DATA LIST/ACTIVE TEST

1. DATA LIST

NOTICE:

- **The values of DATA LIST could vary significantly with slight differences in measurement, differences in the environment in which the measurements are obtained, or the aging of the vehicle. Thus, definite standards or judgment values are unavailable. Therefore, there may be a malfunction even if a measured value is within the reference range.**
- **In case of intricate symptoms, collect sample data from another vehicle of the same model operating under identical conditions, in order to reach an overall judgment by comparing all the items of DATA LIST.**

HINT:

Using DATA LIST displayed by the intelligent tester II, you can read the value of the switches, sensors, actuators and so on without parts removal. Reading DATA LIST as a first step of troubleshooting is one method to shorten diagnostic time.

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the intelligent tester II ON.
(d) On the System Select screen, enter the following menus: Powertrain / HV Battery / Data List.
(e) According to the display on the tester, read DATA LIST.

Intelligent tester II Display (Abbreviation)	Measurement Item/Range (Display)	Reference Range	Diagnostic Note
MIL Status (MIL Status)	CHK ENG status/ ON or OFF	CHK ENG ON: ON	Constant ON: Repair in accordance with detected DTCs
Mileage after Malfunc (Driving Mileage)	Accumulated driving mileage after the malfunction occurrence/ Min.: 0 km, Max.: 65,535 km	—	—
Battery State of Charge (Battery SOC)	Battery state of charge/ Min.: 0 %, Max: 100 %	Always: 0 to 100 %	—
Delta SOC (Delta SOC)	Difference between maximum and minimum values of SOC/ Min.: 0 %, Max.: 100 %	READY lamp ON, engine stopped and no electrical load: 0 to 60 %	—
Batt Pack Current Val (IB Battery)	Current value of battery pack/ Min.: –327.68 A, Max.: 327.67 A	• Instant soon after a full–load acceleration with the engine stopped: Maximum 140 A (room temperature) • When shifting into N position 1 second has elapsed after automatically engine started with P position, engine stopped, head lamp ON, A/C fan high, and READY lamp ON: Maximum 30 A	—
Inhaling Air Temp (Batt Inside Air)	Temperature of inhalation ambient air into battery pack/ Min.: –327.68°C, Max.: 327.67°C	Undisturbed for 1 day: same as ambient air temperature	—
VMF Fan Motor Voltage (VMF Fan Voltage)	Battery blower motor monitoring voltage/ Min.: –25.6 V, Max.: 25.4 V	Fan mode 1 with READY lamp ON and P position: 9.5 to 11.5 V	—
Auxiliary Battery Vol (Aux. Batt V)	Auxiliary battery voltage/ Min.: 0 V, Max.: 25.4 V	Equivalent to auxiliary battery voltage	—
Charge Control Val (WIN)	Charge control wattage which is sent from battery ECU to HV control ECU/ Min.: –64 kW, Max.: 0 kW	–25 kW or more	—

Intelligent tester II Display (Abbreviation)	Measurement Item/Range (Display)	Reference Range	Diagnostic Note
Discharge Control Val (WOUT)	Discharge control wattage which is sent from battery ECU to HV control ECU/ Min.: 0 kW, Max.: 63.5 kW	21 kW or less	—
Cooling Fan Mode (Cooling Fan Spd)	Battery blower motor actuation mode / Min.: 0, Max.: 6	Stopped: 0 Low to high speed actuation: 1 to 6	—
ECU Control Mode (ECU Ctrl Mode)	ECU control mode/ Min.: 0, Max.: 4	—	—
Standby Blower Request (SBLW Rqst)	Battery blower motor stop control request (standby blower)	ON/OFF	—
Temp of Batt TB1 to TB3 (Batt Temp 1 to 3)	Temperature of HV battery/ Min.: –327.68°C, Max.: 327.67°C	Undisturbed for 1 day: Same as ambient air temperature	—
Battery Block Num (Num Of Batt)	The number of battery blocks/ Min.: 0, Max.: 255	Always: 14	—
Batt Block Minimum Vol (Bat Block Min V)	Battery block minimum voltage/ Min.: –327.68 V, Max.: 327.67 V	SOC 50 to 60 %: 12 V or more	—
Minimum Batt Block No (Min Bat Block #)	Battery block number with minimum voltage	One of numbers 0 to 13	—
Batt Block Max Vol (Bat Block Max V)	Battery block maximum voltage/ Min.: –327.68 V, Max.: 327.67 V	SOC 55 to 60 %: 23 V or less	—
Max Battery Block No (Max Bat Block #)	Battery block number with maximum voltage	One of numbers 0 to 13	—
Battery Block Vol–V01 to V14 (V1 to V14 Batt Block)	Battery block voltage/ Min.: –327.68 V, Max.: 327.67 V	SOC 60 %: 12 to 20 V	—
Internal Resistance R01 to R14 (IR01 to 14)	Internal resistance of each battery block/ Min.: 0 Ω, Max.: 0.255 Ω	Always: 0.01 to 0.1 Ω	—
Compliance Regulation (Regulation)	Compliance regulation	Euro–OBD	—
Emission DTC Num (#Codes)	The number of emission related powertrain DTCs/ Min.: 0, Max.: 127	—	—
The Stored DTC Num (DTC)	The number of stored DTCs/ Min.: 0, Max.: 255	—	—

2. ACTIVE TEST

NOTICE:

Beware that if the connector to the intelligent tester II becomes disconnected or a communication error occurs during ACTIVE TEST, the vehicle could become inoperative (READY lamp OFF).

HINT:

Performing ACTIVE TEST using the intelligent tester II allows the relay, VSV, actuator and so on to operate without parts removal. Performing ACTIVE TEST as a first step of troubleshooting is one method to shorten diagnostic time.

It is possible to display items in DATA LIST during ACTIVE TEST.

(a) Connect the intelligent tester II to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the intelligent tester II ON.
(d) On the System Select screen, enter the following menus: Powertrain / HV Battery / Active Test.
(e) According to the display on the tester, perform ACTIVE TEST.

Intelligent Tester II Display (Abbreviation)	Purpose	Test Details	Test Condition
Driving the battery cooling fan (COOLING FAN SPD)	To check the operation and the speed of the battery blower motor	Stops the battery blower motor or operates it in modes 1 to 6	Disabled when a DTC is detected