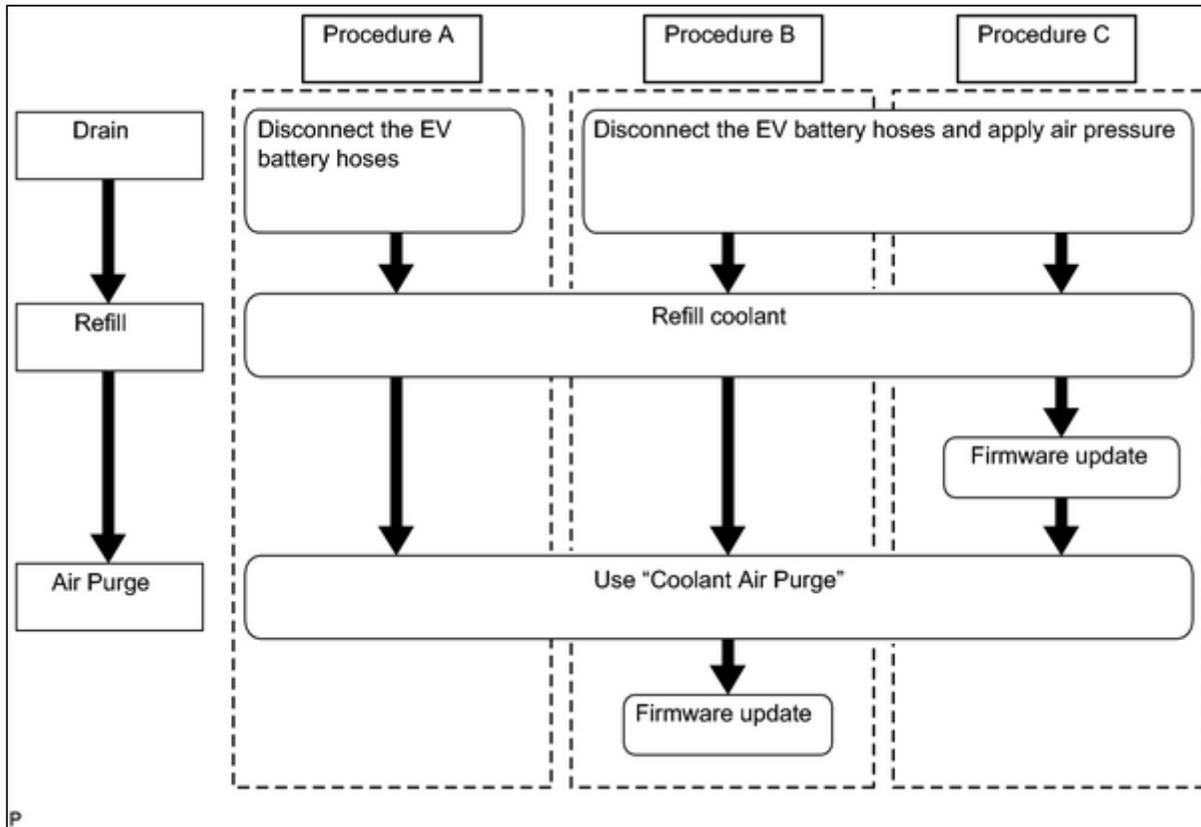


Last Modified: 4-24-2018	6.8:8.0.48	Doc ID: RM000001YMM03YX
Model Year Start: 2014	Model: RAV4 EV	Prod Date Range: [09/2013 -]
Title: COOLING: COOLANT (for HV Battery): REPLACEMENT; 2014 MY RAV4 EV [09/2013 -]		

REPLACEMENT

1. PROCEDURE CHART

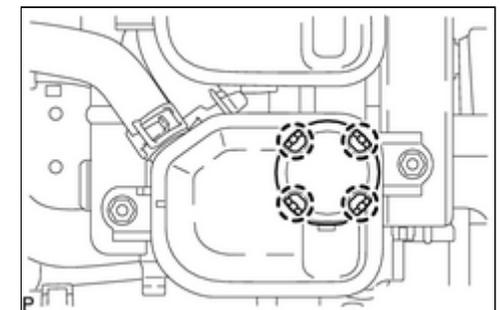
PROCEDURE	SERVICE
A	Parts removal <ul style="list-style-type: none"> • Water pump with motor (for HV Battery) • Radiator assembly (for HV Battery) • Coolant temperature sensor (for HV Battery) • Switching valve way • Battery coolant cooler • Battery coolant heater • DC/DC converter
B	<ul style="list-style-type: none"> • Replacing electric vehicle battery assembly • Replacing EV battery coolant
C	<ul style="list-style-type: none"> • Simultaneously replacing electric vehicle battery assembly and thermal control ECU • Simultaneously replacing electric vehicle battery assembly and EV gateway control ECU



2. DRAIN COOLANT (PROCEDURE A)

(a) Remove the upper No. 1 floor board INFO.

(b) Detach the 4 claws and remove the battery reservoir tank cover from the battery reservoir tank cap.

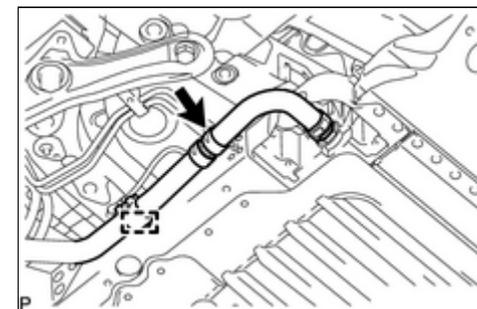


(c) Remove the battery reservoir tank cap.

CAUTION:

To avoid the danger of being burned, do not remove the battery reservoir tank cap while the coolant for the radiator is still hot.

(d) Detach the clamp.



(e) Disconnect both the No. 7 and No. 8 EV battery hoses, and drain the coolant.

(f) Measure the amount of coolant that has been drained.

3. DRAIN COOLANT (PROCEDURE B and C)

(a) Detach the 4 claws and remove the battery reservoir tank cover from the battery reservoir tank cap.

(b) Remove the battery reservoir tank cap to release the pressure, and then reinstall the cap.

CAUTION:

To avoid the danger of being burned, do not remove the battery reservoir tank cap while the coolant for the radiator is still hot.

(c) Remove the upper No. 1 floor board INFO.

(d) Disconnect both the No. 7 and No. 8 EV battery hoses, and drain the coolant.

(e) Connect an air blow gun with a SST (air regulator) to either disconnected EV battery hose, apply air pressure of 172 kPa (1.75 kgf/cm², 25 psi) or less to the EV battery and drain coolant from the other side.

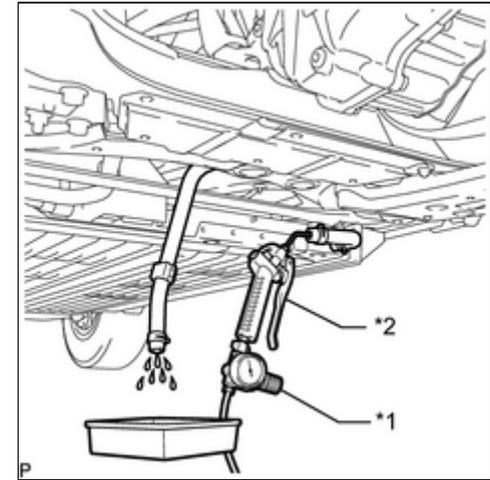
SST: 09236-0R010

Text in Illustration

*1	SST (Air Regulator)
*2	Air Blow Gun

CAUTION:

Do not exceed 172 kPa (1.75 kgf/cm² , 25 psi) because the seals inside the EV battery may be blown.



(f) Measure the amount of coolant that has been drained.

4. REFILL COOLANT (PROCEDURE A, B and C)

(a) Reconnect the No. 7 and No. 8 EV battery hoses.

(b) Prepare new coolant.

Standard Capacity:

7.8 liters (8.2 US qts, 6.9 Imp. qts.)

NOTICE:

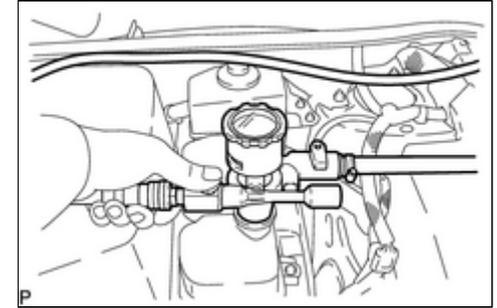
- Only use "Zerex G 48" or "Glysantin G 48".
- Do not reuse the coolant.
- Do not use other coolants including TOYOTA Super Long Life Coolant (SLLC).

HINT:

The dilution ratio for both "Zerex G 48" and "Glysantin G 48" is 50% coolant and 50% deionized water. Therefore, dilution is needed when coolant in the vehicle is added.

(c) Remove the cap from the battery coolant reservoir tank and set a cooling system tool* against the reservoir tank.

*: AirLift II Cooling System Tool or similar



- (d) Draw air until the gauge value is stable.
- (e) Slowly pour coolant into the battery reservoir tank until it reaches the F line.

NOTICE:

Do not exceed the F line of the reservoir tank.

- (f) Remove the coolant system tool.

5. PERFORM FIRMWARE UPDATE (PROCEDURE C)

INFO

6. AIR PURGE (PROCEDURE A, B and C)

- (a) Connect a battery charger to the auxiliary battery.

HINT:

This is to prevent a weak battery. "Coolant Air Purge" will operate the water pumps for 32 minutes with power switch on (IG).

- (b) Connect the RAV4 EV diagnostic tool to the No. 2 DLC3.
- (c) Turn the power switch on (IG).
- (d) Boot up the RAV4 EV diagnostic tool.
- (e) Enter the following menus: Thermal Test / Coolant Air Purge.

NOTICE:

Once "Coolant Air Purge" begins, the coolant in the reservoir tank will be drained quickly. Do not empty the reservoir tank.

- (f) Click "Start Routine".
- (g) Pour coolant into the reservoir immediately and keep the coolant above the F line until "Routine Finished" is displayed.

- (h) After "Routine Finished" is displayed, make sure that the coolant in the reservoir tank is at the F line, and then install the cap.
- (i) Turn the power switch on (READY) for 2 minutes and then turn it off.
- (j) Attach the 4 claws and install the battery reservoir tank cover to the battery reservoir tank cap.

7. PERFORM FIRMWARE UPDATE (PROCEDURE B)

INFO

8. INSPECT FOR COOLANT LEAK INFO

