

## FREEZE FRAME DATA

### NOTICE:

- It is difficult to show the specified values (judgement values) clearly because freeze frame data values significantly change due to differences in measurement conditions, surroundings or vehicle conditions. Because of this reason, there may be a problem even when the values are within specifications.
  - Turn the power switch on (IG) and park the vehicle on level ground to check the freeze frame data by using the hand-held tester.
- (b) Connect the hand-held tester to the DLC3.
- (c) Turn the power switch on (IG) and check the freeze frame data by following the prompts on the display on the hand-held tester.

Item	Item Description	Inspection Condition	Reference Value
TRQ1	Torque sensor 1 output value/ Min.: 0 V, Max.: 5 V	1. Steering wheel is not turned (without load) 2. Turning steering wheel to right with vehicle stopped 3. Turning steering wheel to left with vehicle stopped	1. 2.3 to 2.7 V 2. 2.5 to 4.7 V 3. 0.3 to 2.5 V
TRQ2	Torque sensor 2 output value/ Min.: 0 V, Max.: 5 V	1. Steering wheel is not turned (without load) 2. Turning steering wheel to right with vehicle stopped 3. Turning steering wheel to left with vehicle stopped	1. 2.3 to 2.7 V 2. 2.5 to 4.7 V 3. 0.3 to 2.5 V
TRQ3	Torque value for assist control/ Min.: 0 V, Max.: 5 V	1. Steering wheel is not turned (without load) 2. Turning steering wheel to right with vehicle stopped 3. Turning steering wheel to left with vehicle stopped	1. 2.3 to 2.7 V 2. 2.5 to 4.7 V 3. 0.3 to 2.5 V
SPD	Vehicle speed from meter/ Min.: 0 km/h, Max.: 255 km/h	1. Vehicle is stopped 2. Vehicle is driven at a constant speed	1. 0 km/h 2. No significant fluctuation
MOTOR ACTUAL	Amount of current to motor/ Min.: -128 A, Max.: 127 A	-	-
COMMAND VALUE	Demanded amount of current to motor/ Min.: -128 A, Max.: 127 A	-	-
THERMISTOR TEMP	ECU substrate temperature/ Min.: -50 °C, Max.: 205 °C	Power switch is on (IG)	-
PIG SUPPLY	Power source voltage to activate motor/ Min.: 0 V, Max.: 25.5 V	Power steering is in operation	10 to 16 V
IG SUPPLY	ECU power source voltage/ Min.: 0 V, Max.: 25.5 V	-	10 to 16 V
TRQ1 ZERO VAL	Zero point value of torque sensor 1/ Min.: 0 V, Max.: 5 V	Steering wheel is not turned (without load)	2.3 to 2.7 V
TRQ2 ZERO VAL	Zero point value of torque sensor 2/ Min.: 0 V, Max.: 5 V	Steering wheel is not turned (without load)	2.3 to 2.7 V
TRQ3 ZERO VAL	Zero point value of torque sensor for assist control/ Min.: 0 V, Max.: 5 V	Steering wheel is not turned (without load)	2.3 to 2.7 V

## DIAGNOSTICS - ELECTRIC POWER STEERING SYSTEM

Item	Item Description	Inspection Condition	Reference Value
MTR TERMINAL (+)	Motor terminal M1 voltage/ Min.: 0 V, Max.: 25.5 V	1. Turning steering wheel to right 2. Turning steering wheel to left	1. 10 to 16 V 2. Below 1 V
MTR TERMINAL (-)	Motor terminal M2 voltage/ Min.: 0 V, Max.: 25.5 V	1. Turning steering wheel to right 2. Turning steering wheel to left	1. Below 1 V 2. 10 to 16 V
# CODES	Number of detected DTCs when freeze frame data is stored/ Min.: 0 time, Max.: 255 times	-	-
READY STATUS	HV system "READY"/ OFF/ON	HV system "READY" ⇔ Not "READY"	ON ⇔ OFF