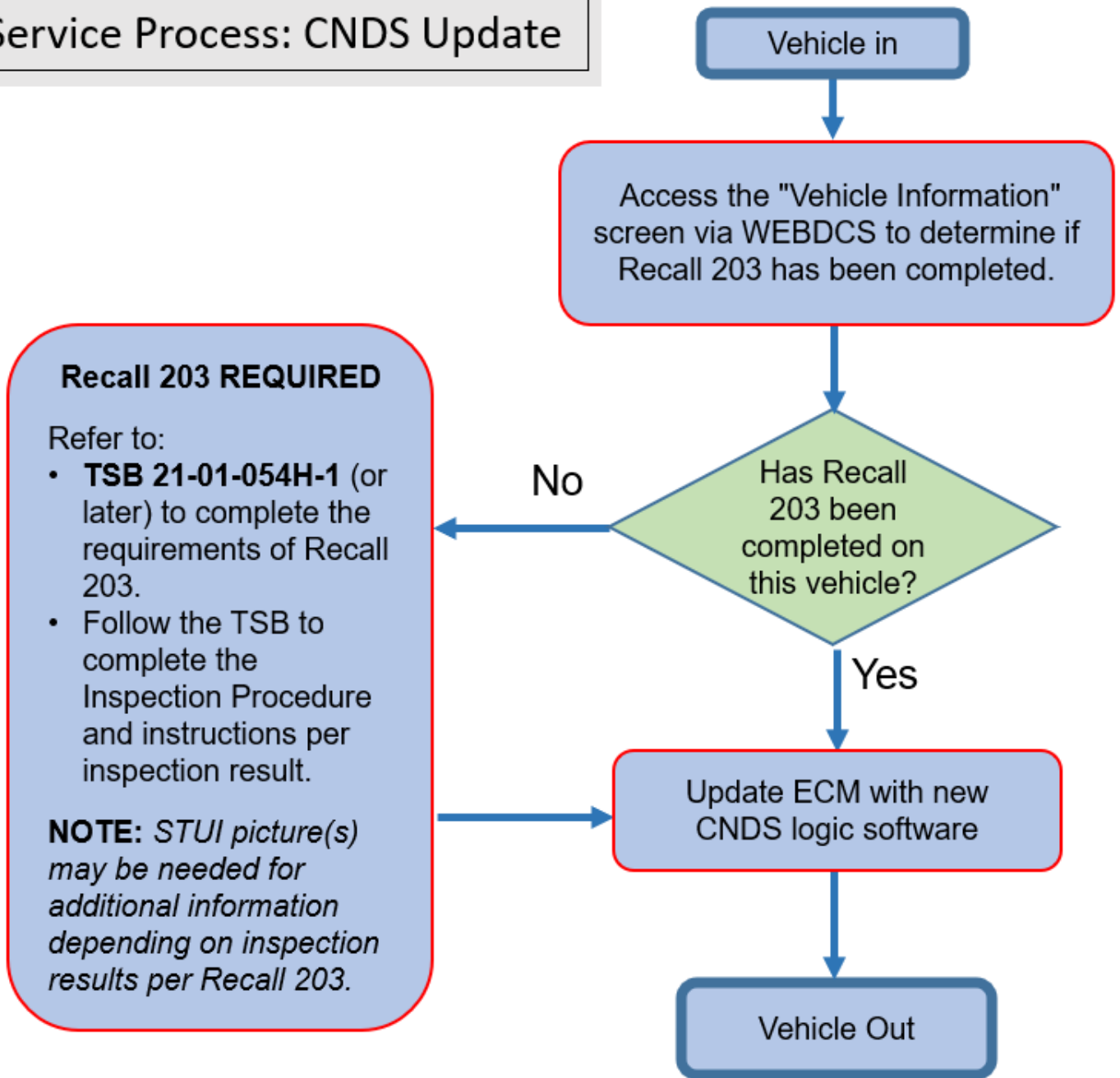
Model	Op Code	Operation	Op Time	Causal P/N	Nature	Cause
Elantra (AD)	20D016R0	<b>ECM UPGRADE</b>	0.3 M/H	1D691-2EU00	I3T	ZZ3
Kona (OS)	20D016R1					
Veloster (JS)	20D016R2					

**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.

**Service Procedure Flowchart:**

**Service Process: CNDS Update**



**ROM ID Information Table:**

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

MODEL	TM	IMMO	ECU P/N	ROM ID	
				OLD	ROM ID
<b>19MY Elantra (AD)</b>	6AT2	+IMMO	39171-2EFB5	AD9SP2AS694A AD9SP2AS695A AD9SP2AS697A	AD9SP2AF699A
	6AT2	-IMMO	39173-2EFB5	AD9SP2US694A AD9SP2US695A	AD9SP2UF699A
	6AT2	+IMMO	39171-2EFC5	AD9UP2AS694A AD9UP2AS695A AD9UP2AS697A	AD9UP2AF699A
	6AT2	-IMMO	39173-2EFC5	AD9UP2US694A AD9UP2US695A	AD9UP2UF699A
	6MT2	-IMMO	39177-2EFA5	AD9UP2VS694A AD9UP2VS695A	AD9UP2VF699A
<b>20MY Elantra (AD)</b>	CVT	+IMMO	39170-2EFG5	ADASP2AS6B1A ADASP2AS6B1B ADASP2AS6B5A ADASP2AS6B5B	ADASP2AF6B9A
	CVT	-IMMO	39172-2EFG5	ADASP2US6B1A ADASP2US6B1B ADASP2US6B5A ADASP2US6B5B	ADASP2UF6B9A
	CVT	+IMMO	39170-2EFH5	ADAUP2AS6B1A ADAUP2AS6B1B ADAUP2AS6B5A ADAUP2AS6B5B	ADAUP2AF6B9A
	CVT	-IMMO	39172-2EFH5	ADAUP2US6B1A ADAUP2US6B1B ADAUP2AS6B5A ADAUP2US6B5B	ADAUP2UF6B9A

MODLE	TM	IMMO	ECU P/N	ROM ID	
				OLD	NEW
19MY Veloster (JS)	6MT2	-IMMO	39176-2EJW0	JS9UP2VS69CA JS9UP2VS69DA JS9UP2VS69DB	JS9UP2VF69GA
	6AT2	+IMMO	39170-2EJW0	JS9UP2AS69CA JS9UP2AS69DA JS9UP2AS69DB	JS9UP2AF69GA
	6AT2	-IMMO	39172-2EJW0	JS9UP2US69CA JS9UP2US69DA JS9UP2US69DB	JS9UP2UF69GA
20MY Veloster (JS)	6AT2	+IMMO	39170-2EJW1	JSAUP2AS697A JSAUP2AS698A	JSAUP2AF699A
	6AT2	-IMMO	39172-2EJW1	JSAUP2US697A JSAUP2US698A	JSAUP2UF699A
	6MT2	-IMMO	39176-2EJW1	JSAUP2VS697A JSAUP2VS698A	JSAUP2VF699A
21MY Veloster (JS)	6AT2	+IMMO	39171-2EJW2	JSBUP2AS698A JSBUP2AS6B2A	JSBUP2AF6B9A
	6AT2	-IMMO	39173-2EJW2	JSBUP2US698A JSBUP2US6B2A	JSBUP2UF6B9A
	6MT2	-IMMO	39177-2EJW2	JSBUP2VS698A JSBUP2VS6B2A	JSBUP2VF6B9A

MODEL	IMMO	AXLE	ECU P/N	ROM ID	
				OLD	NEW
19MY Kona (OS)	+IMMO	2WD	39171-2ESE1	OS9UPAAS694A OS9UPAAS695A	OS9UPAAF699A
	+IMMO	4WD	39171-2ESJ1	OS9UPBAS694A OS9UPBAS695A	OS9UPBAF699A
	-IMMO	2WD	39171-2ESE1	OS9UPAUS694A OS9UPAUS695A	OS9UPAUF699A
	-IMMO	4WD	39171-2ESJ1	OS9UPBUS694A OS9UPBUS695A	OS9UPBUF699A
20MY Kona (OS)	+IMMO	2WD	39171-2ESE2	OSAUPAAS6B1A	OSAUPAAF6B9A
	+IMMO	4WD	39171-2ESJ2	OSAUPBAS6B1A OSAUPBAS6B1B	OSAUPBAF6B9A
	-IMMO	2WD	39173-2ESE2	OSAUPAUS6B1A	OSAUPAUF6B9A
	-IMMO	4WD	39173-2ESJ2	OSAUPBUS6B1A OSAUPBUS6B1B	OSAUPBUF6B9A
21MY Kona (OS)	+IMMO	2WD	39171-2ESE3	OSBUPAAS6B6A	OSBUPAAF6B9A
	+IMMO	4WD	39171-2ESJ3	OSBUPBAS6B6A	OSBUPBAF6B9A
	-IMMO	2WD	39173-2ESE3	OSBUPAUS6B6A	OSBUPAUF6B9A
	-IMMO	4WD	39173-2ESJ3	OSBUPBUS6B6A	OSBUPBUF6B9A

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: #801 19MY Kona (OS) 2.0L**

ECU MENU (#801)	PASSWORD
OS 19MYNU 2.0ATK 6AT +IMMO 2WD 39171-2ESE1	0101
OS 19MYNU 2.0ATK 6AT +IMMO 4WD 39171-2ESJ1	0102
OS 19MYNU 2.0ATK 6AT -IMMO 2WD 39171-2ESE1	0103
OS 19MYNU 2.0ATK 6AT -IMMO 4WD 39171-2ESJ1	0104

**MODE PASSWORD INFORMATION TABLE: #802 19-20MY Veloster (JS) 2.0L**

ECU MENU (#802)	PASSWORD
JS 19MYNU 2.0ATK 6MT -IMMO 2WD 39176-2EJW0	0202
JS 19MYNU 2.0ATK 6AT +IMMO 2WD 39170-2EJW0	0203
JS 19MYNU 2.0ATK 6AT -IMMO 2WD 39172-2EJW0	0204
JS 20MYNU 2.0ATK 6AT +IMMO 2WD 39170-2EJW1	0205
JS 20MYNU 2.0ATK 6AT -IMMO 2WD 39172-2EJW1	0206
JS 20MYNU 2.0ATK 6MT -IMMO 2WD 39176-2EJW1	0208

**MODE PASSWORD INFORMATION TABLE: #803 19MY Elantra (AD) 2.0L**

ECU MENU (#803)	PASSWORD
AD PE 19MY NU 2.0 ATK 6AT+IMMO 2WD 39171-2EFB5/D5	0301
AD PE 19MY NU 2.0 ATK 6AT-IMMO 2WD 39173-2EFB5/D5	0302
AD PE 19MY NU 2.0 ATK 6AT+IMMO 2WD 39171-2EFC5/E5	0303
AD PE 19MY NU 2.0 ATK 6AT-IMMO 2WD 39173-2EFC5/E5	0304
AD PE 19MY NU 2.0 ATK 6MT-IMMO 2WD 39177-2EFA5	0306

**MODE PASSWORD INFORMATION TABLE: #808 21MY Veloster (JS) 2.0L**

ECU MENU (#808)	PASSWORD
JS 21MY NU 2.0 ATK 6AT2 +IMMO 2WD 39171-2EJW2	8081
JS 21MY NU 2.0 ATK 6AT2 -IMMO 2WD 39173-2EJW2	8082
JS 21MY NU 2.0 ATK 6MT2 -IMMO 2WD 39177-2EJW2	8084

**MODE PASSWORD INFORMATION TABLE: #809 20MY Elantra (AD) 2.0L**

ECU MENU (#809)	PASSWORD
AD PE 2.0 AKT CVT +IMMO 2WD 39170-2EFG5/J5	8091
AD PE 2.0 AKT CVT -IMMO 2WD 39172-2EFG5/J5	8092
AD PE 2.0 AKT CVT +IMMO 2WD 39170-2EFH5/K5	8093
AD PE 2.0 AKT CVT -IMMO 2WD 39172-2EFH5/K5	8095

**MODE PASSWORD INFORMATION TABLE: #752 20-21MY Kona (OS) 2.0L**

<b>ECU MENU (#752)</b>	<b>PASSWORD</b>
OS 20MY +IMMO 2WD 39171-2ESE2	3910
OS 20MY +IMMO 4WD 39171-2ESJ2	3911
OS 20MY -IMMO 2WD 39173-2ESE2	3912
OS 20MY -IMMO 4WD 39173-2ESJ2	3913
OS 21MY +IMMO 2WD 39171-2ESE3	3914
OS 21MY +IMMO 4WD 39171-2ESJ3	3915
OS 21MY -IMMO 2WD 39173-2ESE3	3916
OS 21MY -IMMO 4WD 39173-2ESJ3	3917

**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