HYUNDAI Technical Service Bulletin	GROUP **Campaign**	NUMBER **21-01-045H-1**
	DATE **September, 2021**	MODEL(S) **Nexo (FE)**

SUBJECT: STACK COOLANT PUMP REPLACEMENT (SERVICE CAMPAIGN T6A)

This TSB supersedes 21-01-045H by adding an updated coolant part number 00232-19080.

★ IMPORTANT

******* RETAIL*******

Dealers must perform this Service Campaign on all affected vehicles whenever an affected vehicle is in the shop for any maintenance or repair.

When a vehicle arrives at the Service Department, access Hyundai Motor America's "Warranty Vehicle Information screen (VIS)" via WEBDCS to identify open Campaigns.

Description: Certain 2019MY Nexo vehicles may illuminate a check engine light due to a powertrain related DTC P1D3D94 (Coolant Stack Pump – Motor or Internal Controller Malfunction) resulting in reduced engine power due to cracking in the stack coolant pump rotor molding. This bulletin provides replacement procedures related to the stack coolant pump.

Refer to the Fuel Cell System > Thermal Management System > Stack Coolant Pump section in the Shop Manual, and then follow the procedures outlined in this bulletin whenever a vehicle with the following symptoms is being diagnosed:

- Check Engine Light illumination with powertrain related DTC P1D3D94.
- Warning light message on the cluster indicating to safely park the vehicle.
- Reduced engine power.

DTC Description:
P1D3D94 is set when there is a stack coolant pump internal controller malfunction, or the stack coolant pump motor is inoperative.

Applicable Vehicles: Certain 2019MY Nexo (FE) vehicles.

Parts Information:

Part Name	Part Number	Figure	Qty.
Stack Coolant Pump	25816-M5000QQH		1
Stack Coolant	00232-19080 (2L)	N/A	10L (5EA)

Circulate To: General Manager, Service Manager, Parts Manager, Warranty Manager, Service Advisors, Technicians, Body Shop Manager, Fleet Repair

Warranty Information:

Model	Op. Code	Operation	Op. Time	Causal Part	Causal Code	Nature Code
Nexo (Fe)	00D103R0	STACK COOLANT PUMP REPLACEMENT	1.8 M/H	25816-M5000QQH	ZZ1	I11

NOTE 1: Submit Claim on Campaign Claim Entry Screen
NOTE 2: If a part that is not covered by this campaign is found in need of replacement while performing this service campaign 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.

Service Procedure:

A. Stack Coolant Pump Replacement

1. Ensure the Push Button Start Stop (PBSS) is off, and the fuel stack is not in Ready Mode. Wait at least 3 minutes before continuing with the procedure.
2. From the vehicle cargo area, remove the floorboard and cargo tray to access the 12V battery connector and high voltage safety plug.
3. Disconnect the auxiliary 12V battery negative (-) connector.

NOTICE

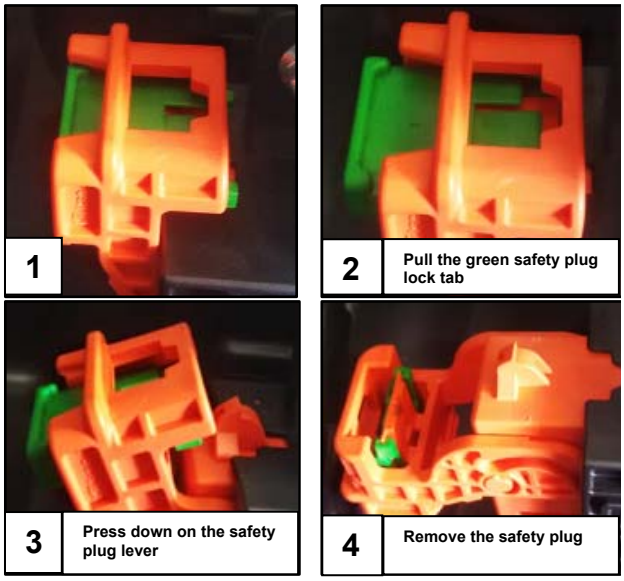
- **Be sure to record the radio presets prior to battery disconnection.**

4. Remove the metal shield to access the High Voltage Safety Plug.

NOTE: Wear Personal Protective Equipment (PPE) when working with the high voltage system.

5. Follow the reference 1- 4 steps to remove the orange high voltage safety plug.

   Store the removed safety plug in a secure location outside and away from the vehicle.



6. Remove the fuel cell stack room undercover.

   Refer to the service manual section for proper service procedure.
   Fuel Cell System > Fuel Cell Stack > Fuel Cell Stack Room Under Cover

7 Drain the stack coolant.

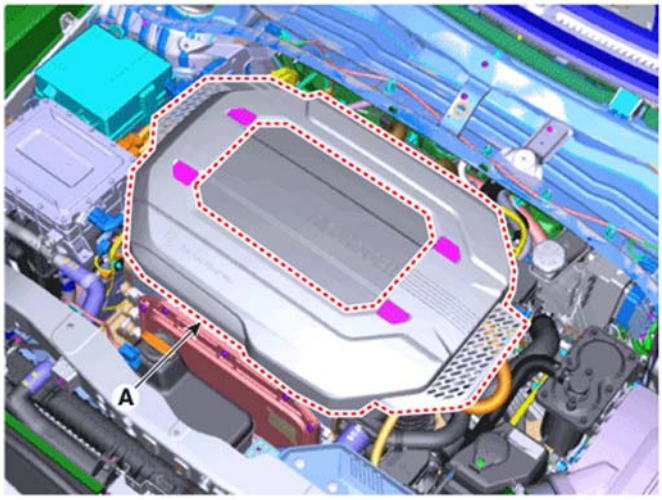
   Refer to the service manual section: for proper service procedure.
   Fuel Cell System > Thermal Management System > Stack Coolant

8. Remove the air cleaner assembly.

   Refer to the service manual section for proper service procedure.
   Fuel Cell System > Air Processing System > Air Cleaner.

9. Remove the Stack Trim Cover (A).

   Refer to the service manual section for proper service procedure.
   Fuel Cell System > Air Processing System > Fuel Cell Stack Cover.



10. Remove the stack coolant ion filter as an assembly (A). DO NOT remove filters from canister.

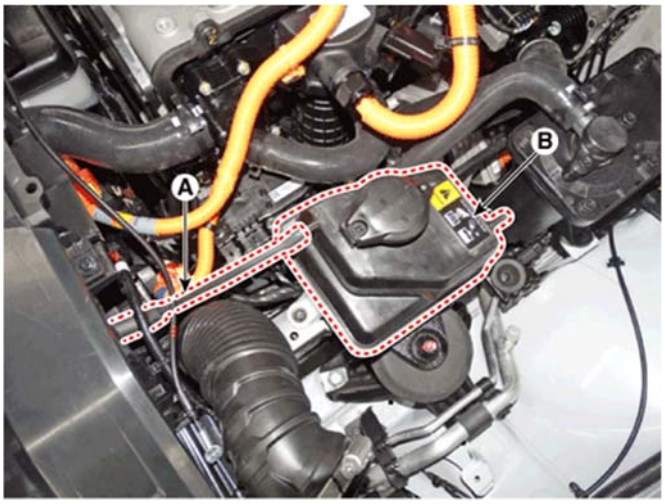
    To prevent loss of coolant from filter canister. Insert a tapered plug into the upper hose fitting on the filter canister then remove the lower hose from filter canister and insert a tapered plug into lower hose fitting on the filter canister.

    Refer to the service manual section for proper service procedure.
    Fuel Cell System > Thermal Management System > Stack Coolant Ion Filter.

11. Remove the stack coolant reservoir, (B) do not allow coolant to drain out of reservoir.

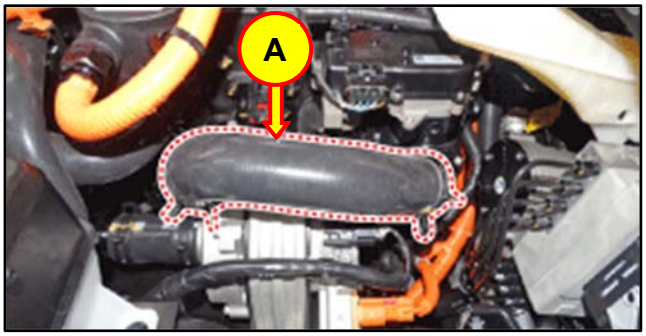
    Refer to the service manual section for detailed service procedure.

    Fuel Cell System > Thermal Management System > Stack Coolant Reservoir Tank

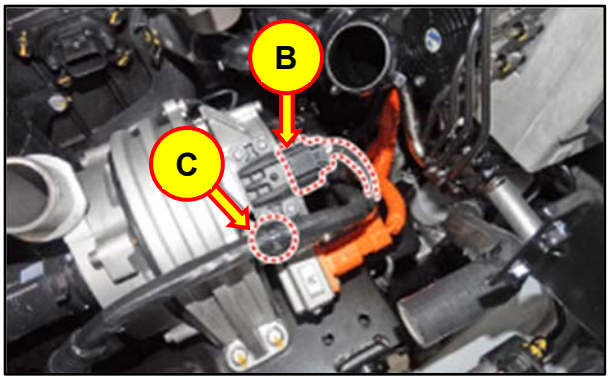


12. Remove the stack coolant pump outlet hose (A).

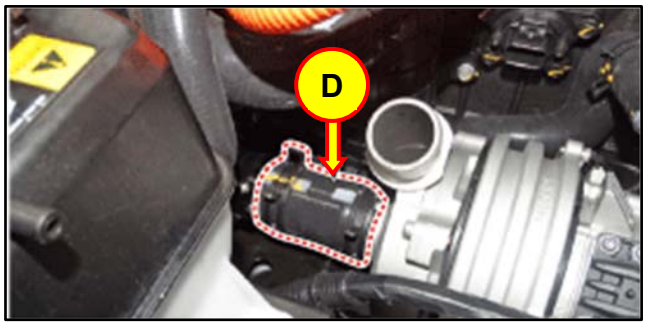
    Refer to the service manual section for detailed service procedure.
    Fuel Cell System > Thermal Management System > Stack Coolant Pump



13. Disconnect the stack coolant pump wiring connector (B) and wiring clip (C).

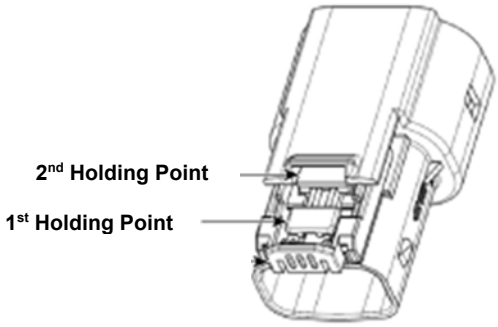


14. Disconnect the stack coolant pump inlet hose clamp (D).



15. Disconnect the stack coolant pump high voltage cable connector (E).

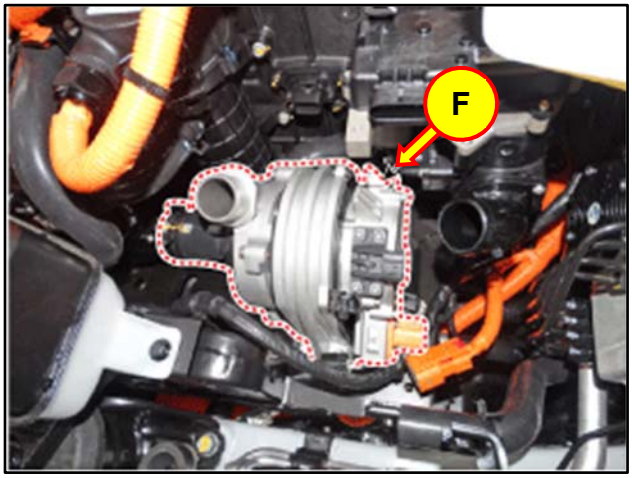
(1) Remove the connector locking pin.
(2) Press on the 1st holding point.
(3) Insert a screwdriver into the 2nd holding point and remove the high voltage connector by pulling on the connector.



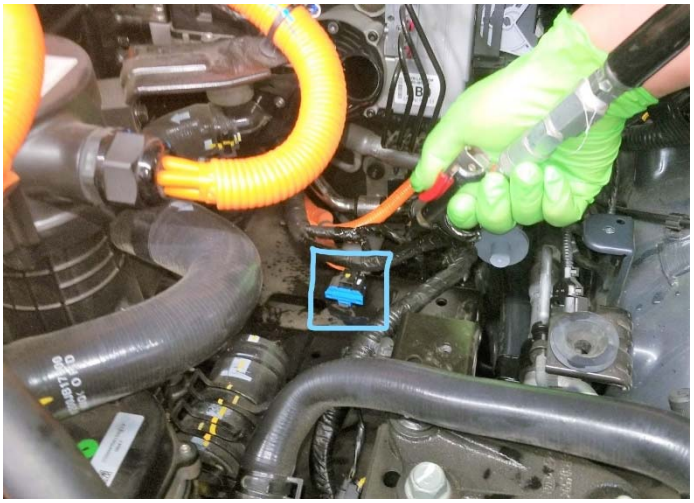
16. Remove the stack coolant pump (F).

Tightening torque:

lb-ft	•15.2 - 16.6
kgf.m	•2.1 - 2.3
N.m	•20.6 - 22.6



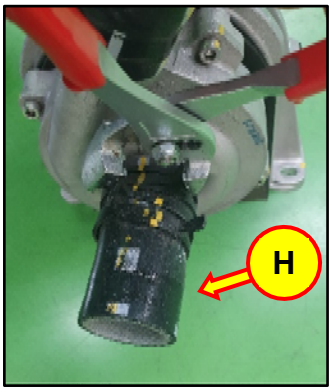
17. Use shop compressed air to blow off any coolant that may have dripped on the junction connector when removing the stack coolant pump.



B. Stack Coolant Pump Disassembly and Replacement

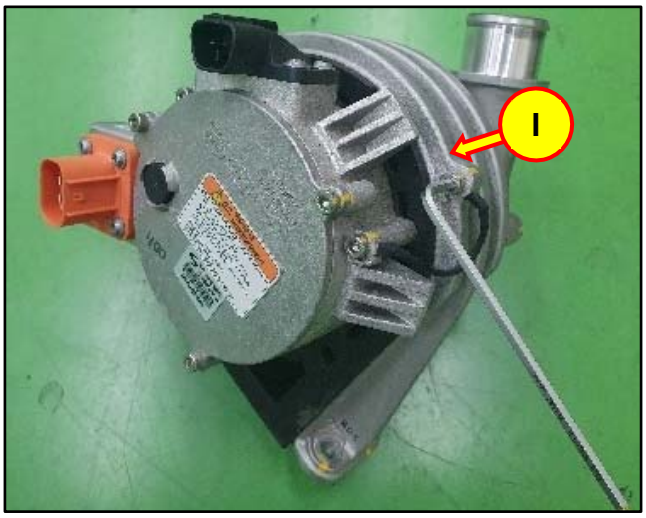
1. Remove the stack coolant pump hose (G).

   Remove the inlet and outlet hose (H).

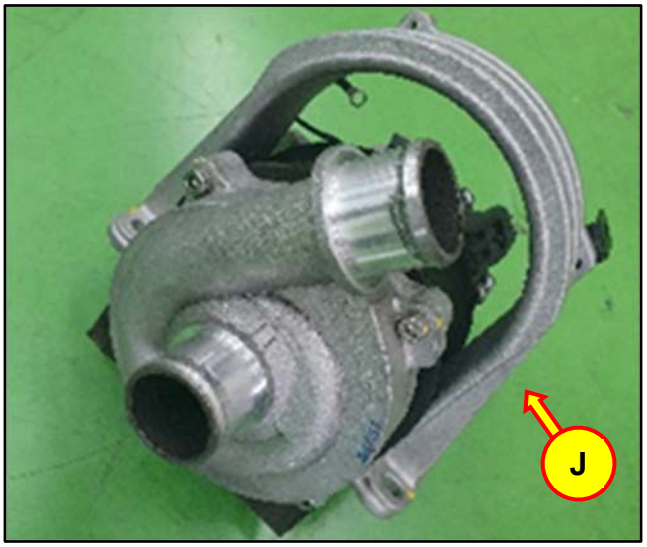


> ***NOTICE***
>
> **Do not discard the stack coolant pump hose. The pump hose will be installed onto the replacement stack coolant pump.**

2. Remove the ground wire (I) from the bracket.

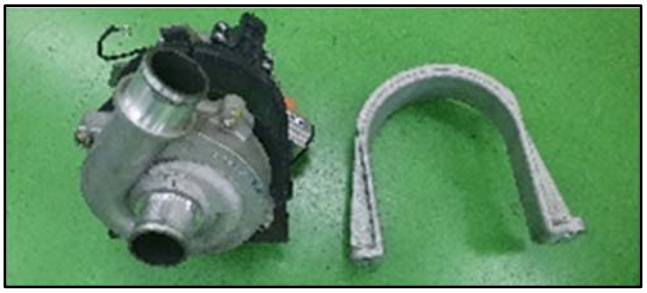


3. Remove the pump bracket (J).

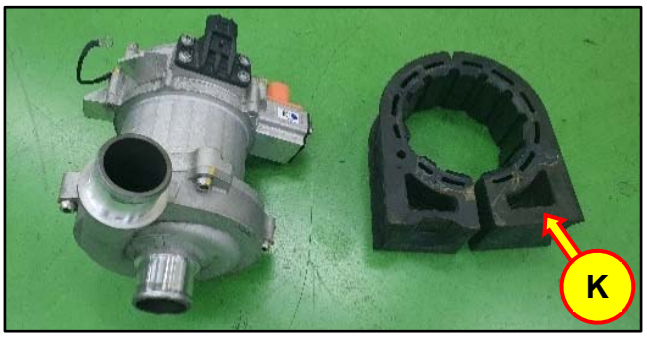


NOTICE

Do not discard the pump bracket. The pump bracket will be installed onto the replacement stack coolant pump.



4. Remove the rubber bushing (K).



5. Attach the rubber bushing to the new stack coolant pump.

   The rubber bushing and stack coolant pump housing are indexed with a land and groove.

   Align the groove in the rubber bushing with the land on the stack coolant pump housing.

6. Attach the pump bracket and hose from the original stack coolant pump to the new stack coolant pump.

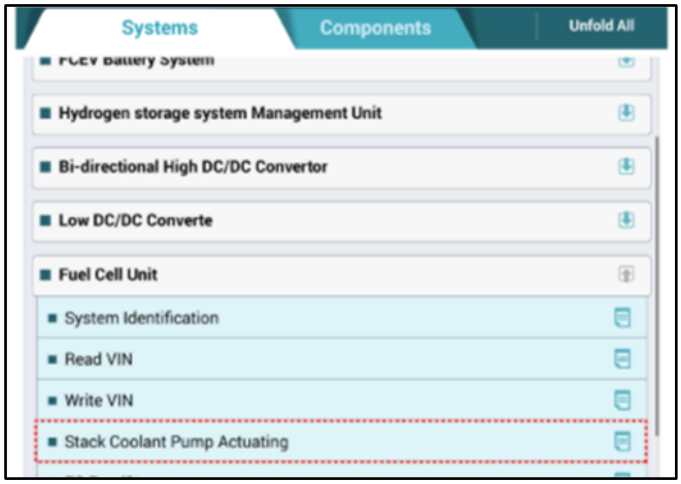
7. Install the replacement stack coolant pump to the vehicle.
8. Reinstall all removed parts in reverse order of removal.

NOTICE

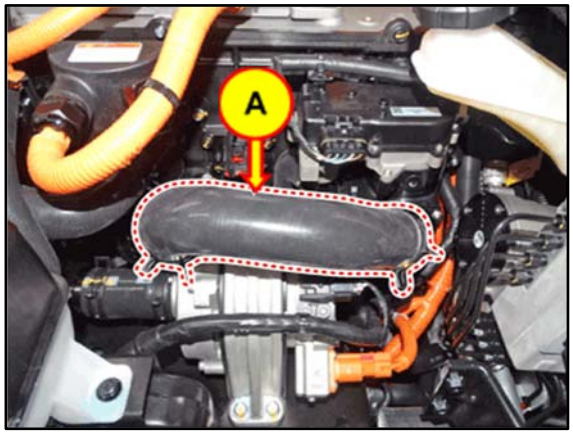
- **Reprogram the radio presets recorded from step 3 on page 2.**

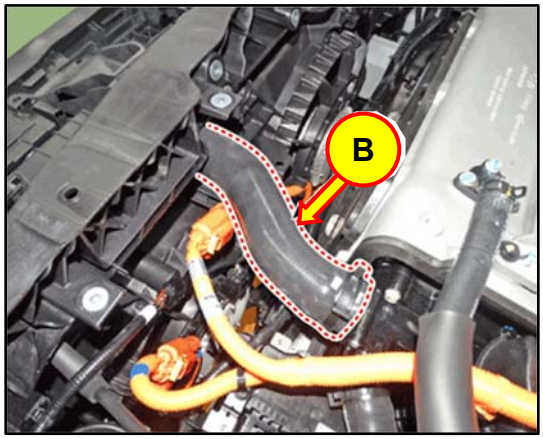
9. Perform air bleeding of stack cooling system.

   Refer to the service manual section: **Fuel Cell System > Thermal Management System > Stack Coolant** for proper service procedure.



10. To assist with bleeding air from the cooling system; during the air bleed process repeatedly squeeze the stack coolant hoses by hand at the coolant pump (A) and at the upper radiator hose (B).





11. Check and clear any DTC that may have set during the pump replacement procedure.
12. The service procedure is now complete.