	GROUP	MODEL
KIA	**ELE**	**2019-2021 Multiple Models with IVT**
	NUMBER	DATE
	200 (Rev 3, 08/14/2020	**June 2020**

TECHNICAL SERVICE BULLETIN

SUBJECT: **SERVICE ACTION: IVT SOFTWARE LOGIC IMPROVEMENT AND/OR IVT REPLACEMENT (SA424)**

ELE200 / SA424 Superseded to SC199

★ NOTICE

This bulletin has been revised to include additional information. Revised sections of this bulletin are indicated by a black bar in the margin area.

This bulletin provides the procedure to improve the Transmission Control Module (TCM) logic and if necessary, replace the Intelligent Variable Transmission (IVT) on 2019-2021MY vehicles which may exhibit a MIL with the DTC(s) [illegible]. The production ranges of the vehicles within the scope of this bulletin are listed in [illegible]. To correct this concern, apply the [illegible] to the CVT system using the [illegible] as described in the [illegible] replace the IVT assembly. For confirmation that the latest reflash has been [illegible] you are working on, verify the [illegible] ID [illegible] on page 4. Before [illegible] procedure, verify the vehicle is included in the list of [illegible] VINs.

DTC(s):
P0730 – Incorrect Gear Ratio
P0731 – Gear 1 Incorrect Ratio
P0741 – Torque Converter Clutch Circuit Performance or Stuck Off
P0867 – Transmission Fluid Pressure

MY	Model	Production Date
2019-2020	[illegible] (BD[illegible])	7/9/18 – 4/2/20
2020-2021	[illegible] (SK3)	11/24/18 – 4/17/20
2021	[illegible] (SP2)	11/20/19 – 4/10/20

★ NOTICE

A Service Action is a repair program without customer notification that is performed during the warranty period. Any dealer requesting to perform this repair outside the warranty period will require DPSM approval.

Repair status for a VIN is provided on WebDCS (Service → Warranty Coverage → Warranty Coverage Inquiry → Campaign Information). Not completed Recall / Service Action reports are available on WebDCS (Consumer Affairs → Not Completed Recall → Recall VIN → Select Report), which includes a list of affected vehicles.

This issue number is SA424.

Printed TSB copy is for reference only; information may be updated at any time. Always refer to KGIS for the latest information.

Circulate To: ☒ General Manager ☒ Service Manager ☒ Parts Manager ☒ Service Advisors ☒ Technicians ☒ Body Shop Manager ☐ Fleet Repair

ECU Upgrade Procedure:

To correct this condition, the ECU should be reprogrammed using the KDS download, as described in this bulletin.

Upgrade Event Name
494. BDM NU 2.0MPI ATK CVT/IVT DRIVING PERFORMANCE IMPROVEMENT
495. SK3 NU 2.0MPI ATK CVT/IVT DRIVING PERFORMANCE IMPROVEMENT
496. SP2 NU 2.0MPI ATK CVT/IVT DRIVING PERFORMANCE IMPROVEMENT

★ NOTICE

- **A fully charged battery is necessary before ECU upgrade can take place. It is recommended that a battery charger is used in ECU mode during reflashing or the use of a fully charged jump starter box connected to the battery.**
- **DO NOT connect any other battery charger to the vehicle during ECU upgrade.**
- **Ensure the KDS or GDS is sufficiently charged prior to reflash.**
- **All ECU upgrades must be done with the ignition key in the 'ON' position.**
- **Be careful not to disconnect the VCI-II connected to the vehicle during the ECU upgrade procedure.**
- **DO NOT start the engine during ECU upgrade.**
- **Do NOT turn the ignition key 'OFF' or interrupt the power supply during ECU upgrade.**
- **When the ECU upgrade is completed, turn the ignition 'OFF' and wait 10 seconds before starting the engine.**
- **ONLY use approved ECU upgrade software designated for the correct model and model year.**

★ NOTICE

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the particular model is equipped with an immobilizer security system. Failure to follow proper procedures may cause the PCM to become inoperative after the upgrade and any claims associated with this repair may be subject to chargeback.

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★ NOTICE

It is recommended to ALWAYS check the Electronic Parts Catalog (EPC) to locate the ECU Part Number respective to Auto/Manual Mode ROM IDs. DO NOT reference the parts label affixed to the ECU.

ROM ID INFORMATION TABLE:

Upgrade Event #494 (BDm), #495 (SK3) and #496 (SP2).

Model	EM	TM	IMMO	ECU P/No.	ROM ID	
					Previous	New
Forte (BDm)	Nu 2.0L MPI Atkinson	CVT/IVT	Yes	39171-2ECA0 39171-2ECB0 39171-2ECD0 39171-2ECD1 39171-2ECE0 39171-2ECE1 39173-2ECA0 39173-2ECB0 39173-2ECD0 39173-2ECD1 39173-2ECE0 39173-2ECE1	CBD0N20NS0 CBD0N20NS1 CBD0N20NS2 CBD0N20NS3 CBD0N20NS4 CBD0N20NS5 CBD0N20NS6 CBD0N20NS7	CBD0N20NS8
Soul (SK3)		CVT/IVT		39171-2ELC0 39173-2ELC0 39171-2ELC1 39173-2ELC1	CSK0N20NS0 CSK0N20NS1 CSK0N20NS2 CSK0N20NS3 CSK0N20NS4	CSK0N20NS5
Seltos (SP2)		CVT/IVT		39171-2EPT0 39173-2EPT0	CSP2N20NS0 CSP2N20NS1 CSP2N20NS2	CSP2N20NS3
				39171-2EPV0 39173-2EPV0	CSP4N20NS0 CSP4N20NS1 CSP4N20NS2	CSP4N20NS3

To verify the vehicle is affected, be sure to check the Calibration Identification of the vehicle's ECM ROM ID and reference the Information Table as necessary.

Manual Upgrade Procedure:

★ NOTICE

The manual upgrade should ONLY be performed if the automatic upgrade fails.

If the automatic upgrade fails, turn the ignition OFF for about 10 seconds then place it back in the ON position to reset the control unit BEFORE performing manual upgrade.

See table below for Manual Mode passwords.

Manual Mode ECU Upgrade Passwords

Menu	Password
BDM NU 2.0MPI ATK CVT/IVT : 39171/3-2ECA0/B0/D0/D1/E0/E1	9171
SK3 NU 2.0MPI ATK CVT/IVT : 39171/3-2ELC0/C1	3201
SP2 NU 2.0MPI ATK CVT/IVT (2WD) : 39171/3-2EPT0	1320
SP2 NU 2.0MPI ATK CVT/IVT (4WD) : 39171/3-2EPV0	1321

1. Within the ECU Upgrade screen displayed, select **Manual Mode**.
2. Select the **CVT** system under the System selection menu. Select **Upgrade Event #494 (BDm), #495 (SK3) or #496 (SP2)** and select **Upgrade** to continue.
3. Select the appropriate control unit part number with reference to the ROM ID Information Table on page 3, and select **OK**.
4. Enter the appropriate password from the Manual Mode password table above and select **OK**.
5. The upgrade will begin and the progress of the upgrade will appear on the bar graph.
6. When instructed on the KDS, turn the ignition **OFF** for ten (10) seconds then back on. Touch **OK** to continue.
7. Once the upgrade is complete, touch **OK** to finalize the procedure.
8. When prompted, select **YES** to check for Diagnostic Trouble Codes (DTC) and erase any DTCs stored such as EPS, ESC, and TPMS that may have been set during the upgrade.
9. Start the engine to confirm proper operation of the vehicle.

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AFFECTED VEHICLE RANGE:

Model	Production Date Range
Forte (BDm)	July 9, 2018 to April 2, 2020
Soul (SK3)	November 24, 2018 to April 17, 2020
Seltos (SP2)	November 20, 2019 to April 10, 2020

REQUIRED PART:

Model	Part Name	P/N (Remanufactured.)	Figure	Qty.
Forte (BDm)	CVT/IVT Assembly	48000 2H300QQKR		1
Soul (SK3)		48000 2H351QQKR		
Seltos (SP2) FWD		48000 2H353QQKR		
Seltos (SP2) AWD		48000 2H751QQKR		
ALL (Except BDm)	Transmission Cooler Flush	UM013 CH060		1
ALL*	IVT Fluid SP-CVT1	UM018 CH130	N/A	Up to 7 Qts.

*May **NOT** be claimed <u>if a new CVT/IVT assembly was shipped</u> with P/N ending in QQK.

A Vehicle Diagnosis Number (VDN) must be created with at least one of the five (5) DTCs listed on page 2, prior to IVT replacement. If a VDN is not created, Parts Ordering <u>and</u> Warranty claim submission issues WILL occur.

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WARRANTY INFORMATION:

N Code: N99 C Code: C99

Model	Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
BDm	V	48000 2H300	0	SA(424) DTC Check + TCM S/W Upgrade + TCM Learning (Success)	200M05R0	0.3 M/H	N/A	0
				DTC Check + IVT Replacement + TCM S/W Upgrade	200M05R1	3.3 M/H	48000 2H300QQKR	1
				DTC Check + TCM S/W Upgrade + TCM Learning (Fail) + IVT Replacement	200M05R2	3.4 M/H		
SK3		48000 2H351	0	SA(424) DTC Check + TCM S/W Upgrade + TCM Learning (Success)	200034R0	0.3 M/H	N/A	0
				DTC Check + IVT Replacement + TCM S/W Upgrade	200034R1	3.1 M/H	48000 2H351QQKR UM013 CH060	1
				DTC Check + TCM S/W Upgrade + TCM Learning (Fail) + IVT Replacement	200034R2	3.2 M/H		
SP2 (FWD)		48000 2H353	0	SA(424) DTC Check + TCM S/W Upgrade + TCM Learning (Success)	200034R3	0.3 M/H	N/A	
				DTC Check + IVT Replacement + TCM S/W Upgrade	200034R4	3.2 M/H	48000 2H353QQKR UM013 CH060	1
				DTC Check + TCM S/W Upgrade + TCM Learning (Fail) + IVT Replacement	200034R5	3.3 M/H		
SP2 (AWD)		48000 2H751	0	SA(424) DTC Check + TCM S/W Upgrade + TCM Learning (Success)	200034R3	0.3 M/H	N/A	0
				DTC Check + IVT Replacement + TCM S/W Upgrade	200034R6	3.7 M/H	48000 2H751QQKR UM013 CH060	1
				DTC Check + TCM S/W Upgrade + TCM Learning (Fail) + IVT Replacement	200034R7	3.8 M/H		

A Vehicle Diagnosis Number (VDN) must be created with at least one of the five (5) DTCs listed on page 2, prior to IVT replacement. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. If necessary, use sublet code 'X1' for UM018-CH130 SP-CVT1 fluid (up to 7qts.) for a $68.25 total reimbursement cost. Use sublet code 'X2' for rental expense reimbursement (up to 5 days maximum) for transmission replacement labor codes only.

NOTE: You may receive a transmission with a part number ending in "QQK" when a part number ending in "QQKR" was ordered. Both part numbers are interchangeable and acceptable in the warranty system.

★ NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA424 when accessing the WebDCS system.