



GROUP	MODEL
Safety Recall Campaign	2022-2024MY EV6, EV6 GT (CV)
NUMBER	DATE
SC302 (Rev 1, 05/20/2024)	May 2024

## SAFETY RECALL CAMPAIGN

### SUBJECT: ICCU AND FUSE INSPECTION/REPLACEMENT AND ICCU SOFTWARE UPGRADE (SC302)

#### 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 inspect and, if necessary, replace the Integrated Charging Control Unit (ICCU) and ICCU fuse on certain 2022-2024MY EV6, EV6 GT (CV) vehicles produced from November 17, 2021 through February 7, 2024. This bulletin also provides information to update the ICCU software. The ICCU may become damaged over time from transient high voltage and thermal cycling resulting in a DTC P1A9096 stored. A damaged ICCU may not be able to charge the 12-volt battery which can discharge gradually while driving with progressive reductions of motive power. If the driver ignores the warnings associated with the discharging battery condition and continues to operate the vehicle in a reduced power mode, the vehicle may eventually experience a complete loss of motive power, increasing the risk of a crash. Follow the procedure outlined in this publication to 1) inspect and, if necessary, replace the ICCU and ICCU fuse, and 2) update the ICCU software on the affected vehicle. Before conducting the procedure, verify that the vehicle is included in the list of affected VINs.

#### DTC Description:

P1A9096 - DC/DC Converter Input Voltage Sensor Fault

#### NOTICE

**There is no charge to the vehicle owner for this repair. Under applicable law, you may not sell or otherwise deliver any affected vehicle until it has been repaired pursuant to the procedures set forth in this bulletin.**

**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.**

## Flowchart:

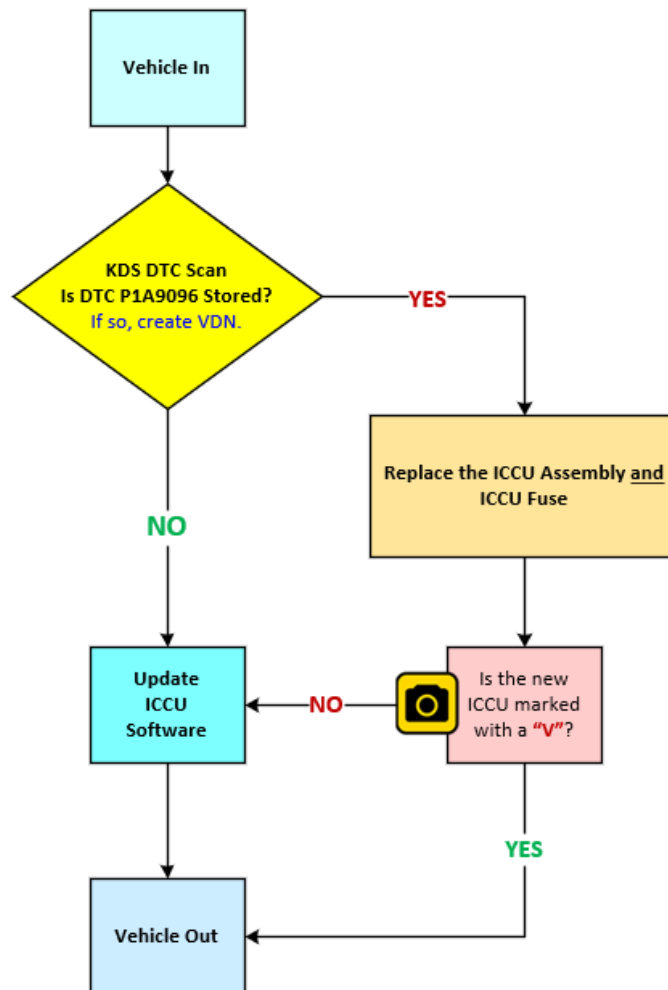
## Using KDS, scan the vehicle for DTC P1A9096 - Is DTC stored?

- If DTC is not stored, update the ICCU software (Pages 3-4).
- If DTC is stored, replace the ICCU Assembly + ICCU Fuse (Page 5)

DTC P1A9096 Stored + ICCU Assembly and ICCU Fuse Replacement

## Does the 'new' ICCU Assy marked with a letter "V"?

- No - Take a KVID photo of ICCU marked "V" + Update the ICCU software (Pages 3-4)
- Yes - Vehicle Out

**IMPORTANT**

A Vehicle Diagnosis Number (VDN) must be created prior to ICCU replacement. If a VDN is not created, Parts Ordering and Warranty claim submission issues WILL occur. Any associated claims for ICCU replacement are subject to Warranty review and chargeback. Take a KVID photo of a new ICCU assembly installed that IS NOT marked with a "V" (page 10, step25) as the software will need to be upgraded. The software is pre-installed in ICCU assemblies marked with a "V" only.

**ECU Upgrade Procedure:**

To correct this condition, the ECU should be reprogrammed using the KDS download, as described in TSB [SST081](#).

## Upgrade Event Name

735.CV/CV eGT ICCU LDC FET Protection Logic Improvement (EWP, Vpeak)

**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.

**NOTICE**


If a 'Communication Fail' error notice appears or the upgrade cannot be performed, DO NOT disconnect the KDS/VCI-II. Contact GIT America Help Desk at (888) 542-4371 or Techline.

**NOTICE**

Before attempting an ECU upgrade on any Kia model, make sure to first determine whether the applicable model is equipped with an immobilizer  (IMMO) 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 #735**

Model	SYSTEM	IMMO		ECU P/No.	ROM ID	
					Previous	New
EV6 (CV)	ICCU	Yes		36400 1XFAO 36401 1XFAO	ECV1E1-IDS51R000 ECV1E1-IDS03R000 ECV1E1-IDS05R000 ECV1E1-IDS07R000 ECV1E1-IDS08R000 ECV1E1-IDS09R000 ECV1E3-IDS10R000 ECV1E3-IDS11R000 ECV1E3-IDS12R000	ECV1E3-IDS13R000

*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.*

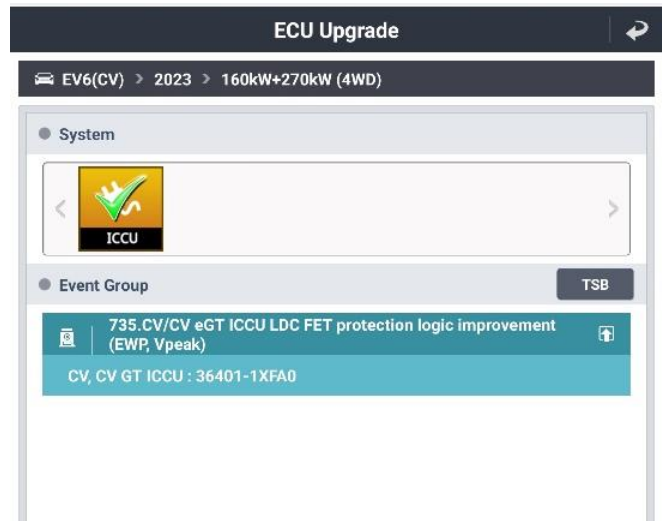
Refer to [TSB SST081](#) for instructions to upgrade the 'ICCU' system:

**UPGRADE EVENT:**

**#735.CV/CV eGT ICCU LDC FET Protection Logic Improvement (EWP, Vpeak)**

**NOTICE**

**Prior to performing the ECU upgrade, be sure to check that the KDS is fully charged.**



**Manual Mode ECU Upgrade Passwords**

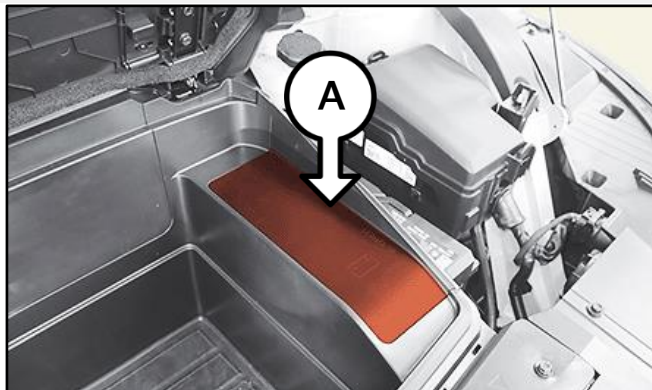
Menu	Password
CV, CV GT ICCU : 36401-1XFAO	1311



## SUBJECT: ICCU &amp; FUSE INSPECTION/REPLACEMENT &amp; ICCU S/W UPGRADE (SC302)

**Replacement Procedure:**

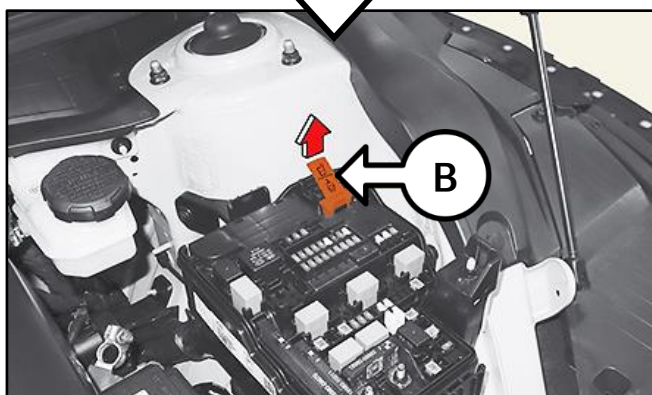
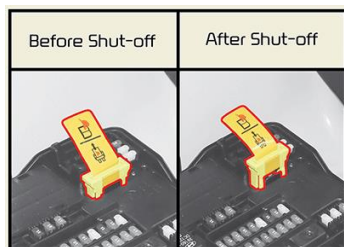
1. Open the hood and open the auxiliary battery (12V) service cover and fuse (A).



2. Open the hood and disconnect the battery negative (-) post cable.
3. Remove the room junction block cover and disconnect the service interlock connector (B).

**NOTICE**

It takes at least 5 minutes for capacitor of the high voltage battery system to discharge completely.



4. Open the coolant reservoir tank pressure cap (C) to release pressure.

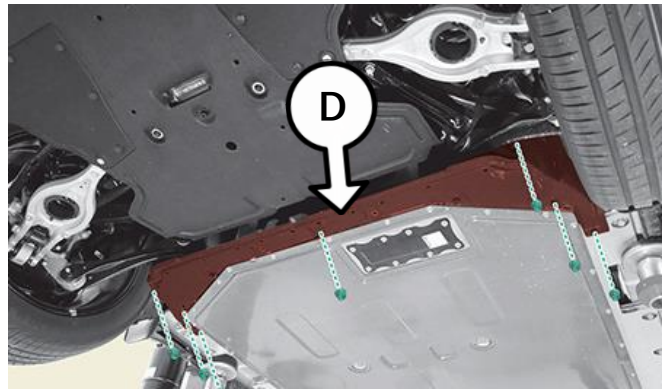


- Remove the rear under cover (D).

**Note:** Long Range model shown for reference use only. Standard range will appear different.



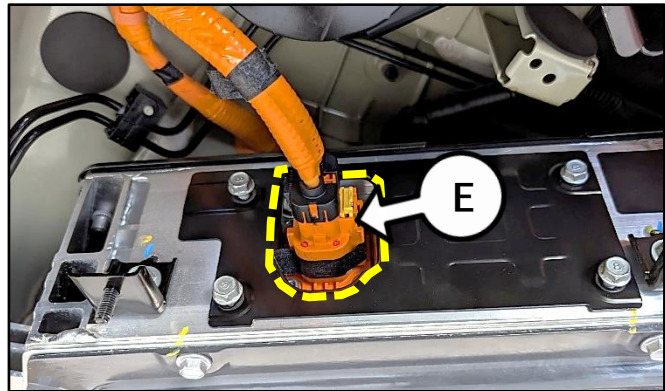
Tightening torque for nuts:  
5.8 - 8.7 lb.ft (7.8 - 11.8 N.m)



- Disconnect the ICCU Connector (E).

**WARNING**

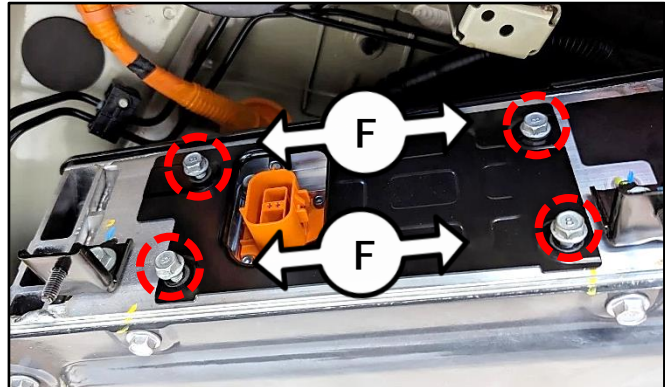
Be sure to read and follow the "General Safety Information and Caution" information on KGIS when working with a High Voltage system. Failure to do so can result in serious electrical injuries.



- Remove the four (4) ICCU fuse service cover retaining bolts (F).



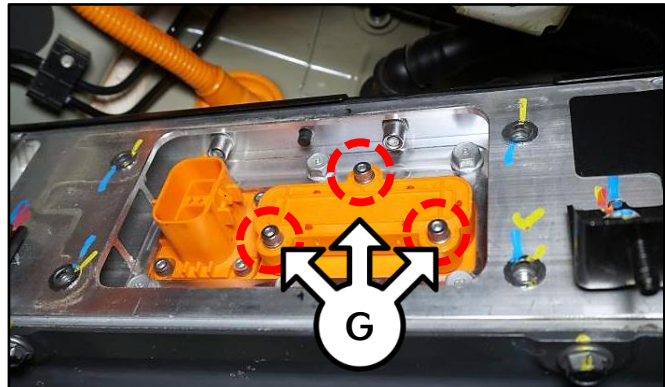
Tightening torque for bolts (F):  
5.8 - 8.7 lb.ft (7.8 - 11.8 N.m)



- Remove the three (3) ICCU fuse cover retaining bolts (G).



Tightening torque for T3 hex bolts (G):  
22.6 - 29.5 lb.in (2.5 - 3.3 N.m)



## SUBJECT: ICCU &amp; FUSE INSPECTION/REPLACEMENT &amp; ICCU S/W UPGRADE (SC302)

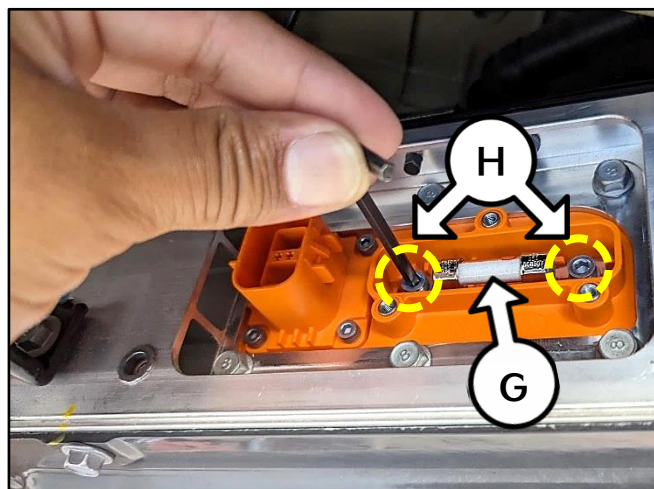
9. Carefully and gently remove the two (2) ICCU fuse (H) retaining allen head bolts (H) using a hand tool and replace the ICCU fuse (I) with a new part.

**CAUTION**

**DO NOT** use a power tool to remove these bolts. There are two (2) securing nuts inside the battery. If the nuts fall inside the battery, additional time will be required to extract them.



Tightening torque for T5 hex bolts (H):  
39.1 -47.7 lb.in (3.3 - 4.0 N.m)

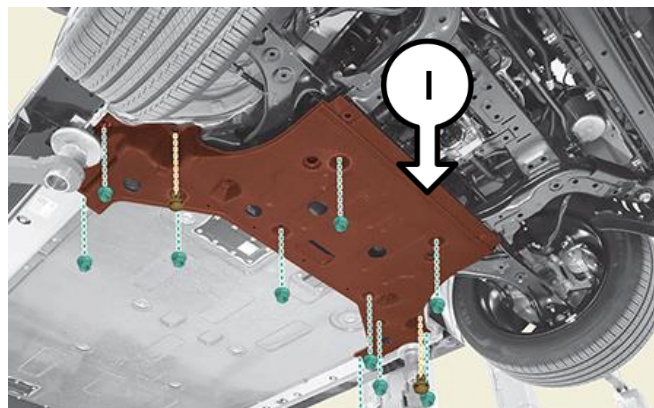


**Warning:** Be sure to read and follow the “General Safety Information and Caution” information on KGIS when working with a High Voltage system.  
(Image shown is for reference use only)

10. Reinstall all removed parts in the reverse order of removal after ICCU Assembly and Fuse replacement is completed as outlined below (Steps 11 - 25), then refer to step 26.

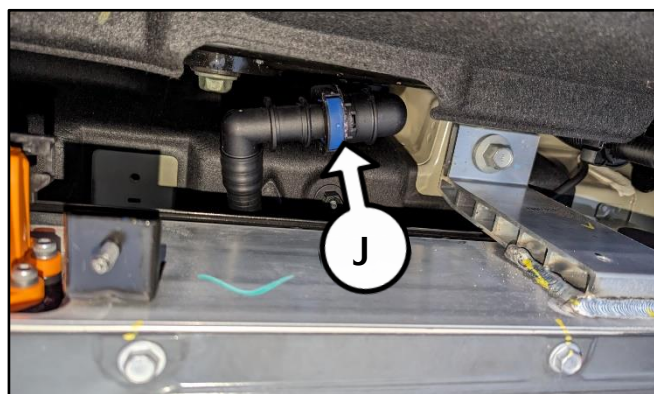
11. Remove the front rear under cover (I).

**Note:** Image shown for reference only. The front under cover does not need to be removed.



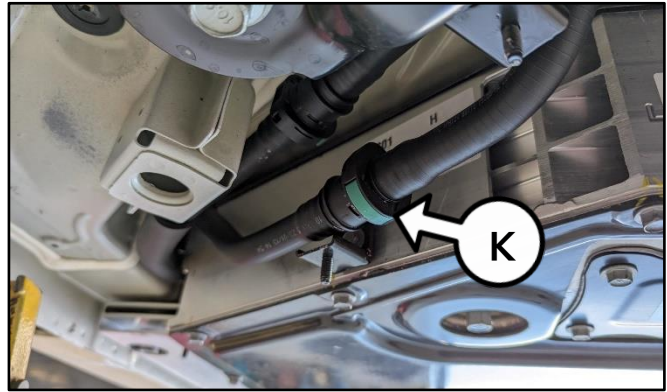
Front of Battery

12. Disconnect the blue rear coolant hose connector (J).



Rear of Battery

13. Disconnect the front coolant **green** hose connector (K).



Front Right Side of Battery

14. Using shop air, blow out the ICCU coolant from the **blue** rear disconnected coolant hose.

 **TECH TIP**

Wearing a rubber glove, create a tight seal using hand when blowing into the **blue** hose connector end.



Note: Use a drain pan to collect the coolant fluid from the front disconnected hose.

15. Remove the rear seat assembly (L) by referring to "Body Interior and Exterior → Rear Seat Assembly → Removal and Installation" in the applicable Shop Manual on KGIS.



16. Remove the left (LH) and right (RH) side rear door scuff trim (M).





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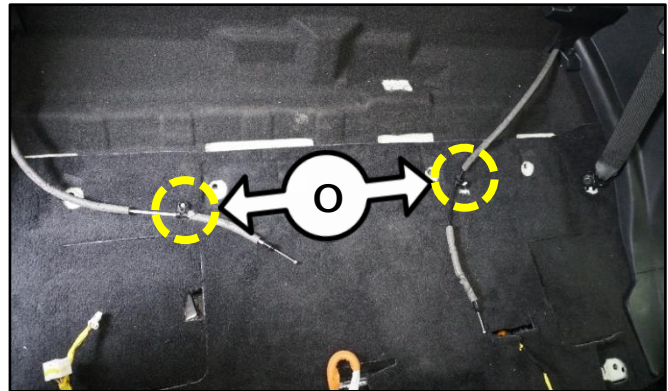
17. Remove both (LH and RH) the rear seat belt lower anchor retaining bolts (N).



Tightening torque for bolt (N):  
29.7 - 44.1 lb.ft (40.2 - 59.8 N.m)



18. Detach the two (2) folding lever cables (O) from the floor carpet.

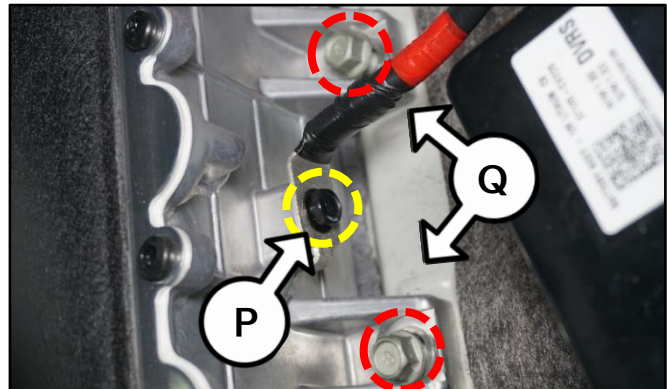


19. Disconnect the LDC cable by loosening the retaining bolt (P).

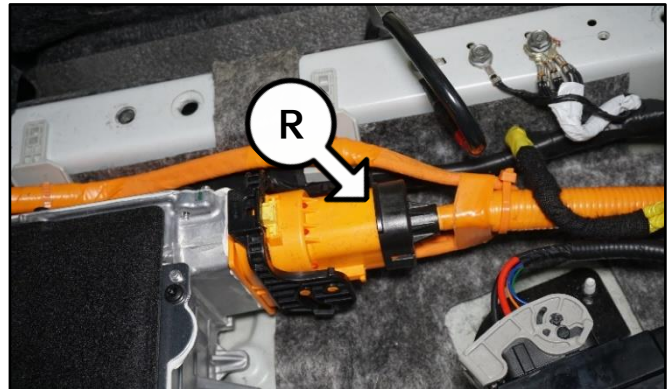
20. Remove the two (2) ICCU retaining bolts (Q).



Tightening torque for bolt (P):  
5.8 - 8.7 lb.ft (7.8 - 11.8 N.m)



21. Disconnect the combo charge inlet wire harness connector (R).

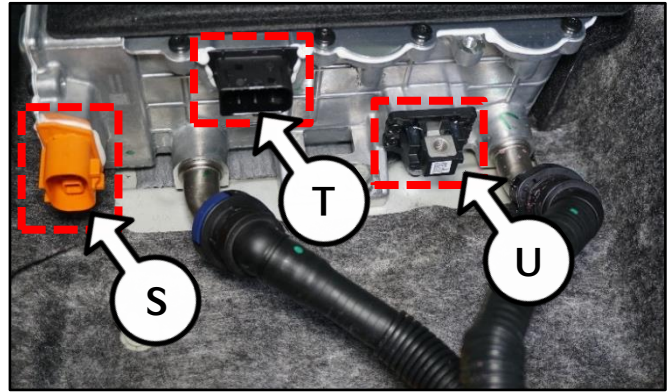


22. Disconnect the following:

- HV power connector (S)
- ICCU connector (T)
- LDC positive (+) cable (U)



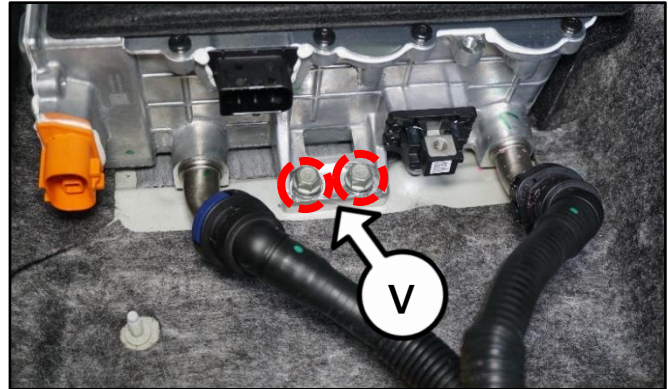
Tightening torque for bolt (U):  
5.8 - 7.2 lb.ft (7.8 - 9.8 N.m)



23. Remove the two (2) ICCU assembly retaining bolts (V).

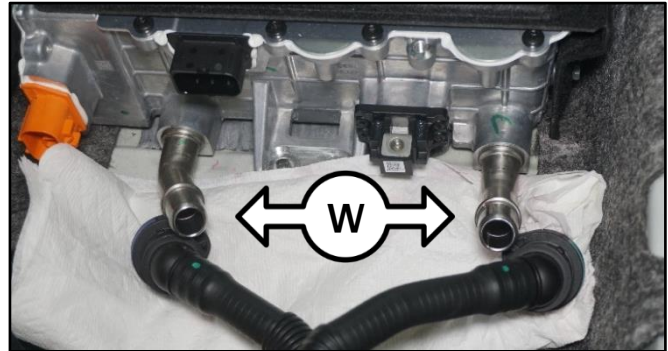


Tightening torque for bolts (V):  
5.8 - 8.7 lb.ft (7.8 - 11.8 N.m)



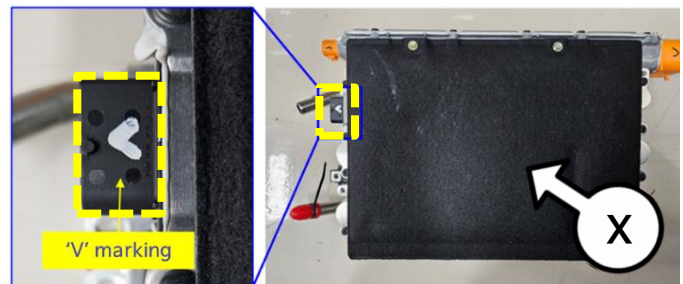
24. Disconnect the two (2) ICCU coolant hoses (W) from the ICCU assembly.

**Note:** Place an absorbing towel to collect any remaining coolant fluid residue when detaching the coolant hoses.



25. Replace the ICCU assembly (X) with a new part in the reverse order of removal.

- **If the new ICCU part IS NOT marked with a "V", take a KVID photo and submit with claim. The software will need to be installed after replacement.**
- **If the ICCU is marked with a "V", the software was pre-installed.**



26. Refill the coolant by referring to "Cooling System → Coolant → Motor Coolant (Coolant Refilling and Air Bleeding" in the applicable Shop Manual on KGIS.

27. Confirm normal vehicle operation.

**SUBJECT: ICCU & FUSE INSPECTION/REPLACEMENT & ICCU S/W UPGRADE (SC302)**


**AFFECTED VEHICLE RANGE:**

Model	Production Date Range
EV6, EV6 GT (CV)	November 17, 2021 to February 7, 2024

**REQUIRED TOOL:**

Tool Name	Figure	Comments
KDS		Kia Diagnostic System

**REQUIRED PART:**

Part Name	Part Number	Figure	Qty.
ICCU Assembly	36400 1XFA0QQK		1
ICCU Fuse	375F2 GI040QQK	N/A	1
Coolant (Pink)	UM020 CH263	N/A	1

**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.
CV	R	36400 1XFA0	0	(SC302) ICCU Software Upgrade	241041R0	0.3 M/H	N/A	0
				(SC302) ICCU + Fuse Replacement + ICCU Software Upgrade <b>(Non-"V" marked)</b>	241041R1	2.1 M/H	36400 1XFA0QQK	1
				375F2 GI040QQK				
				UM020 CH263				
				(SC302) ICCU + Fuse Replacement <b>("V" marked)</b>	241041R2	1.9 M/H	36400 1XFA0QQK	1
				375F2 GI040QQK				
UM020 CH263								

**Note: Refer to Warranty Bulletin 2024-28 for claim submission procedures. A Vehicle Diagnosis Number (VDN) must be created prior to ICCU replacement. A KVID photo of the ICCU with marked "V" MUST be attached to the claim using KVID attachment type 'XX - Other' to claim labor op code 241041R1. When necessary, manually enter sublet code 'X2' for reimbursement of one roundtrip rideshare expense or up to three (3) days of rental for ICCU replacement. Attach supporting documentation.**

**NOTICE**

VIN inquiry data for this repair is provided for tracking purposes only. Kia retailers should reference SC302 when accessing the KDealer+ system.

