	GROUP	MODEL
	ELE	2023MY Niro EV (SG2 EV)
	NUMBER	DATE
	298	September 2023

TECHNICAL SERVICE BULLETIN

SUBJECT: **EV BATTERY POOR/NO CHARGING CONCERN**
ICCU REPLACEMENT

This bulletin provides information regarding a poor EV battery charging concern on some 2023MY Niro EV (SG2 EV) vehicles produced from January 4, 2022 through March 29, 2023, when charging using a Level 1 or Level 2 charger; however, the concern is not present when using a DC charger. In some cases, the vehicle may exhibit a "Check electric vehicle system", and/or "Stop vehicle and check power supply" message in the instrument cluster display, and/or MIL 'ON' with DTC(s) described below. The Integrated Charging Control Unit (ICCU) performs charging functions for the high voltage and the auxiliary 12V batteries, and depending on the DTC(s) stored, the ICCU may need to be replaced. Follow the procedure outlined in this publication (Refer to Flowchart on page 2) to inspect for DTC(s) and if applicable, replace the ICCU for the described concern.

DTC	Description	Charger
P1A9096	DC/DC Converter Input Voltage Sensor Fault	LDC
P1A8C19	DC/DC Converter Input Current Over Fail	
P0D3E1C	Battery Charger Input Voltage Sensor Circuit Range/Performance	OBC
P0D4D1C	Battery Charger Hybrid/EV Battery Output Voltage Sensor Circuit Range/Performance	
P0D0972	Battery Charging System Positive Contractor Stuck Open	
P0D6700	Battery Charger Control Module Performance	
P0D2498	Battery Charger Temperature Too High	
P0D2A19	Battery Charger Input Current Too High	
P0D521C	Battery Charger Hybrid/EV Battery Output Current Sensor Circuit Range/Performance	
P1A8D13	DC/DC Converter Voltage Path Fault	LDC
P1A9304	LDC Control Unit Error	
P0D1812	Battery Charging System High Voltage Interlock Circuit High	OBC
P0A9400	DC/DC Converter Performance	

Charger: LDC: Low DC Charger / OBC: On Board Charger

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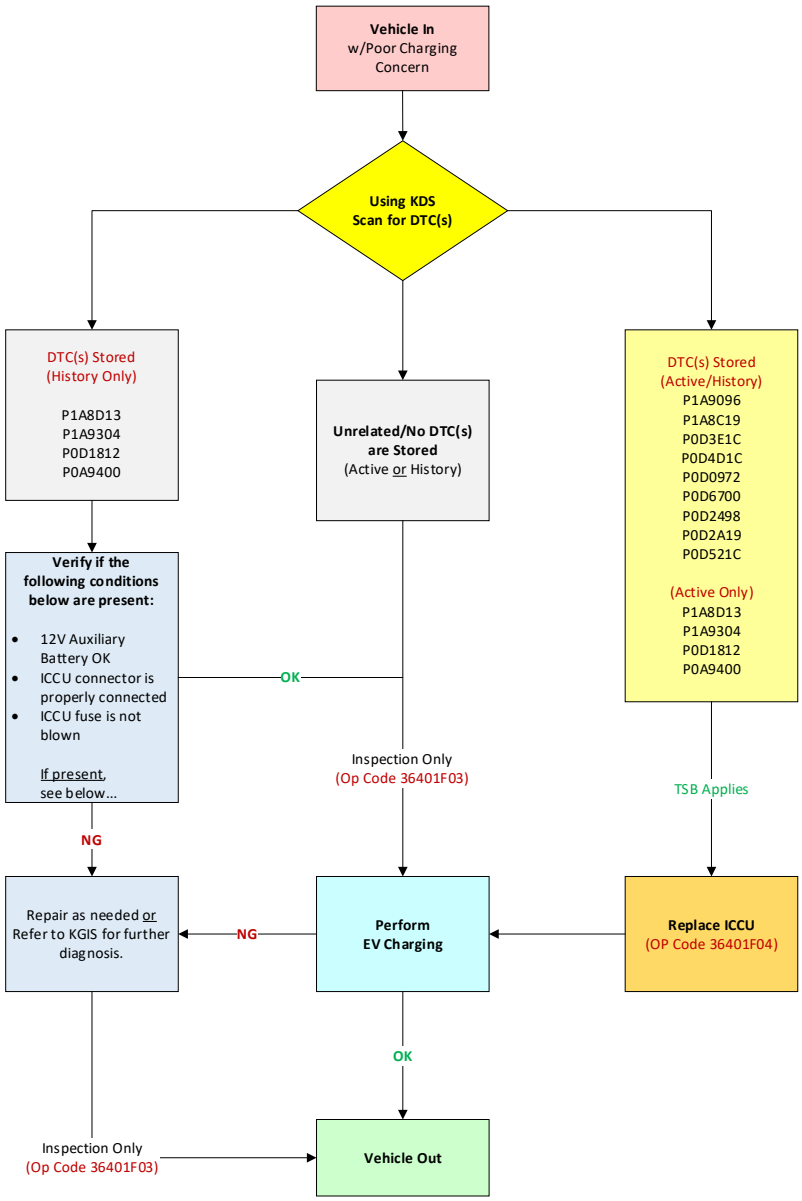
Flowchart:

Follow the flowchart below for vehicles experiencing a poor EV charging concern. After DTC scan has been performed, confirm if one or more of the listed DTC(s) in the flowchart below are stored, (Active/Pending or History) to apply this TSB and if so, follow the corresponding path to diagnose and repair the vehicle:



NOTICE

This TSB only covers DTC scan (inspection) and repair (replacement) of the ICCU for the applicable DTC(s) listed in this publication for the concern described in this bulletin. The dealer must retain a copy of the DTC record for accounting purposes. As per SPPM section 9: Measurements and readings for which the results must be included on or attached to the repair order include but are not limited to the following: Scan tool DTC codes and KDS E-Report data. If records reveal that any portion of the claim or the entire claim cannot be substantiated or is not in compliance with KUS policies or procedures, a chargeback may be issued.

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Inspection Procedure:

1. Confirm poor EV battery charging condition is present.

2. Using KDS, scan vehicle for DTC(s).

   - Follow the flowchart on page 2 and perform the 'Action' required from the table below for the applicable DTC(s) listed below.

   DTC(s) not related: Refer to KGIS for normal diagnosis procedure.

DTC	Description	Charger	Action
P1A9096	DC/DC Converter Input Voltage Sensor Fault	LDC	**If DTC(s) are 'Active'** Replace the ICCU (Refer to page 4)  Confirm normal charging after replacing ICCU.
P1A8C19	DC/DC Converter Input Current Over Fail		
P0D3E1C	Battery Charger Input Voltage Sensor Circuit Range/Performance	OBC	
P0D4D1C	Battery Charger Hybrid/EV Battery Output Voltage Sensor Circuit Range/Performance		
P0D0972	Battery Charging System Positive Contractor Stuck Open		
P0D6700	Battery Charger Control Module Performance		
P0D2498	Battery Charger Temperature Too High		
P0D2A19	Battery Charger Input Current Too High		
P0D521C	Battery Charger Hybrid/EV Battery Output Current Sensor Circuit Range/Performance		
P1A8D13	DC/DC Converter Voltage Path Fault	LDC	
P1A9304	LDC Control Unit Error		
P0D1812	Battery Charging System High Voltage Interlock Circuit High	OBC	
P0A9400	DC/DC Converter Performance		
P1A8D13*	DC/DC Converter Voltage Path Fault	LDC	**If DTC(s) are 'History'** Verify if the conditions decribed below are present. *Otherwise, refer to normal diagnose procedure on KGIS.
P1A9304*	LDC Control Unit Error		
P0D1812*	Battery Charging System High Voltage Interlock Circuit High	OBC	
P0A9400*	DC/DC Converter Performance		

***Verify the following conditions if the four (4) DTCs described above are stored as 'History'.**

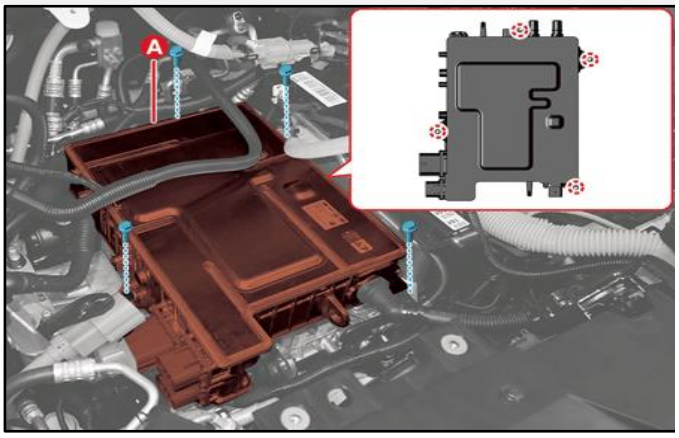
- The 12V auxiliary battery is fully charged and operating normal.
- The ICCU connector is properly connected and secured.
- The ICCU fuse is not blown.

(If any of the conditions listed above was present, confirm normal EV charging is restored after repairing (not covered under this bulletin). Only claim DTC scan inspection Op Code.

SUBJECT: EV BATTERY POOR/NO CHARGING CONCERN ICCU REPLACEMENT

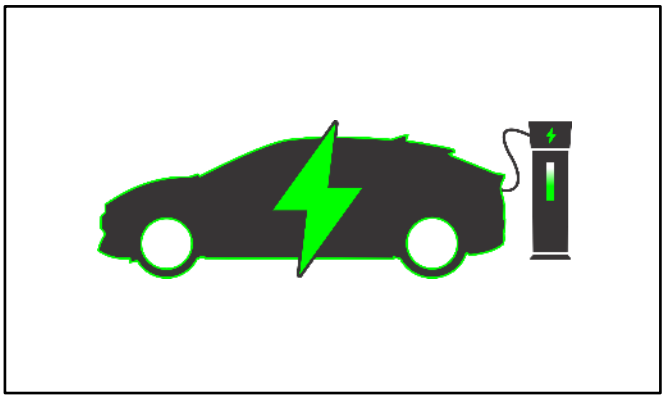
Replacement Procedure:

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



2. Reinstall all removed parts in the reverse order.

3. Confirm normal vehicle operation and charging of the battery.



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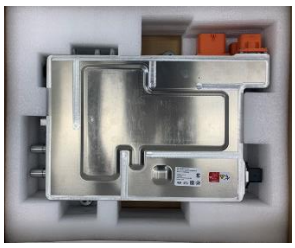
AFFECTED VEHICLE RANGE:

Model	Production Date Range
Niro EV (SG2 EV)	January 4, 2022 to March 29, 2023

REQUIRED PART:

Part Name	Part Number	Figure	Qty.	Comment
Integrated Charging Control Unit (ICCU)	36401 0EJA0FFF		1	Vehicle to Load (V2L)
	36401 0EJA1FFF			(Non-V2L)

WARRANTY INFORMATION:

N Code: I14 C Code: ZZ3

Claim Type	Causal P/N	Qty.	Repair Description	Labor Op Code	Op Time	Replacement P/N	Qty.
W	36401 0EJA0	0	KDS DTC Inspection	36401F03	0.2 M/H	N/A	0
			KDS DTC Inspection + ICCU Replacement	36401F04	1.3 M/H	36401 0EJA0FFF or 36401 0EJA1FFF	1

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