

June 4, 2019

Version 2

Safety Recall: 2017-18 Fuel Cell Clarity: FC Electric Water Pump

AFFECTED VEHICLES

Year	Model	Trim	VIN Range
2017-18	Clarity Fuel Cell	ALL	Check the iN VIN status for eligibility.

BACKGROUND

The fuel cell (FC) system uses an electric water pump to circulate insulating fluid and remove excess heat from the fuel cell stack. During manufacturing, the water pump's magnetic surface was not treated for corrosion resistance. Over time, the corrosion may prevent the water pump's motor from starting, which will prevent the vehicle from starting. If this happens while driving, the vehicle can only be driven for a short distance at greatly reduced power.

There are three similar bulletins for the 2017-18 Fuel Cell Clarity:

19-006, *Product Update: Clarity Fuel Cell Stack Replacement*

19-050, *Safety Recall: 2017-18 Fuel Cell Clarity: FC Electric Water Pump*

19-054, *Safety Recall: 2017-18 Fuel Cell Clarity: FC Electric Water Pump and Fuel Cell Stack / Product Update: 2017-18 Fuel Cell Clarity Fuel Cell Stack Replacement*

Do an iN VIN status inquiry, and follow the repair procedure in the indicated bulletin.

CUSTOMER NOTIFICATION

Owners of affected vehicles will be sent a notification of this campaign.

Do an iN VIN status inquiry to make sure the vehicle is shown as eligible.

Some vehicles affected by this campaign may be in your new or used vehicle inventory.

Failure to repair a vehicle subject to a recall or campaign may subject your dealership to claims or lawsuits from the customer or anyone else harmed as a result of such failure. To see if a vehicle in inventory is affected by this safety recall, do a VIN status inquiry before selling it.

CORRECTIVE ACTION

Replace the FC electric water pump.

CUSTOMER INFORMATION: The information in this bulletin is intended for use only by skilled technicians who have the proper tools, equipment, and training to correctly and safely maintain your vehicle. These procedures should not be attempted by "do-it-yourselfers," and you should not assume this bulletin applies to your vehicle, or that your vehicle has the condition described. To determine whether this information applies, contact an authorized Honda automobile dealer.

PARTS INFORMATION

Part Name	Part Number	Quantity
Electric Water Pump Assembly	3H300-5WM-A04	1
O-ring	19012-PD2-004	1
Honda Genuine Fuel Cell Insulating Fluid - 50% Prediluted Formulation	OL999-9014	2

TOOL INFORMATION

Part Name	Part Number	Quantity
Clear Tube	Tygon ADK00012 or any commercially available with similar specs	1
Radiator Filling Funnel	Commercially available	1
Hose Pinching Pliers	Commercially available	1

WARRANTY CLAIM INFORMATION

Operation Number	Description	Flat Rate Time	Defect Code	Symptom Code	Template ID	Failed Part Number
1141AK	Replace the FC electric water pump.	3.3 hr	6WP00	L4N00	A19050A	3H300-5WM-A02

Skill Level: Fuel Cell Certified Technician

REPAIR PROCEDURE

FC Electric Water Pump Replacement

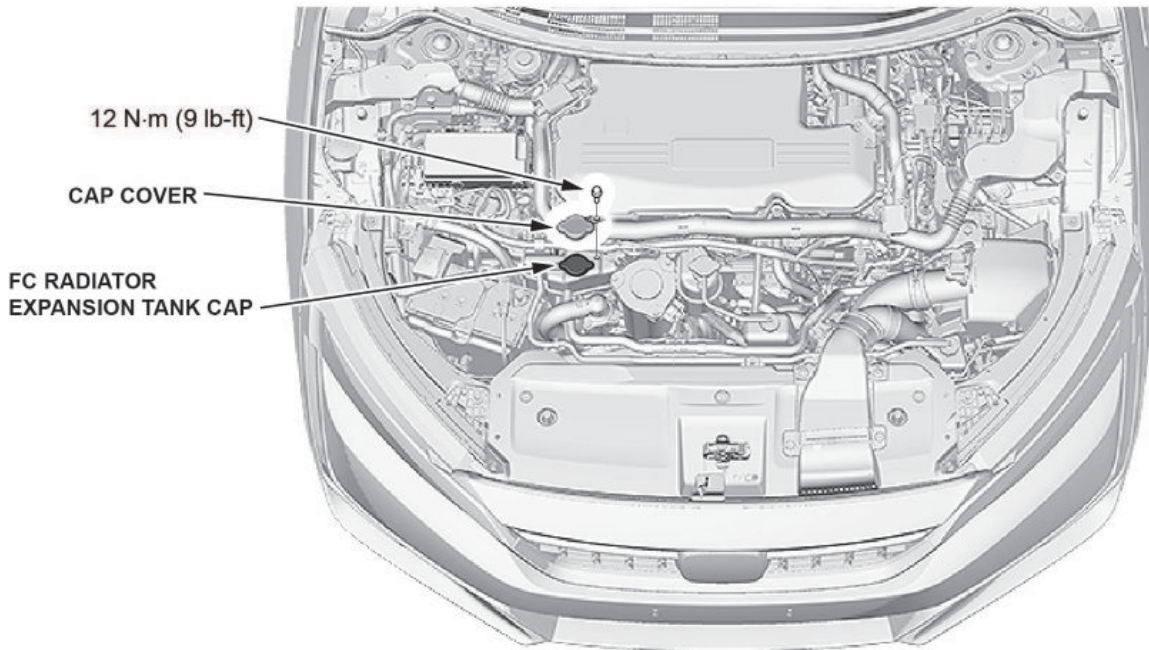
NOTES

- There are two independent lines for coolant in the cooling system. Because different coolant is used in each line, distinguish parts appropriately and do not use improper coolant.
 - Any disconnected ventilation ducts should be plugged or capped to keep out dust and debris.
1. Raise the vehicle on a lift.

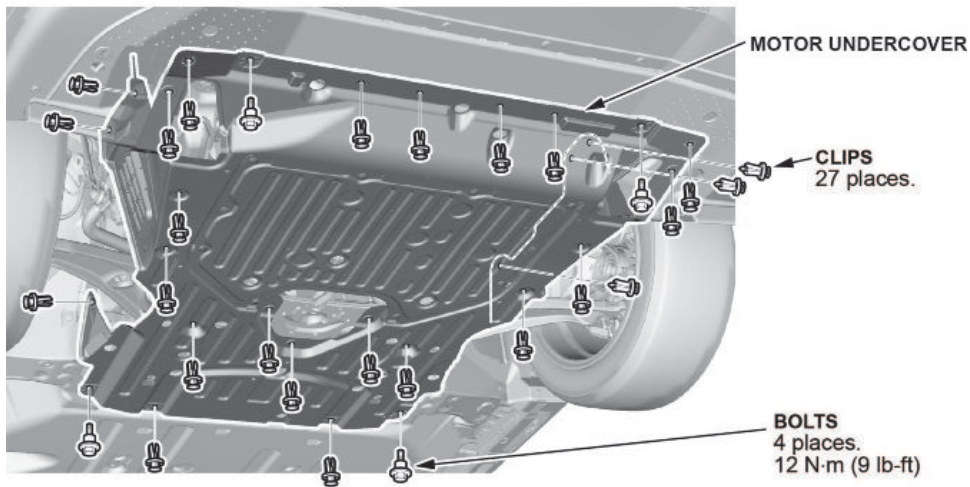
2. Remove the cap cover and FC radiator expansion tank cap.

NOTE

Let the fuel cell insulating fluid cool down before removing the cap.



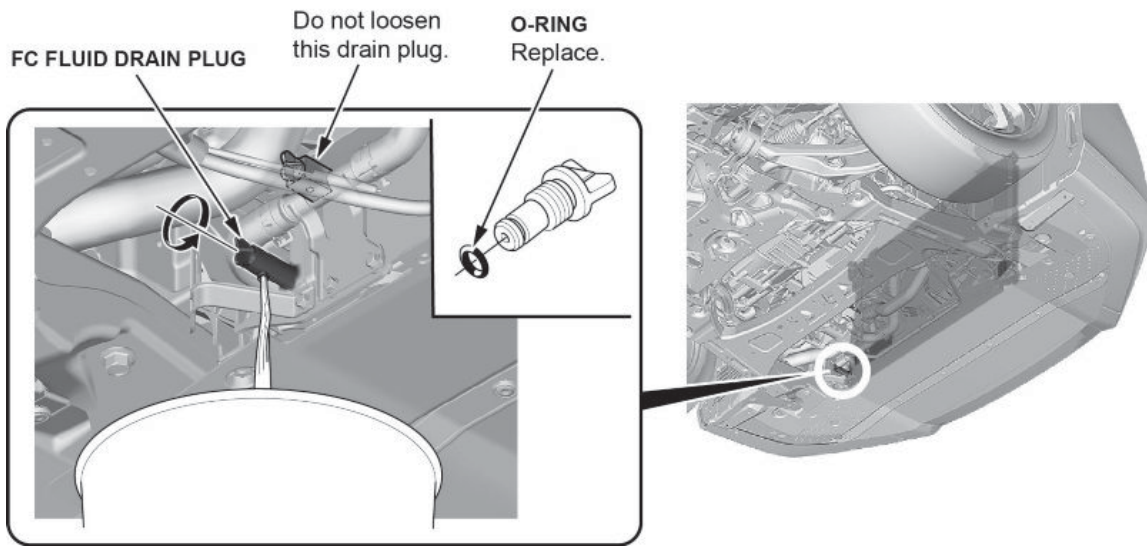
3. Remove the motor undercover.



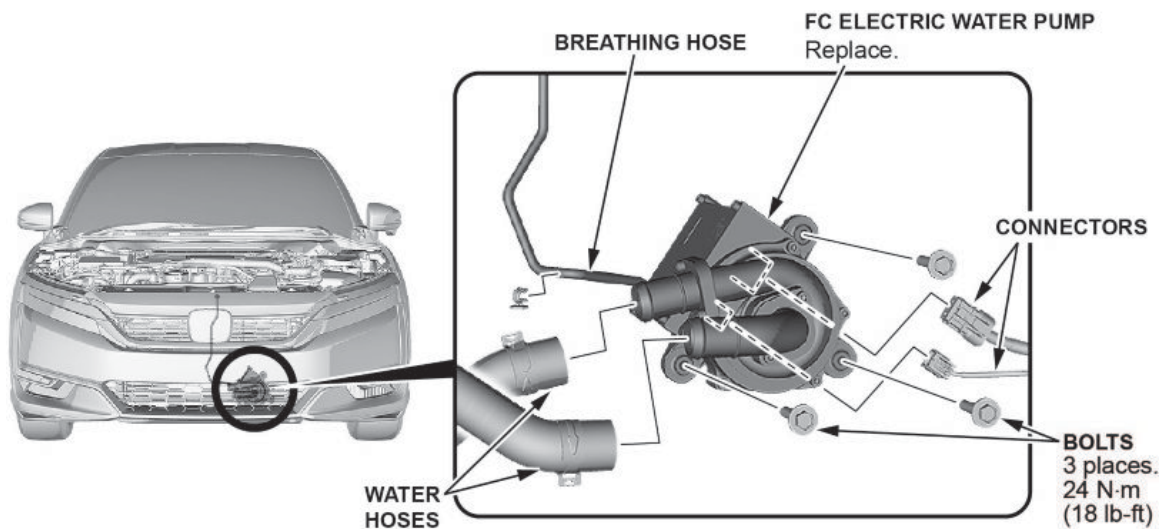
4. Drain the fuel cell insulating fluid by loosening the FC fluid drain plug.

NOTE

Do not loosen the drain plug above it.



5. Once drained, replace the O-ring on the drain plug before installing it.
6. Disconnect both water hoses from the FC electric water pump.



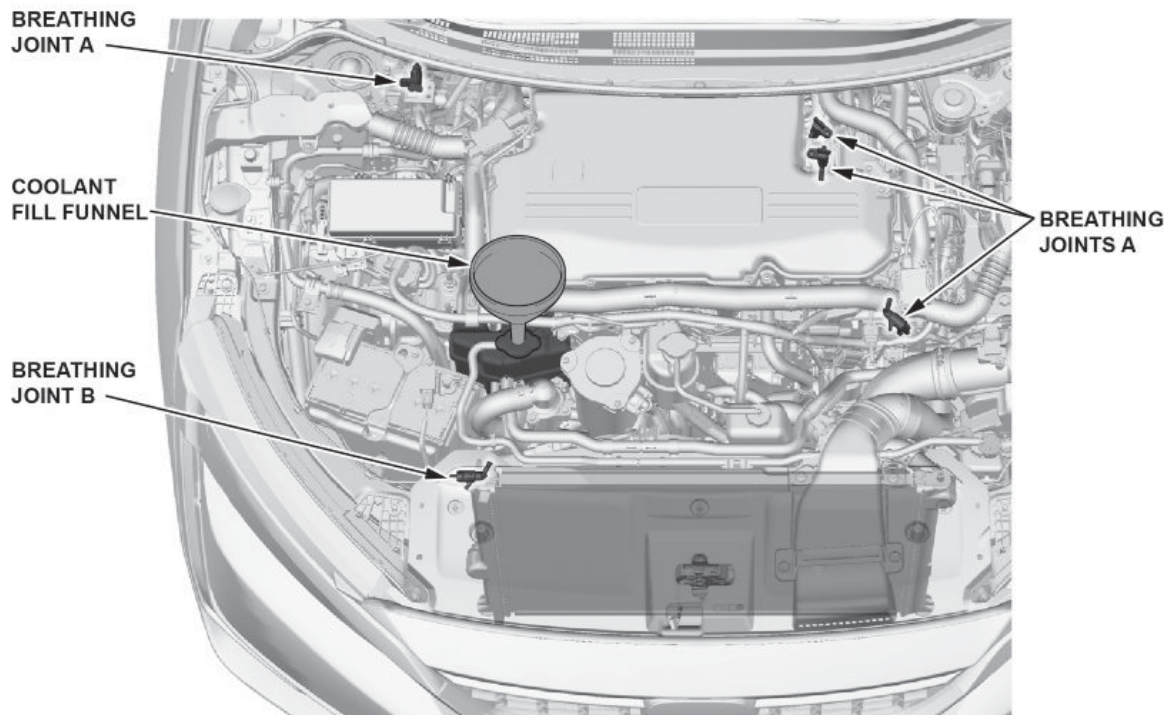
7. Remove the three mounting bolts.
8. Disconnect the breathing hose.
9. Move the water pump out of the way, and disconnect the two connectors behind it.
10. Install a new FC electric water pump in the reverse order of removal.

Fuel Cell System Fill Procedure

NOTE

When filling the FC fluid, always use Honda Genuine Fuel Cell Insulating Fluid - 50% Prediluted Formulation. Do not add water. Using a non-Honda product can result in corrosion, causing the FC system and the cooling system to malfunction or fail.

1. Fill the FC system.
2. Using hose pinching pliers, pinch the hose between the main FC insulating fluid reservoir and the FC radiator expansion tank to stop the flow of the insulating fluid.
3. Loosen all five breathing joints.



4. Place a clean coolant fill funnel on the FC radiator expansion tank.
5. Install commercially available clear silicon hoses to each of the breathing joints. Then, route the other end of the hoses into the coolant funnel.
6. Fill the funnel with insulating fluid.

NOTE

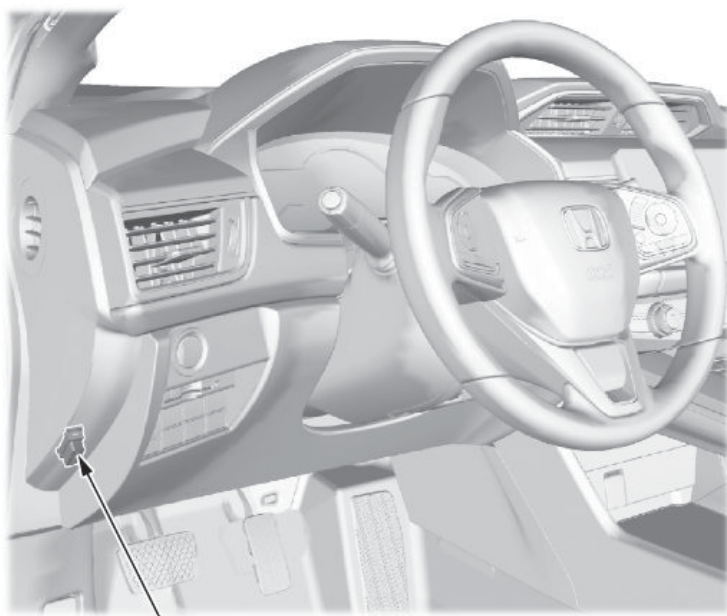
If the insulating fluid level in the funnel drops during the bleeding procedure, add extra fluid.

7. Squeeze the FC radiator hoses several times to push out the air.
8. Make sure there are no bubbles coming out of breathing joints A, then tighten them. If there are bubbles, wait until the bubbling stops, then tighten the breathing joints.
9. Make sure there are no bubbles coming out of breathing joint B, then tighten it. If there are bubbles, wait until the bubbling stops, then tighten the breathing joint.

10. Connect the i-HDS to the DLC.

NOTE

Connect a GR8 battery diagnostic station, and use the power supply mode. For more information, refer to the GR8 user's manual.



DATA LINK CONNECTOR

11. Turn the ignition to ON.

NOTE

Make sure the i-HDS communicates with the vehicle. If it does not, go to the DLC circuit troubleshooting.

12. Select **FC** on i-HDS, then select **FC POWERTRAIN SYSTEM**.
13. Select **ADJUSTMENT**, then select **FC FLUID AIR BLEEDING**.

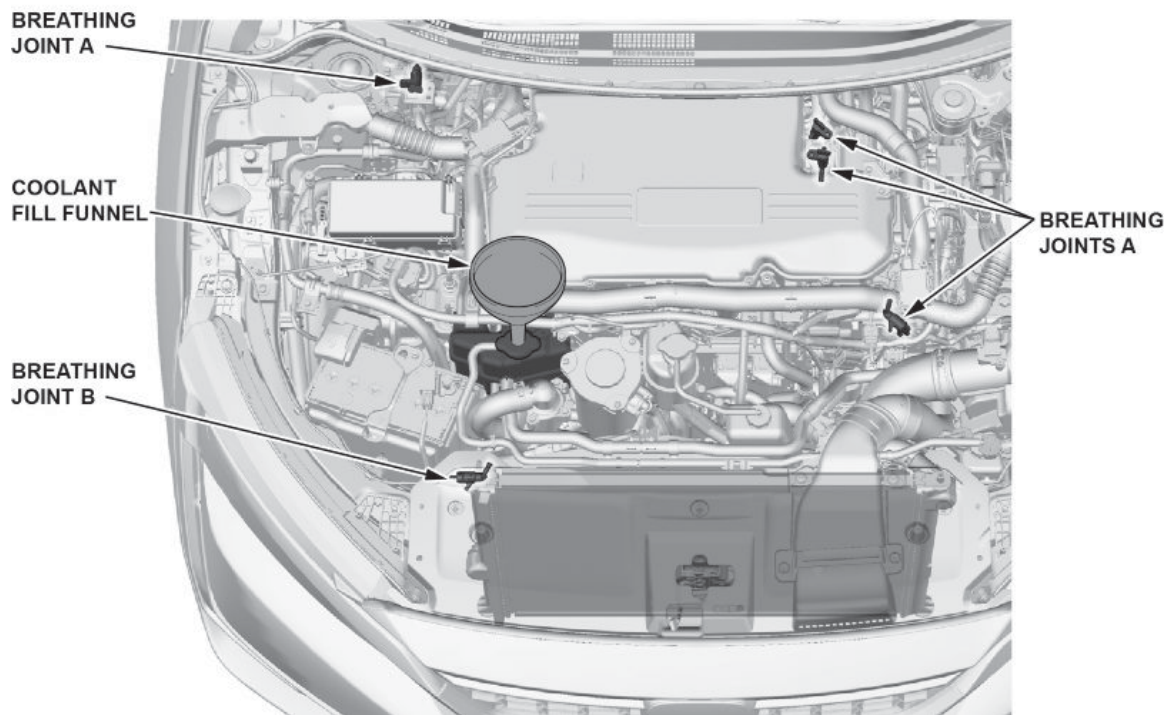
⚠ CAUTION

Running the FC electric water pump without insulating fluid in the system will damage the pump.

14. Loosen all breathing joints A and B while the FC electric water pump and the electric heater coolant pump are running.

NOTE

The FC electric water pump and the electric heater coolant pump will automatically begin to run one after another during the air bleeding process with the i-HDS.



15. Squeeze the FC radiator hoses several times to push out the air.
16. Make sure there are no bubbles coming out of breathing joints A, then tighten them. If there are bubbles, wait until the bubbling stops, then tighten the breathing joints.
17. Make sure there are no bubbles coming out of breathing joint B, then tighten it. If there are bubbles, wait until the bubbling stops, then tighten the breathing joint.
18. When the i-HDS completes the bleeding procedure, turn the ignition to OFF.
19. Turn the ignition to READY TO DRIVE.
20. Do the following:
- Set the climate control to MAX HOT.
 - Turn off the A/C.
 - Set the fan control to MAX.
 - Set the seat heaters to MAX HOT.
 - Turn on the rear window defogger.
 - Turn on the headlights.
 - Open all of the windows.
21. Select **FC** with the i-HDS, then select **FC POWERTRAIN SYSTEM**.

22. Select **FUNCTION TEST**, then select **FC ELECTRIC WATER PUMP TEST** to force the FC electric water pump to run.

NOTE

Squeeze the FC radiator hoses to push out the air.

23. Run the test for about **35 minutes**.
24. Check the insulating fluid in the funnel for bubbles.
25. If there are bubbles in the funnel, repeat steps 18 thru 22. Then, wait another **20 minutes**.
26. Set the climate control to MAX COOL, turn on the A/C, then wait **5 minutes**.

NOTE

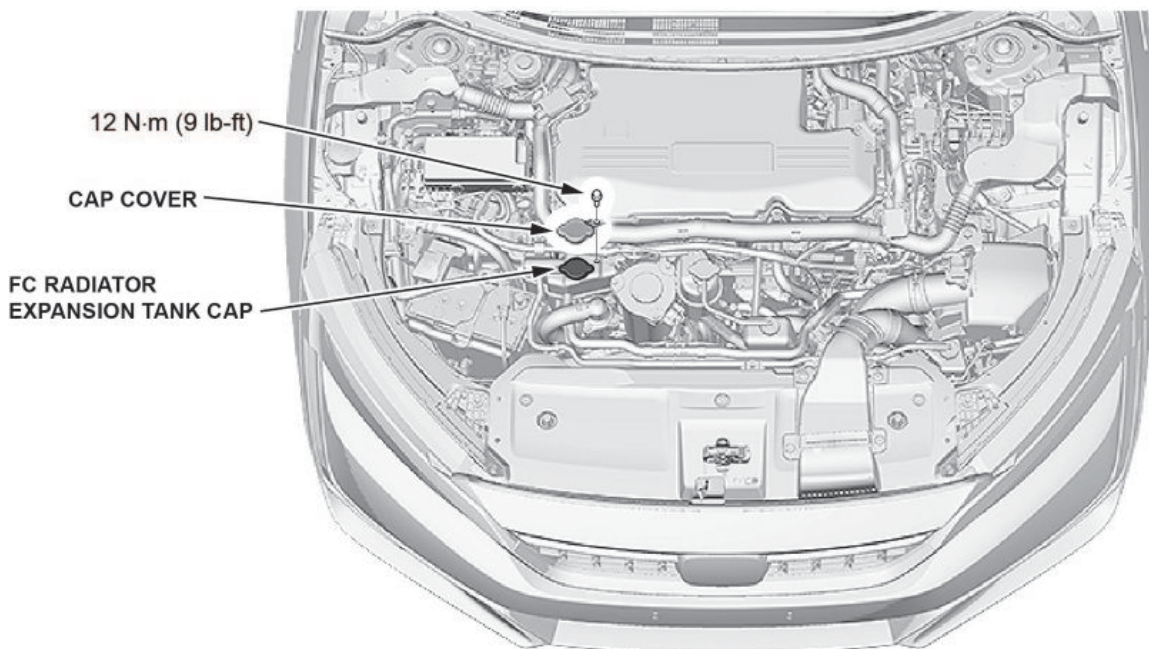
When the climate control is set to MAX COOL, the cooling fans start to cool the insulating fluid and prevents air from entering the cooling lines.

27. Stop the **FC ELECTRIC WATER PUMP TEST**, then wait **5 minutes**.
28. Turn the ignition to OFF.
29. Repeat steps 11 thru 18.

NOTE

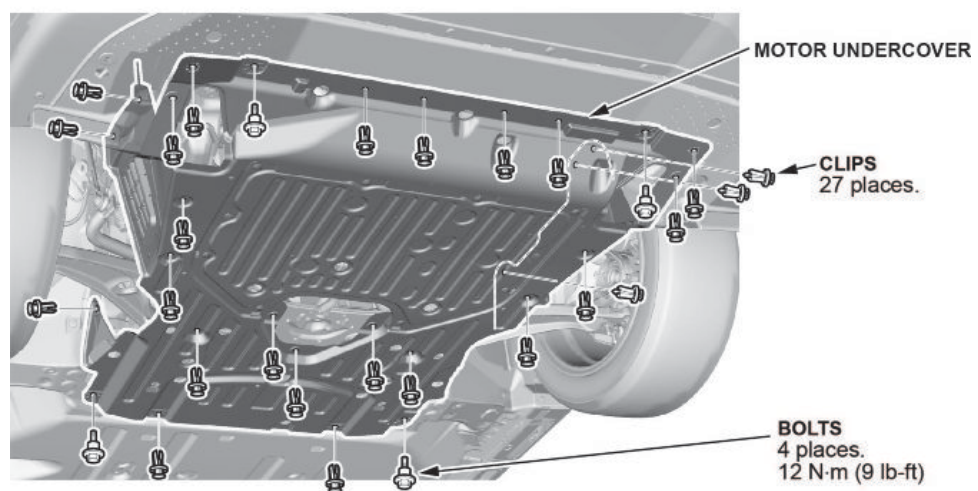
Repeating steps 11 thru 18 is required to completely bleed the system.

30. Remove the funnel, then install the FC radiator expansion tank cap and cap cover.



31. Remove the hose pinching pliers from the hose between the main FC insulating fluid reservoir and the FC radiator expansion tank.
32. Fill the main FC insulating fluid reservoir with insulating fluid to the MAX mark, then add an extra **0.3 L (0.08 US gal)**.

33. Install the motor undercover.



END