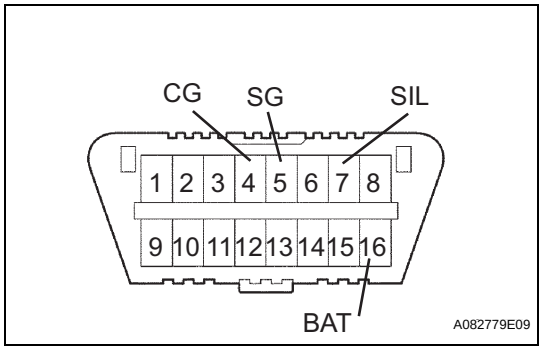
DIAGNOSIS SYSTEM

1. DESCRIPTION

(a) Front power seat control system data can be read through the Data Link Connector 3 (DLC3) of the vehicle. When the system seems to be malfunctioning, use the intelligent tester to check for malfunctions and perform repairs.

2. CHECK DLC3



(a) The vehicle uses ISO 15765-4 communication protocol. The terminal arrangement of the DLC3 complies with SAE J1962 and matches the ISO 15765-4 format.

Symbols (Terminal No.)	Terminal Description	Condition	Specified Condition
SIL(7) - SG(5)	Bus "+" line	During transmission	Pulse generation
CG(4) - Body ground	Chassis ground	Always	Below 1 Ω
SG(5) - Body ground	Signal ground	Always	Below 1 Ω
BAT(16) - Body ground	Battery positive	Always	11 to 14 V

If the result is not as specified, the DLC3 may have a malfunction. Repair or replace the wire harness and connector.

HINT:

Connect the cable of the intelligent tester to the DLC3, turn the ignition switch on and attempt to use the tester. If the screen displays a communication error message, a problem exists on the vehicle side or the tester side.

- If communication is normal when the tester is connected to another vehicle, inspect the DLC3 of the original vehicle.
- If communication is still not possible when the tester is connected to another vehicle, the problem is probably in the tester itself. Consult the Service Department listed in the tester's instruction manual.

3. INSPECT BATTERY VOLTAGE

(a) Check the battery voltage.

Voltage:

11 to 14 V

If the voltage is below 11 V, recharge or replace the battery before proceeding.

SE

DATA LIST / ACTIVE TEST

1. DATA LIST

HINT:

Using the intelligent tester's DATA LIST allows the status of a switch, sensor, actuator and other items to be read without removing any parts. Reading the DATA LIST early in troubleshooting is one way to save time.

(a) Connect the intelligent tester (with CAN VIM) to the DLC3.
(b) Turn the ignition switch on.
(c) Read the DATA LIST.

D_SEAT (Position control ECU and switch assembly)

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
RECLIN SW REAR	Reclining switch signal (Rearward)/ ON or OFF	ON: Reclining switch (Rearward) is ON OFF: Reclining switch (Rearward) is OFF	-
RECLIN SW FRONT	Reclining switch signal (Forward)/ ON or OFF	ON: Reclining switch (Forward) is ON OFF: Reclining switch (Forward) is OFF	-
F VTCL SW DOWN	Front vertical switch signal (Downward)/ ON or OFF	ON: Front vertical switch (Downward) is ON OFF: Front vertical switch (Downward) is OFF	-
F VTCL SW UP	Front vertical switch signal (Upward)/ ON or OFF	ON: Front vertical switch (Upward) is ON OFF: Front vertical switch (Upward) is OFF	-
LIFTER SW DOWN	Lifter switch signal (Downward)/ ON or OFF	ON: Lifter switch (Downward) is ON OFF: Lifter switch (Downward) is OFF	-
LIFTER SW UP	Lifter switch signal (Upward)/ ON or OFF	ON: Lifter switch (Upward) is ON OFF: Lifter switch (Upward) is OFF	-
SLIDE SW REAR	Sliding switch signal (Rearward)/ ON or OFF	ON: Sliding switch (Rearward) is ON OFF: Sliding switch (Rearward) is OFF	-
SLIDE SW FRONT	Sliding switch signal (Forward)/ ON or OFF	ON: Sliding switch (Forward) is ON OFF: Sliding switch (Forward) is OFF	-
POWER VOLTAGE	Power supply for position control ECU and switch assembly/ MIN: 0 V, MAX: 19.89 V	Within range from 11 to 14 V	-
IG SW	Ignition switch position/ ON or OFF	ON: Ignition switch is ON OFF: Ignition switch is OFF	-
KEY UNLOCK SW	Key unlock warning switch signal/ ON or OFF	ON: Key is in ignition key cylinder OFF: Key is not in ignition key cylinder	-
D-DOOR WARN SW	Door courtesy light switch signal/ ON or OFF	ON: Driver side door is open OFF: Driver side door is closed	-
PNP SW	Shift lever position P signal/ ON or OFF	ON: Shift lever in P position OFF: Shift lever in any position except P	-
M2 SW	Seat memory M2 switch signal/ ON or OFF	ON: Seat memory M2 switch is ON OFF: Seat memory M2 switch is OFF	-
M1 SW	Seat memory M1 switch signal/ ON or OFF	ON: Seat memory M1 switch is ON OFF: Seat memory M1 switch is OFF	-
SET SW	Seat memory set switch signal/ ON or OFF	ON: Seat memory set switch is ON OFF: Seat memory set switch is OFF	-
SLIDE POS	Seat sliding position/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
RECLIN POS	Seatback position/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
F VTCL POS	Seat front vertical position/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
LIFTER POS	Seat lifter position/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-

Tester Display	Measurement Item/Range	Normal Condition	Diagnostic Note
MEM M1 SW	Driving position memorized with seat memory switch M1/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
MEM M2 SW	Driving position memorized with seat memory switch M2/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
SEAT MEM M1	Seat position memorized with seat memory switch M1/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
SEAT MEM M2	Seat position memorized with seat memory switch M2/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
D-MIRR MEM 1	Driver side mirror position memorized with seat memory switch M1/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
D-MIRR MEM 2	Driver side mirror position memorized with seat memory switch M2/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
P-MIRR MEM 1	Front passenger side mirror position memorized with seat memory switch M1/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
P-MIRR MEM 2	Front passenger side mirror position memorized with seat memory switch M2/ MEM or NOT MEM	MEM: Memorized NOT MEM: Not memorized	-
SLIDE MEM POS 1	Seat sliding position memorized with seat memory switch M1/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
RECLN MEM POS 1	Seatback position memorized with seat memory switch M1/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
F VTCL MEM POS 1	Front vertical position memorized with seat memory switch M1/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
LIFTER MEM POS 1	Lifter position memorized with seat memory switch M1/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
SLIDE MEM POS 2	Seat sliding position memorized with seat memory switch M2/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
RECLN MEM POS 2	Seatback position memorized with seat memory switch M2/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
F VTCL MEM POS 2	Front vertical position memorized with seat memory switch M2/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
LIFTER MEM POS 2	Lifter position memorized with seat memory switch M2/ MIN: -4096, MAX: 4096	Within range from -4096 to 4096	-
D-MIRR MEM POS 1	Driver side mirror position memorized with seat memory switch M1/ MIN: 0, MAX: 65535	Within range from 0 to 65535	-
P-MIRR MEM POS 1	Front passenger side mirror position memorized with seat memory switch M1/ MIN: 0, MAX: 65535	Within range from 0 to 65535	-
D-MIRR MEM POS 2	Driver side mirror position memorized with seat memory switch M2/ MIN: 0, MAX: 65535	Within range from 0 to 65535	-
P-MIRR MEM POS 2	Front passenger side mirror position memorized with seat memory switch M2/ MIN: 0, MAX: 65535	Within range from 0 to 65535	-