



| | |
|------------------------|--------------------|
| GROUP | MODEL |
| ELE | 2024MY EV9 (MV) |
| NUMBER | DATE |
| 339 (Rev 1, 7/10/2024) | June 2024 |

TECHNICAL SERVICE BULLETIN

SERVICE ACTION: ICCU-VCU S/W UPGRADE FOR EWP OPERATION AND ICCU REPLACEMENT (SA570)

SUBJECT:

NOTICE

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

This bulletin provides information to improve the Electric Water Pump (EWP) operation logic when the EV battery is being charged with a Level 1 or Level 2 (120-240 Volt) AC charger on certain 2024MY EV9 (MV) vehicles produced from September 25, 2023 through January 11, 2024. A disparity may occur between the actual temperature and sensed temperature of the Integrated Charging Control Unit (ICCU) during high-current AC charging, predominantly in cold weather environments. If this condition occurs, the ICCU may become damaged and exhibit a MIL 'ON' with the DTC(s) listed below, resulting in a stopped charging session and inability to charge using Level 1 or 2 AC chargers; however, the EV battery can still be charged using Level 3 DC fast charging, and the vehicle's drivability is unaffected. This software upgrade may also be available via Over The Air (OTA) through Kia Connect if it has been activated. Follow the procedure outlined in this publication to inspect and upgrade the Vehicle Control Unit 'VCU' software logic for the EWP and, if any of the related DTCs are stored, replace the ICCU assembly. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

DTC Description:

P1E011C - PFC Voltage Sensor Reliability and Initial Offset Value Check

P1E0211 - PFC Voltage Sensor Circuit Low

P1E1300 - Battery Charger Power Module System Voltage

P1EOC73 - Input Relay Stuck Closed Check

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 SA570.

publications are listed in 'Service Releases' and has the latest service information that has been released.

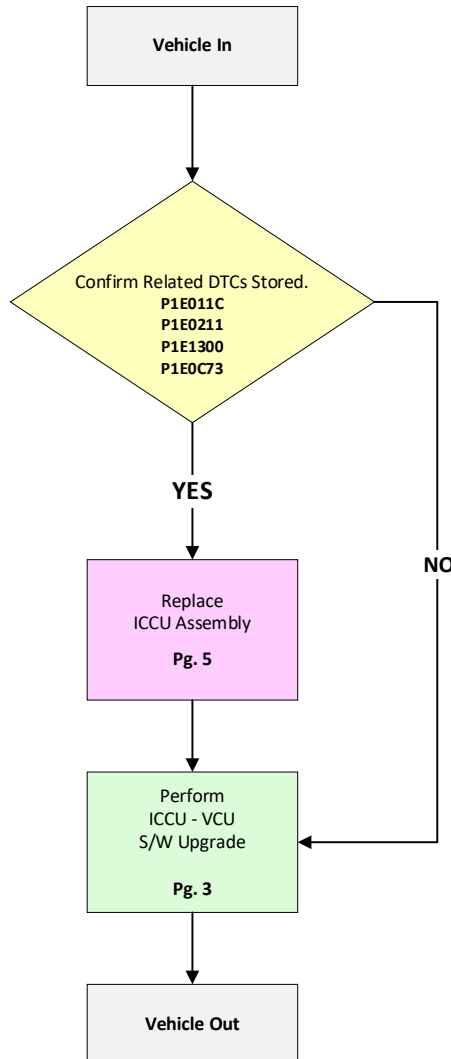
**ICCU-VCU S/W UPGRADE FOR EWP
OPERATION AND ICCU REPLACEMENT (SA570)**

SUBJECT:

Flowchart:

Path 1: Vehicle IN → Related DTCs Stored (NO) → ICCU - VCU S/W Upgrade → Vehicle OUT

Path 2: Vehicle IN → Related DTCs Stored (YES) → Replace ICCU ASSY → ICCU - VCU S/W Upgrade → Vehicle OUT



NOTICE

If non-related DTCs are stored, refer to KGIS to further diagnosis.

IMPORTANT

A **Vehicle Diagnosis Number (VDN)** must be created for DTC(s) P1E011C, P1E0211, P1E1300 or P1E0C73 prior to ordering parts and performing necessary procedures as outlined in this TSB. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur.



SUBJECT:

ICCU-VCU S/W UPGRADE FOR EWP OPERATION AND ICCU REPLACEMENT (SA570)

ECU Upgrade Procedure:

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

Upgrade Event Name

724.MV1 VCU Upgrade for AC Charging Logic Improvement

NOTICE

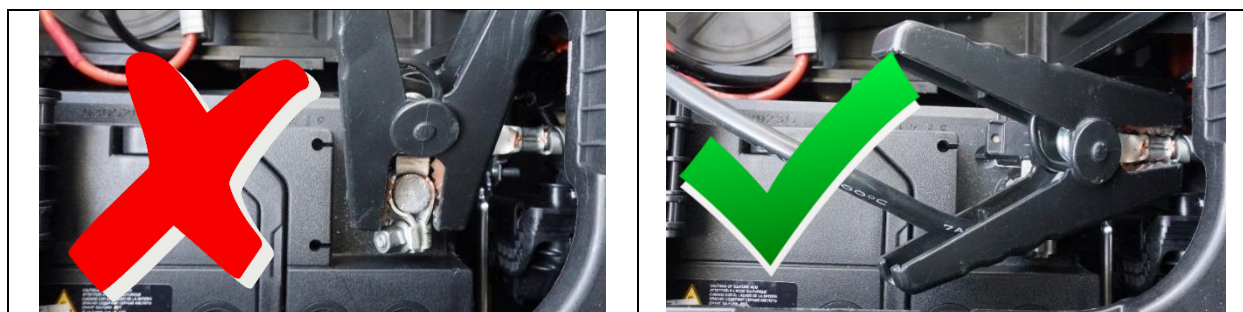
- Confirm a fully charged battery (12.3 volts or higher is necessary) is used or utilize a fully charged jump starter box connected to the battery.
- **Ensure the KDS GDS is sufficiently charged at 60% or higher prior to reflash.**
- All ECU upgrades must be performed with the ignition set to the 'ON' 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.

Note: When connecting the external battery pack, in-vehicle operation built-in CAM might be issued by impossible charging amount sensing of the battery sensor.

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



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

TSB: SA570 (Rev 1) EV9 (MV) June 2024

**ICCU-VCU S/W UPGRADE FOR EWP
OPERATION AND ICCU REPLACEMENT (SA570)**

SUBJECT:

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 #724

| Model | Type | IMMO | | ECU P/No. | ROM ID | |
|-------|------|------|--|-------------|--|------------------|
| | | | | | Previous | New |
| EV9 | AWD | Yes | | 39751 1XVN1 | MV10 67H N03 S00 MV10 67H N03 S01 MV10 67H N03 S02 | MV10 67H N03 S03 |
| | RWD | | | 39751 1XVN2 | MV10 57H N03 S00 MV10 57H N03 S01 MV10 57H N03 S02 | MV10 57H N03 S03 |

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 'VCU' system:

UPGRADE EVENT:

724.MV1 VCU Upgrade for AC Charging Logic Improvement



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](#)

Manual Upgrade Procedure:

Manual Mode ECU Upgrade Passwords

| Menu | Password |
|----------------------------|----------|
| MV1 VCU (AWD): 39751-1XVN1 | 9532 |
| MV1 VCU (RWD): 39751-1XVN2 | 4583 |



SUBJECT:

ICCU-VCU S/W UPGRADE FOR EWP OPERATION AND ICCU REPLACEMENT (SA570)

Replacement Procedure: (ICCU)

1. Related DTC(s) stored.

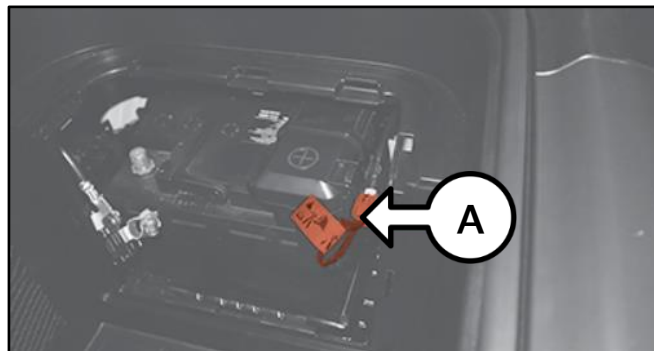
DTC Description:

- P1E011C - PFC Voltage Sensor Reliability and Initial Offset Value Check
- P1E0211 - PFC Voltage Sensor Circuit Low
- P1E1300 - Battery Charger Power Module System Voltage
- P1E0C73 - Input Relay Stuck Closed Check

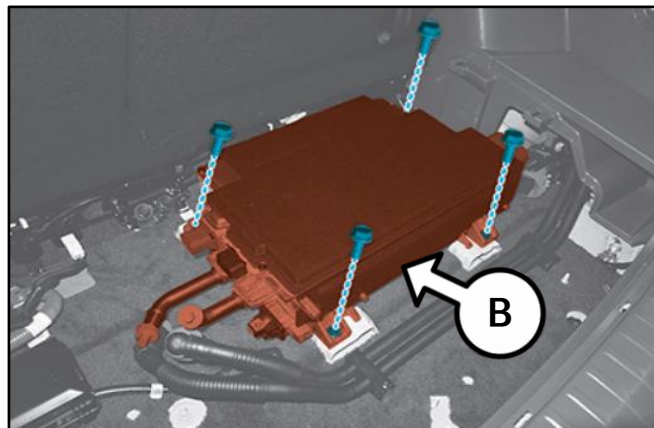
NOTICE

If any non-related (other than those listed below) DTC(s) are stored, refer to KGIS to further diagnosis then proceed to 'ECU Upgrade Procedure' on page 3.

2. Perform the '**High Voltage Shut-Off Procedure**' (A) by referring to "Body Electrical System → High Voltage Shut-Off Procedures → High Voltage Shut-Off Procedures (**Steps 1-2 Only**)" in the applicable Shop Manual on KGIS.



3. Replace the Integrated Charging Control Unit (ICCU) (B) by referring to "Battery Control System → High Voltage Charging System → Integrated Charging Control Unit (ICCU) → Removal and Installation" in the applicable Shop Manual on KGIS.



Note: The 'ICCU Fuse' does not require replacement.



Tightening torque for bolts:
16.6 - 19.5 lb.ft (22.6 - 26.5 N.m)

4. Perform the Coolant Refilling and Air Bleeding by referring to "Cooling System → Motor Cooling System → Motor Coolant → Refilling" in the applicable Shop Manual on KGIS.
5. Confirm normal vehicle charging operation.
6. Refer to 'ECU Upgrade Procedure' on page 3 to upgrade the ICCU software after ICCU replacement.


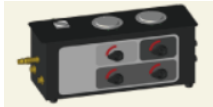

**ICCU-VCU S/W UPGRADE FOR EWP
OPERATION AND ICCU REPLACEMENT (SA570)**

SUBJECT:



AFFECTED VEHICLE RANGE:

| Model | Production Date Range |
|----------|--|
| EV9 (MV) | September 25, 2023 to January 11, 2024 |

REQUIRED TOOL:

| Tool Name | SST # | Figure | Comments |
|---------------------------------------|-------------|--|-----------------------|
| KDS | N/A |  | Kia Diagnostic System |
| Filling and Drain tool for EV Coolant | OK253 J2300 |  | Located O/H 2 |
| Cap Adapter | OK253 J2350 |  | Located Drawer 18 |

REQUIRED PART:

| Part Name | Part Number | Figure | Qty. |
|---------------|-------------------------------------|---|-----------|
| ICCU Assembly | 36400 1XHA0QQK or 36400 1XHA0 |  | 1 |
| Coolant | UM020 CH263 |  | 2 gallons |

Note: The replacement QQK part number will require a VIN entry for parts ordering. DO NOT order this part for stocking purposes, related to this Service Action. Supply is very limited. Until supply stabilizes, please confirm part availability before scheduling customers. Please be sure to expedite warranty claim filing.



SUBJECT:

ICCU-VCU S/W UPGRADE FOR EWP OPERATION AND ICCU REPLACEMENT (SA570)

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 | 36400 1XHA0 | 0 | (SA570) DTC Inspection + ICCU-VCU S/W Upgrade | 240020R0 | 0.3 M/H | N/A | 0 |
| | | 0 | (SA570) DTC Inspection + ICCU Replacement + ICCU-VCU S/W Upgrade | 240020R1 | 2.0 M/H | 36400 1XHA0QQK <u>or</u> 36400 1XHA0 | 1 |
| | | | | | | UM020 CH263 | 2 |

Note: Manually enter sublet code 'X2' for reimbursement of one roundtrip rideshare expense or up to three (3) days of rental expense, with supporting documentation. A [Vehicle Diagnosis Number \(VDN\)](#) must be created for DTC(s) P1E011C, P1E0211, P1E1300 or P1E0C73 prior to ordering parts and performing necessary procedure, as outlined in this TSB. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. Any claims for replacement parts are subject to Warranty review and chargeback.

NOTICE

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SA570 when accessing the KDealer+ system.

