DTC	P0AA4/228	HYBRID BATTERY NEGATIVE CONTACTOR CIRCUIT STUCK CLOSED

DTC	P0AA5/229	HYBRID BATTERY NEGATIVE CONTACTOR CIRCUIT STUCK OPEN

CIRCUIT DESCRIPTION

Refer to DTC P0AA1 (INF 224) on page 05–537.

The HV control ECU monitors the proper operation of the system main relay No. 3 (CON3) to check for malfunction.

DTC No.	INF Code	DTC Detection Condition	Trouble Area
P0AA4	228	Open or +B short in system main relay No. 3 circuit	• Wire harness or connector • System main relay No. 3 • HV control ECU
P0AA5	229	GND short in system main relay No. 3 circuit	• Wire harness or connector • System main relay No. 3 • HV control ECU

WIRING DIAGRAM

Refer to DTC P0AA1 (INF 224) on page 05–537.

INSPECTION PROCEDURE

CAUTION:

- **Before inspecting the high–voltage system, take safety precautions to prevent electrical shocks, such as wearing insulated gloves and removing the service plug grip. After removing the service plug grip, put it in your pocket to prevent other technicians from reconnecting it while you are servicing the high–voltage system.**
- **After disconnecting the service plug grip, wait at least for 5 minutes before touching any of the high–voltage connectors or terminals.**

HINT:

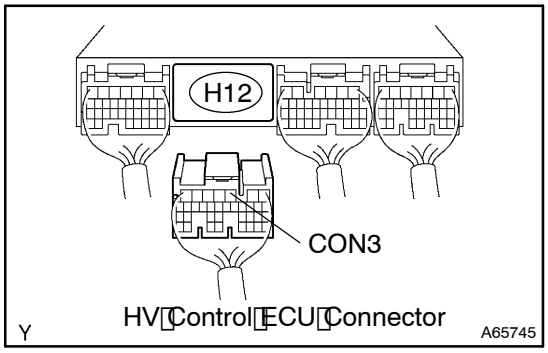
At least 5 minutes is required to discharge the high–voltage condenser inside the inverter.

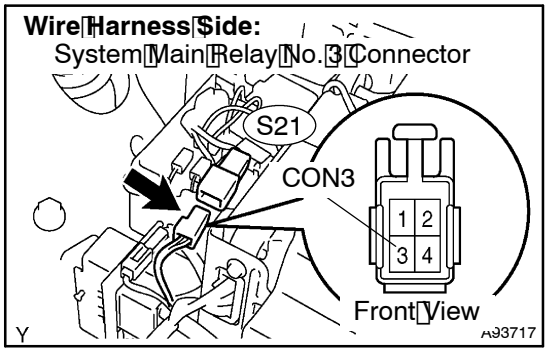
1	**INSPECT SYSTEM MAIN RELAY NO.3 (See page 21–42)**

NG → **REPLACE SYSTEM MAIN RELAY NO.3 (See page 21–92)**

OK

2	CHECK HARNESS AND CONNECTOR(HYBRID VEHICLE CONTROL ECU – SYSTEM MAIN RELAY NO. 3)





CAUTION:
Wear insulated gloves before performing the following operation.

(a) Turn the power switch OFF.

(b) Remove the service plug grip (see page 21–120).

NOTICE:
Turning the power switch ON (READY) with the service plug grip removed could cause malfunction. Therefore, never turn the power switch ON (READY) in this state.

(c) Disconnect the H12 HV control ECU connector.

(d) Disconnect the S21 system main relay No. 3 connector.

(e) Turn the power switch ON (IG).

HINT:
DTCs for the interlock switch system are output when turning the power switch ON (IG) with the service plug grip removed.

(f) Measure the voltage between the terminal of the HV control ECU connector and body ground.

Standard:

Tester Connection	Specified Condition
CON3 (H12–3) – Body ground	Below 1 V

(g) Turn the power switch OFF.

(h) Check the resistance between the wire harness side connectors.

Standard (Check for open):

Tester Connection	Specified Condition
CON3 (H12–3) – CON3 (S21–3)	Below 1 Ω

Standard (Check for short):

Tester Connection	Specified Condition
CON3 (H12–3) or CON3 (S21–3) – Body ground	10 kΩ or higher

(i) Reconnect the system main relay No. 3 connector.

(j) Reconnect the HV control ECU connector.

(k) Reinstall the service plug grip (see page 21–120).

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE HYBRID VEHICLE CONTROL ECU (See page 21–128)