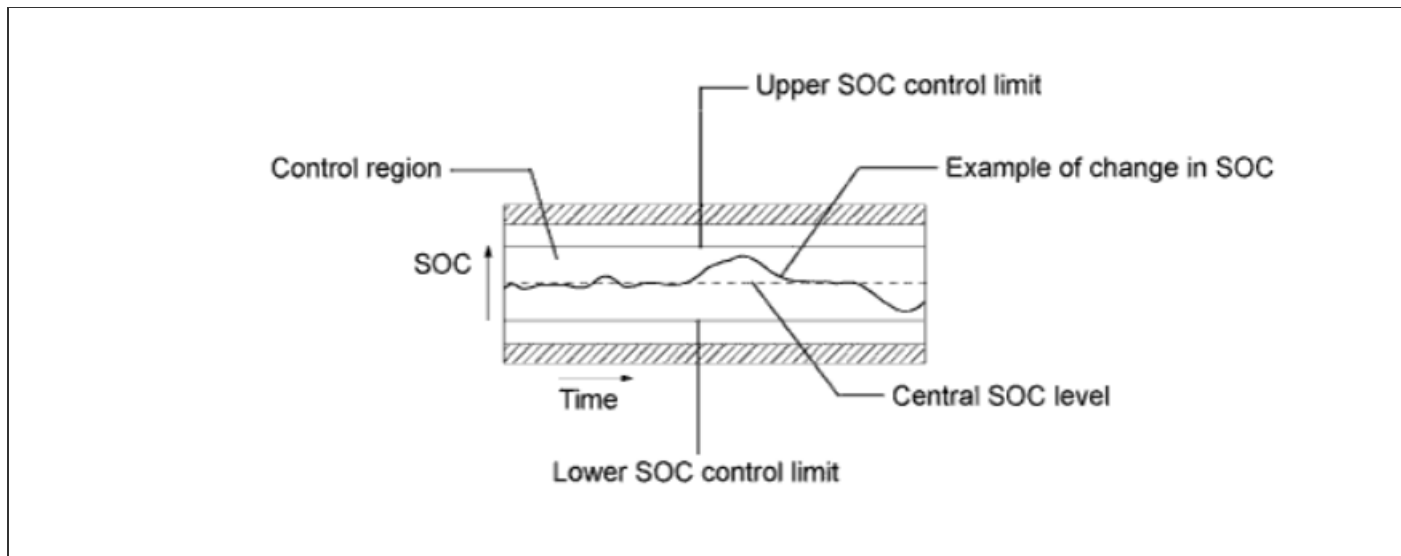


DTC POA7F-123 Hybrid Battery Pack Deterioration

for Preparation [Click here](#)

DESCRIPTION

The battery smart unit and hybrid vehicle control ECU calculate the SOC (state of charge) of the HV battery based on the accumulated amperage in the HV battery. The battery smart unit sends the condition of the HV battery to the hybrid vehicle control ECU. Then the hybrid vehicle control ECU calculates the SOC based on this information and controls HV battery charge and discharge according to the driving conditions.



DTC No.	DTC Detection Condition	Trouble Area
POA7F-123	<ul style="list-style-type: none"> Internal resistance of the HV battery is higher than the standard (1 trip detection) Difference in the capacity between battery blocks is larger than the standard (2 trip detection) 	<ul style="list-style-type: none"> HV battery Battery smart unit

HINT:

POA7F cannot be set unless the vehicle is driven for approximately 10 minutes after clearing the DTCs. (For 2 trip detection, turn the power switch off and perform a road test again after the first road test.)

INSPECTION PROCEDURE

1.CHECK DTC OUTPUT (DTC POA1F-123 IS OUTPUT)

- a. Connect the intelligent tester to the DLC3.
- b. Turn the power switch on (IG).
- c. Select the following menu items: Powertrain / Hybrid Control / DTC.
- d. Check if DTCs are output.

Result:

DTC POA1F-123 is output.

YES
GO TO INSPECTION PROCEDURE RELEVANT TO OUTPUT DTC

NO

2.CHECK BATTERY SMART UNIT

- a. Ensure the safety of the areas in front and rear of the vehicle.
- b. Connect the intelligent tester to the DLC3.
- c. Turn the power switch on (READY).
- d. Select the following menu items: Powertrain / Hybrid Control / Data List / Battery Block Vol -V01 to V20.
- e. Fully warm up the engine and turn the air conditioning off.
- f. Firmly depress the brake pedal with your left foot.
- g. Move the shift lever to the D position.
- h. Record each battery block voltage from the data list (Battery Block Vol -V01 to V20) while fully depressing the accelerator pedal.
- i. Compare the battery block voltages (Battery Block Vol -V01 to V20) between the even and odd number groups in each combination shown in the table below.

Even number group	Odd number group	Battery block voltages to be compared
Battery Block Vol-V01	Battery Block Vol-V02	Battery Block Vol-V01 - Battery Block Vol-V02
Battery Block Vol-V03	Battery Block Vol-V04	Battery Block Vol-V03 - Battery Block Vol-V04
Battery Block Vol-V05	Battery Block Vol-V06	Battery Block Vol-V05 - Battery Block Vol-V06
Battery Block Vol-V07	Battery Block Vol-V08	Battery Block Vol-V07 - Battery Block Vol-V08
Battery Block Vol-V09	Battery Block Vol-V10	Battery Block Vol-V09 - Battery Block Vol-V10
Battery Block Vol-V11	Battery Block Vol-V12	Battery Block Vol-V11 - Battery Block Vol-V12
Battery Block Vol-V13	Battery Block Vol-V14	Battery Block Vol-V13 - Battery Block Vol-V14
Battery Block Vol-V15	Battery Block Vol-V16	Battery Block Vol-V15 - Battery Block Vol-V16
Battery Block Vol-V17	Battery Block Vol-V18	Battery Block Vol-V17 - Battery Block Vol-V18
Battery Block Vol-V19	Battery Block Vol-V20	Battery Block Vol-V19 - Battery Block Vol-V20

- j. Check if the difference in voltage of each combination is 0.3 V or more.

Result:

Result	Proceed to
Difference in voltage of each combination is less than 0.3 V.	A
Difference in voltage of each combination is 0.3 V or more.	B

HINT:

Difference in voltage of each combination may be 0.3 V or more due to a battery smart unit internal error.

