 HYUNDAI Technical Service Bulletin	GROUP RECALL	NUMBER 23-01-018H
	DATE MARCH 2023	MODEL(S) KONA Electric (OS EV)
SUBJECT: ELECTRIC POWER CONTROL UNIT (EPCU) LEAK INSPECTION AND REPLACEMENT (RECALL 239)		

*** IMPORTANT**


Vehicle repairs related to safety recalls are critically important and must be performed properly in accordance with TSB procedures. Review this bulletin in its entirety prior to beginning any repair work.

As required by federal law, dealers must not deliver new vehicles for sale or for lease to customers until all open recalls have been performed. Dealers must also perform all open recalls on used vehicles, demo, and rental vehicles prior to placing them into customer use and whenever an affected vehicle is in the shop for any maintenance or repair.

Access the "Vehicle Information" screen via WEBDCS to identify open recalls.

Description: On certain Kona Electric (OS EV) vehicles a low-conductivity coolant may leak inside the Electric Power Control Unit (EPCU) and may cause warning lights to illuminate and/or loss of motive power. The coolant leak is caused by insufficient sealing and housing cleaning omissions. This bulletin provides information on how to inspect the leak and replace the EPCU if a leak is confirmed.

STUI



This TSB includes STUI pictures as a requirement. Please include the last 6 digits of the VIN and date of repair on a piece of paper. Ensure the VIN and date of repair are clearly visible. Finally, please ensure all captured pictures are completed according to the steps in this TSB and uploaded to STUI. All claims submitted that have illegible, incomplete, or incorrect picture(s) are subject to debit.

Applicable Vehicles: Certain 2021MY Kona Electric (OS EV) produced from 06/18/2020 - 07/31/2020


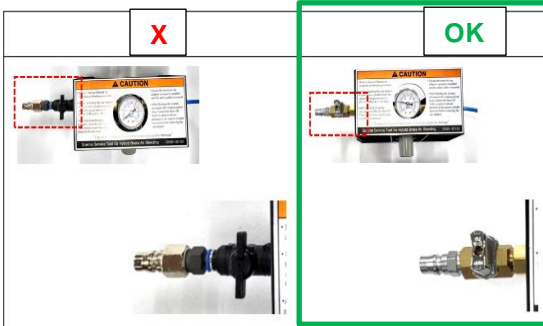


Parts Information:

Part Name	Part Number	Remarks
Coolant (Low Conductivity)	00232-19111 Note: If 00232-19111 is no longer available, use 00232-19113.	3 qty. of BSC2, 2L Bottle (6L required per vehicle)
EPCU	36601-0E170QQH	Only order as required after an inspection FAIL result.

Tools Information:

NOTE:

- The following tools have been provided to most dealers expected to perform this recall.
- A valid recall VIN will be required when ordering the tools. The tools will be shipped out if it determined that the dealership has not previously received 1 set of each.
- These tools can be used for multiple vehicles.

Part Name	Figure / Part Number	Remarks
<p>Air Bleeding Tool</p> <p>(NOTE: This is a revised version of existing tool at dealers)</p>	 <p>09580-3D100QQH</p>	<p>NOTE:</p> <ul style="list-style-type: none"> • This new improved tool with part number ending in QQH and must be used for this recall. • Do not use a prior version of this tool not ending in QQH. 
<p>Adapter Tool (Pressure Hose/ Differential Pressure Hose)</p>	 <p>1K373-G5100QQH</p>	<ul style="list-style-type: none"> • 1 qty. Kit
<p>Coolant Discharge Hose</p>	 <p>KQ366-EV001QQH</p>	<ul style="list-style-type: none"> • 1 qty. • The length of the hose provided is 1M (39.4 in). • For first time use, cut 16in (40cm) from the end and use the remaining 26in (60cm) of the hose.

Warranty Information:

MODEL	OP CODE	OPERATION	OP TIME	CAUSAL PART	NATURE CODE	CAUSE CODE
Kona EV (OS EV)	21D184R0	EPCU Leak Inspection	1.7 M/H	36601-0E170QQH	I3A	ZZ7
Kona EV (OS EV)	21D184R1	EPCU Leak Inspection and EPCU Replacement	3.3 M/H	36601-0E170QQH	I3A	ZZ7

NOTE 1: Submit claim on Campaign Claim Entry screen.

NOTE 2: If a part is found in need of replacement while performing the repair for this recall and the affected part is still under warranty, submit a separate claim using the same repair order. If the affected part is out of warranty, submit a Prior Approval request for goodwill consideration prior to performing the work.

NOTE 3: Three (3) qty. of 2L bottles of BSC-2 Coolant will be reimbursed under both labor operations.

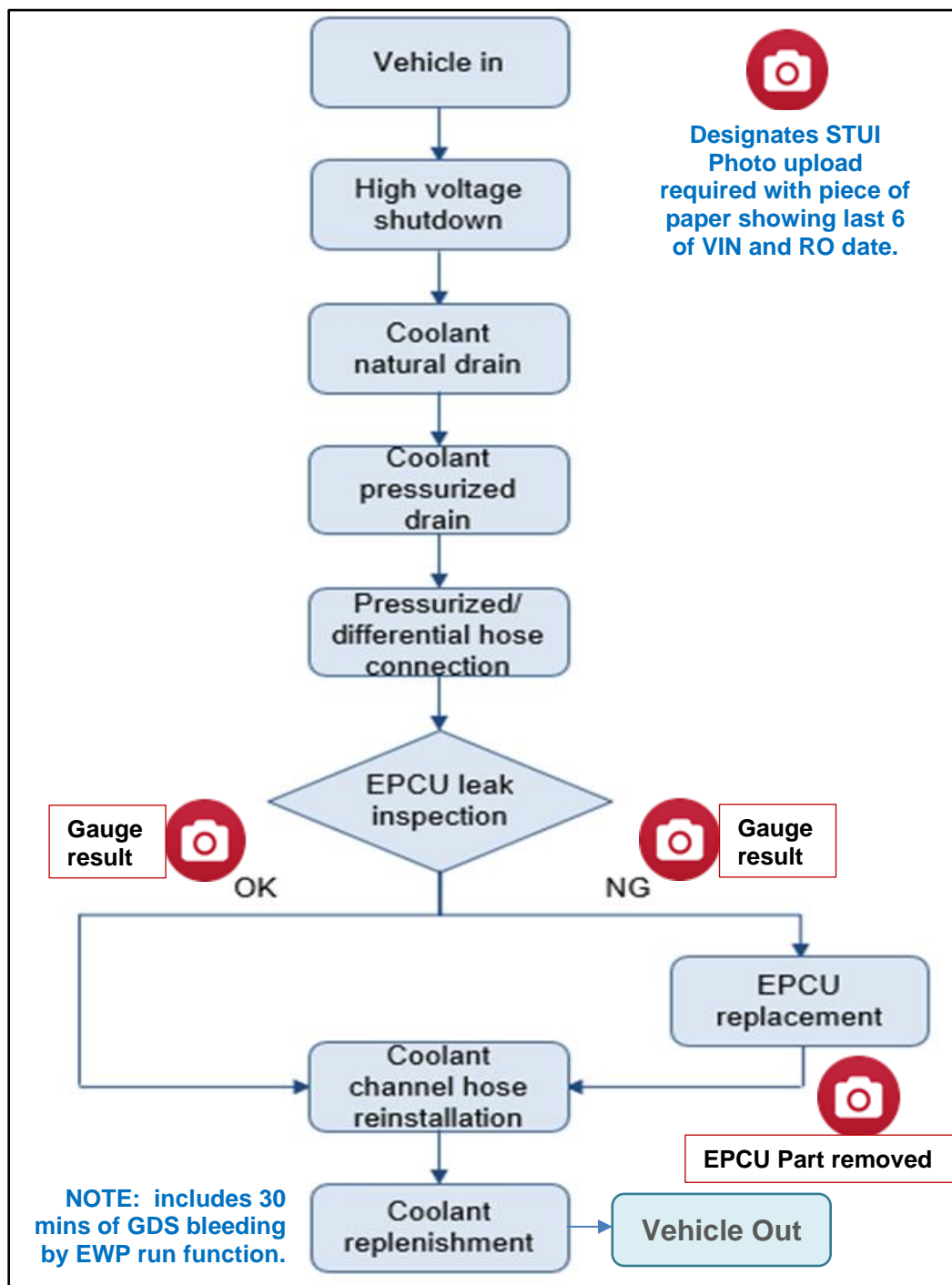
NOTE 4: Op time includes taking STUI pictures and uploading. The STUI photos must include the inspection result of the EPCU and new EPCU installed (if necessary, based on inspection) with a piece of paper displaying the last 6 digits of the VIN and date of the repair.

NOTE 5: The incident parts are subject to callback through the normal Warranty Technical Center (WTC) parts return process. **Claim is subject to debit if the part is not returned.**

Service Procedure:



Refer to service procedure video at: <https://vimeo.com/803267927/b21bc01099>



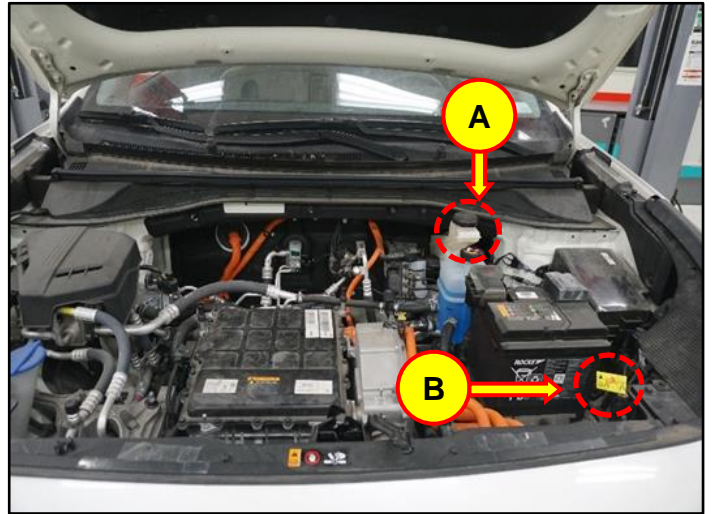
1. Open the hood and remove the engine cover. Open the reservoir cap (A) and remove the service interlock connector (B) to cut the high voltage connection and wait 5 minutes for capacitors to discharge.

Record Radio Presets while waiting the 5 mins.

CAUTION

Refer to the shop manual:

- Battery Control System > High Voltage Shut-off Procedures
- Also remove the 12V auxiliary battery negative terminal.



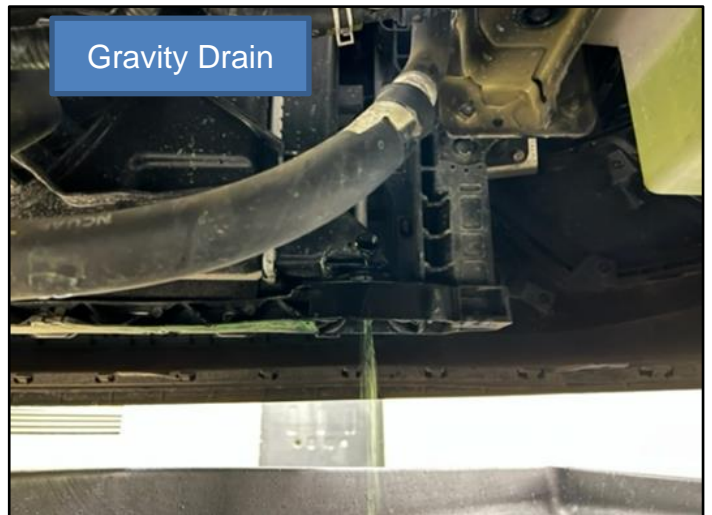
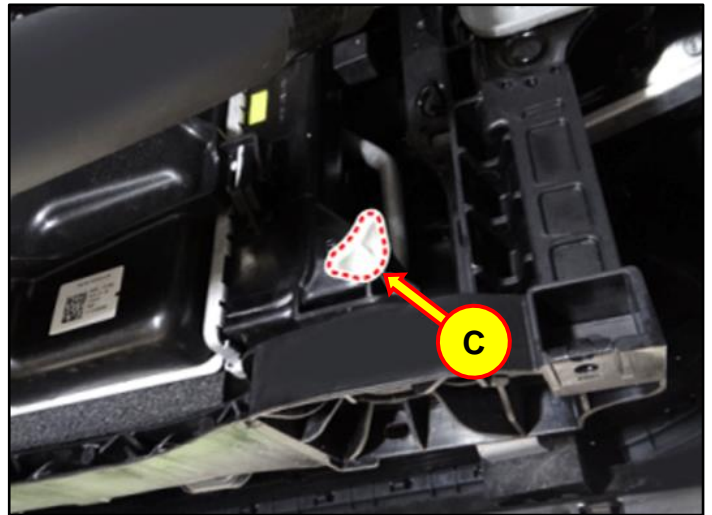
2. Lift the vehicle, remove the splash shield, and open the coolant drain plug (C) to drain the coolant.

CAUTION

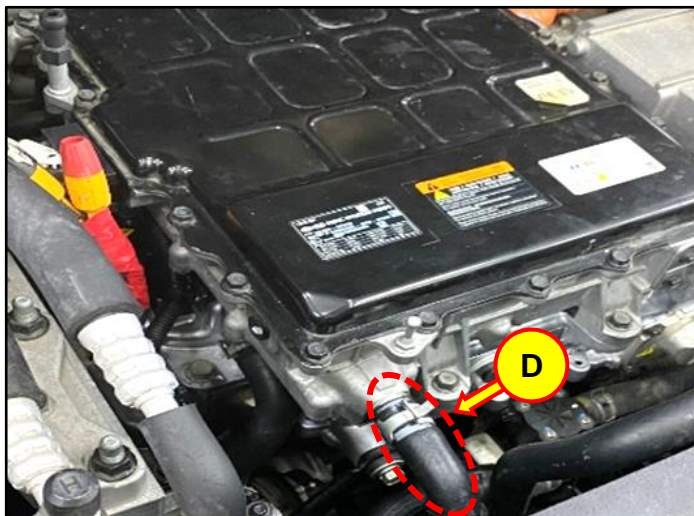
Wear safety glasses to protect from coolant splash into your eyes.

NOTICE

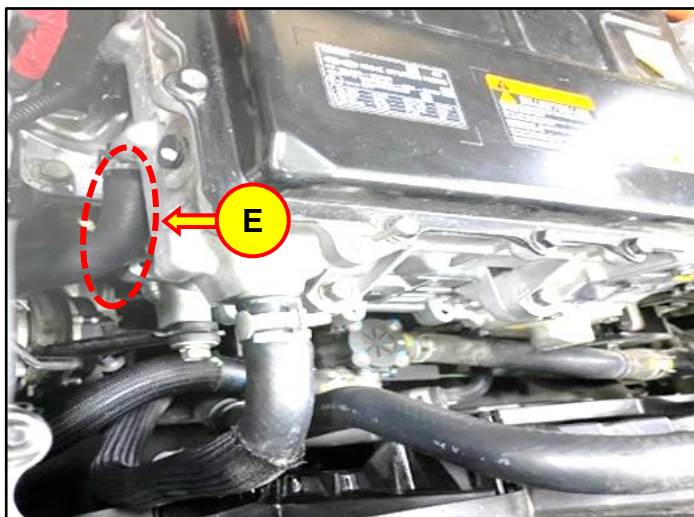
Place the container on the floor to catch coolant as it drains downward.



3. Disconnect the on-board charger (OBC) cooling hose (D).



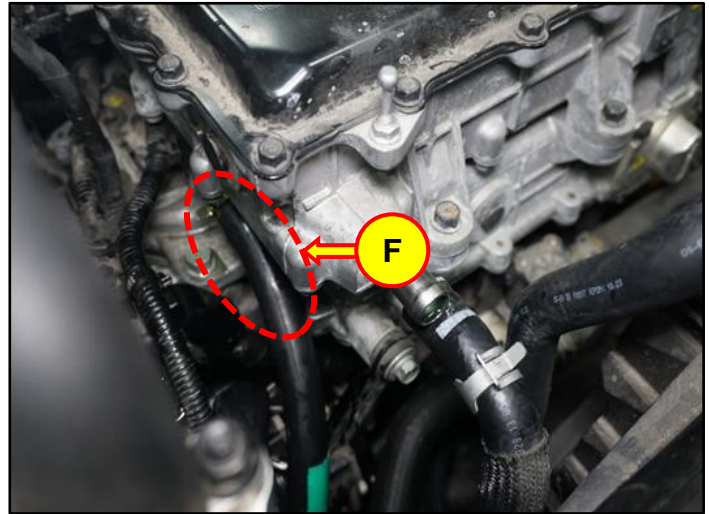
4. Disconnect the EPCU cooling hose (E).



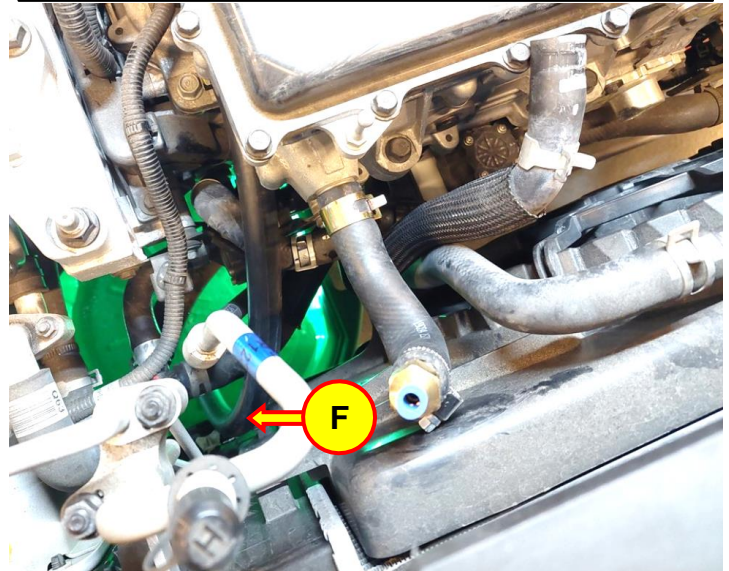
5. Connect the coolant discharge hose (F) supplied to the EPCU nipple.

i Information

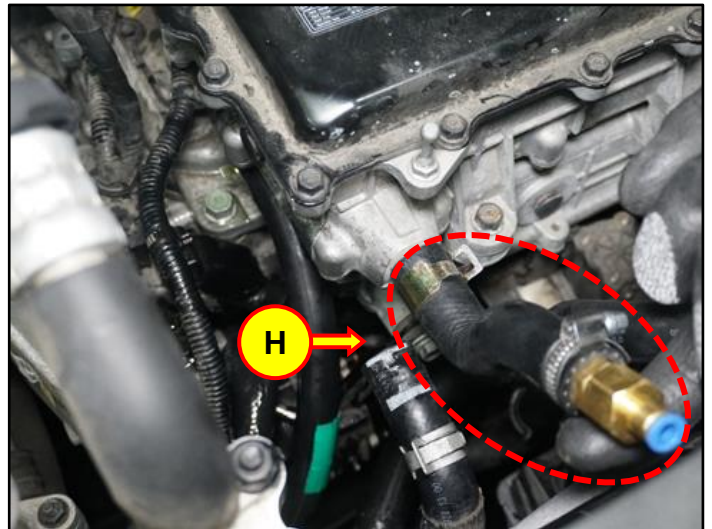
1. For the first use, cut 16in (40cm) from the end of the 1M coolant discharge hose (F) and use the remaining 26in (60cm). If already at 26in, no further cutting is required.
2. Due to the curvature of the hose, it may spray coolant to the front or rear if it is not facing down when draining the coolant.



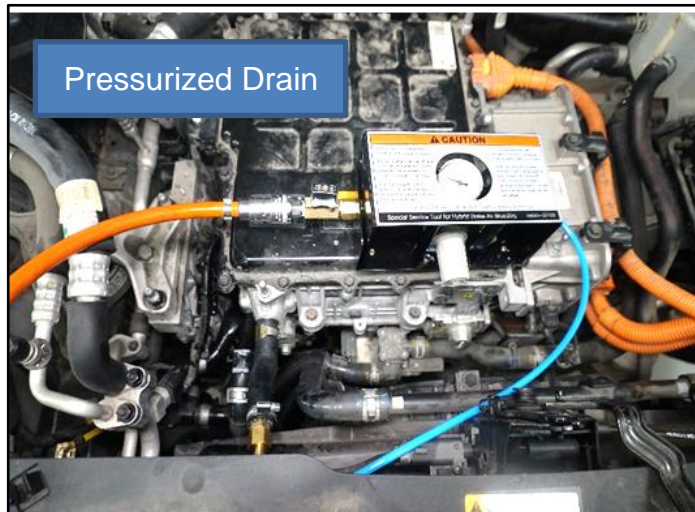
1. Feed the discharge hose through to the bottom of the vehicle to a bucket placed underneath to catch coolant that will be discharged from the hose later.



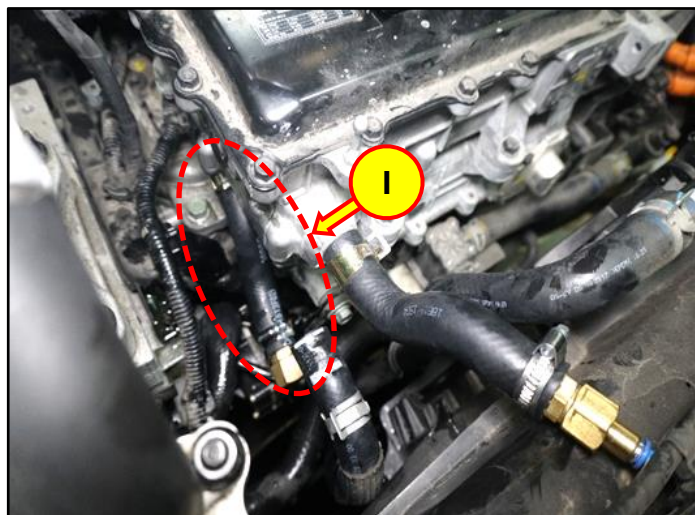
6. Connect the pressure hose (H) of the adapter tool supplied to the OBC nipple.



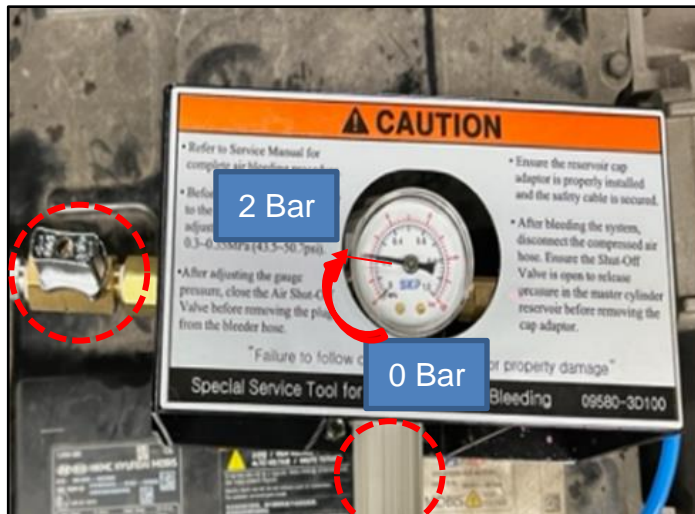
7. Connect air pressure hose specific to this recall (09580-3D100QQH) to the air bleeding tool and inject air at a pressure of 2 to 2.5 bar for about 30 seconds to drain the residual coolant inside the OBC and EPCU.



8. After the residual coolant drain is finished, remove the coolant discharge drain hose that was connected to the EPCU side, and install the differential pressure hose (I) of the adapter tool.



9. Pressurize at the setting "2 Bar" with the air bleeding tool.



i Information

3. Remove the air hose after setting the air bleeding tool to 2 Bar.

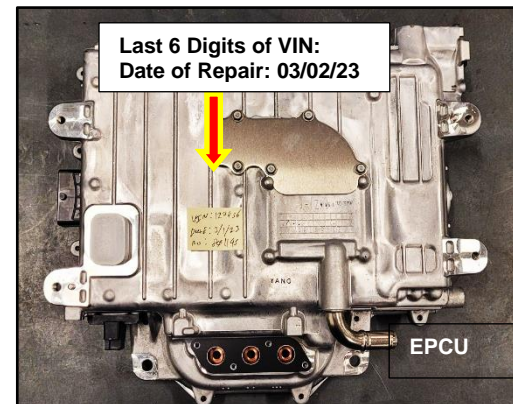
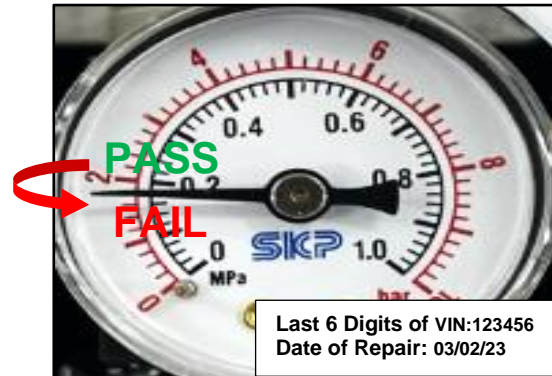
NOTICE

When pressurized using the air bleeding tool, any instantaneous increase in pressure other than the set pressure of 2 bar, can cause the EPCU and OBC to fail.

10. Lock the pressure valve and check that it is airtight after 30 minutes.

1) **PASS:** If the internal pressure of the coolant is maintained at 1.8 to 2 bar, reinstall vehicle in the reverse order of removal and finish the operation.

2) **FAIL:** If the internal pressure of the coolant is less than 1.8 Bar (the gauge scale has reduced by more than 1 increment), then replace with a new EPCU.



STUI



Using STUI, take a photo of the gauge scale (for either a PASS or FAIL result) with the last 6 digits of the VIN and date of the repair on a piece of paper. Upload the photo to STUI.

NOTICE

Refer to the shop manual for EPCU replacement:

- Vehicle Control System > Electric Power Control Unit (EPCU)
- **NOTE:** Ignore the EPCU step to perform air tightness check as it is not necessary for the new part.

STUI

After EPCU replacement, include a STUI photo of the replacement part. Include the last 6 digits of the VIN and date of the repair on a piece of paper. Upload the photo to STUI.

11. After installing in the reverse order of removal, perform a full 30 mins of GDS EWP operation coolant bleeding and replenish with new coolant as specified in the Parts Info.

12. Reprogram customer's preset radio stations.

13. Procedure is complete -> Vehicle Out.

