

	GROUP	MODEL
	ELE	2024-2025MY EV9 (MV1)
	NUMBER	DATE
	362	January 2025
TECHNICAL SERVICE BULLETIN		
SUBJECT: SERVICE ACTION: SHIFT CONTROL UNIT LOGIC IMPROVEMENT (SA594)		

This bulletin provides the software upgrade procedure for certain 2024-2025MY EV9 (MV1) vehicles produced from September 25, 2023 through September 4, 2024. The affected vehicles may experience the inability to shift out of 'PARK' accompanied with the DTC P28E812 stored due to the output shaft sensor signal exceeding the expected value. Follow the procedure outlined in this publication to perform the 'SCU' software upgrade on the applicable vehicle. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

DTC Description:

P28E812 - Shift Motor Position Sensor Circuit High



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

This issue number is SA594.

ECU Upgrade Procedure:

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

Upgrade Event Name

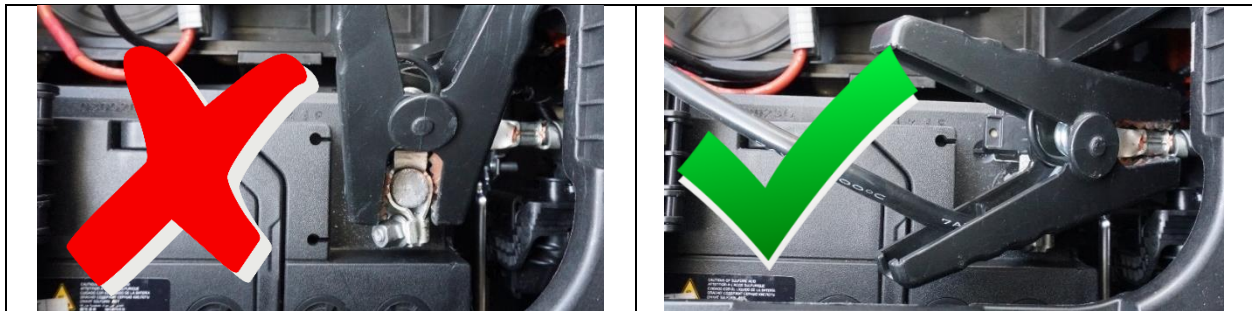
787.MV1 SCU DTC Judgment Logic Improvement (P28E812)**NOTICE**

- Confirm a fully charged battery (12.3 volts or higher is necessary) is used or utilize a fully charged jump starter box connected to the battery.
- **Ensure the KDS GDS is sufficiently charged at 60% or higher prior to reflash.**
- All ECU upgrades must be performed with the ignition set to the 'ON' position unless otherwise stated.
- **Damaged VCI II units should not be used and promptly replaced.**
- 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 application.

IMPORTANT

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.

[Connect the negative \(-\) terminal to the battery as shown below.](#)



SUBJECT:

SHIFT CONTROL UNIT LOGIC IMPROVEMENT (SA594)

 NOTICE

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the applicable 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.

ROM ID INFORMATION TABLE:

Upgrade Event #787

Event	System	IMMO		ECU P/No.	ROM ID	
					Previous	New
#787	SCU	Yes		42910 18510	EMV1XXXXXX500XS0 EMV1XXXXXX520XS0 EMV1XXXXXX540XS0 EMV1XXXXXX550XS0	EMV1XXXXXX610XS0

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.

Refer to [TSB SST081](#) for instructions to upgrade the 'SCU' system:

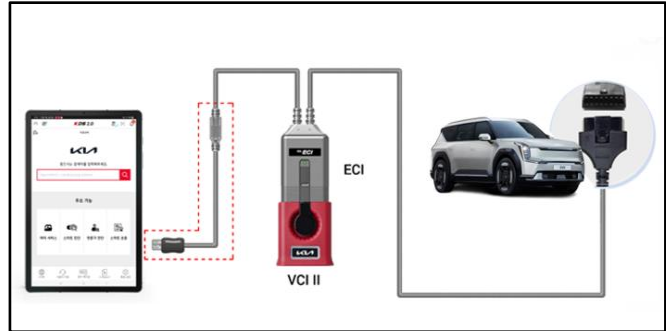
❗ IMPORTANT

An **Over-The-Air (OTA)** Software Update for this procedure is planned for release but may not be available at the time of TSB publication. Dealers can confirm OTA availability by checking for OTA release notes on the [Owners Portal](#) of [kia.com](#): [OTA Software Update Release Notes](#)

Ensure the ECI cable is configured by referring to the '[KDS Configuration for ECI Cable Usage](#)'.

- 1a. Connect the ECI DLC connector to the OBD-II connector, located under the driver's side of the instrument panel.
- 1b. Connect the ECI USB -C connector to the KDS tablet.
- 1c. Connect the VCI II to the ECI OBD-II connector.
2. **UPGRADE EVENT:**

787.MV1 SCU DTC Judgment Logic Improvement (P28E812)



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

Event No.	Menu	Password
#787	MV1 SCU : 42910-18510	0158

SUBJECT:

SHIFT CONTROL UNIT LOGIC IMPROVEMENT (SA594)**AFFECTED VEHICLE RANGE:**

Model	Production Date Range
EV9 (MV1)	September 25, 2023 to September 4, 2024

REQUIRED TOOL:

Tool Name	Part Number	Figure	Comments
KDS	N/A		Kia Diagnostic System

WARRANTY INFORMATION:**N Code: N99 C Code: C99**

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
V	42910 18510	0	(SA594) Shift Control Unit Software Upgrade	240211R0	0.3 M/H	N/A	0

NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA594 when accessing the KDealer+ system.