

FREEZE FRAME DATA

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NOTICE:

- It is difficult to show the specified values (judgment values) clearly because freeze frame data values change significantly due to differences in measurement conditions, surroundings, or vehicle conditions. For this reason, there may be a problem even when the values are within specifications.
- Turn the ignition switch ON and park the vehicle on level ground. Check the freeze frame data by using intelligent tester.
 - (a) Connect the intelligent tester (with CAN VIM) to the DLC3.
 - (b) Turn the ignition switch ON and check the freeze frame data by following the prompts on the intelligent tester display.

Power steering ECU

Item	Item Description: Range (Display)	Inspection Condition	Reference Value
BATTERY VOLTAGE	Battery voltage: Min.: 0 V Max.: 25.5 V	-	10 to 14 V
SPD	Vehicle speed from meter: Min.: 0 km/h (0 mph) Max.: 300 km/h (187.5 mph)	Vehicle stopped	0 km/h (mph)
		Vehicle driven at constant speed	No significant fluctuation
ENGINE REV	Show the engine revolution: Min.: 0 rpm Max.: 12800 rpm	Engine is running at a constant speed	No significant fluctuation
MOTOR ACTUAL	Amount of current to motor: Min.: -327.68 A Max.: 327.67 A	Power steering is in operation	Value changes in proportion to steering effort
COMMAND VALUE	Demanded amount of current to motor: Min.: -327.68 A Max.: 327.68 A	Power steering is in operation	Value changes in proportion to steering effort
STR ANGL VEL	Steering angle speed: Min.: -32768°/sec. Max.: 32767°/sec.	Steering wheel is turned	Value changes in proportion to steering effort
STEERING TORQUE	Steering wheel torque: Min.: -7 Nm Max.: 7 Nm	-	-
THERMISTOR TEMP	ECU substrate temperature: Min.: -40°C Max.: 150°C	Ignition switch ON	-
PIG SUPPLY	Power source voltage to activate motor: Min.: 0 V Max.: 20.1531 V	Power steering in operation	10 to 14 V
IG SUPPLY	ECU power source voltage: Min.: 0 V Max.: 20.1531 V	Ignition switch ON	10 to 14 V
MOTOR ROTATE	Motor rotation angle: Min.: 0° Max.: 360°	Power steering in operation	During steering operation, motor rotation angle value changes from 0 to 360°
MOTOR VOLTAGE	Motor power supply voltage: 0 V Max.: 45.955 V	Power steering in operation	-

Item	Item Description: Range (Display)	Inspection Condition	Reference Value
MTR TERMINAL(U)	Motor terminal voltage (U phase): Min.: 0 V Max.: 46.667 V	Steering wheel is turned	While turning the steering wheel, a value within the range of 1 V to approximately 0.7 V less than the battery voltage is displayed. (The value changes according to the steering load.)
MTR TERMINAL(V)	Motor terminal voltage (V phase): Min.: 0 V Max.: 46.667 V	Steering wheel is turned	While turning the steering wheel, a value within the range of 1 V to approximately 0.7 V less than the battery voltage is displayed. (The value changes according to the steering load.)
MTR TERMINAL(W)	Motor Terminal voltage (W phase): Min.: 0 V Max.: 46.667 V	Steering wheel is turned	While turning the steering wheel, a value within the range of 1 V to approximately 0.7 V less than the battery voltage is displayed. (The value changes according to the steering load.)
PS ASSIST SIG	Power steering assist signal: ON or OFF	-	-