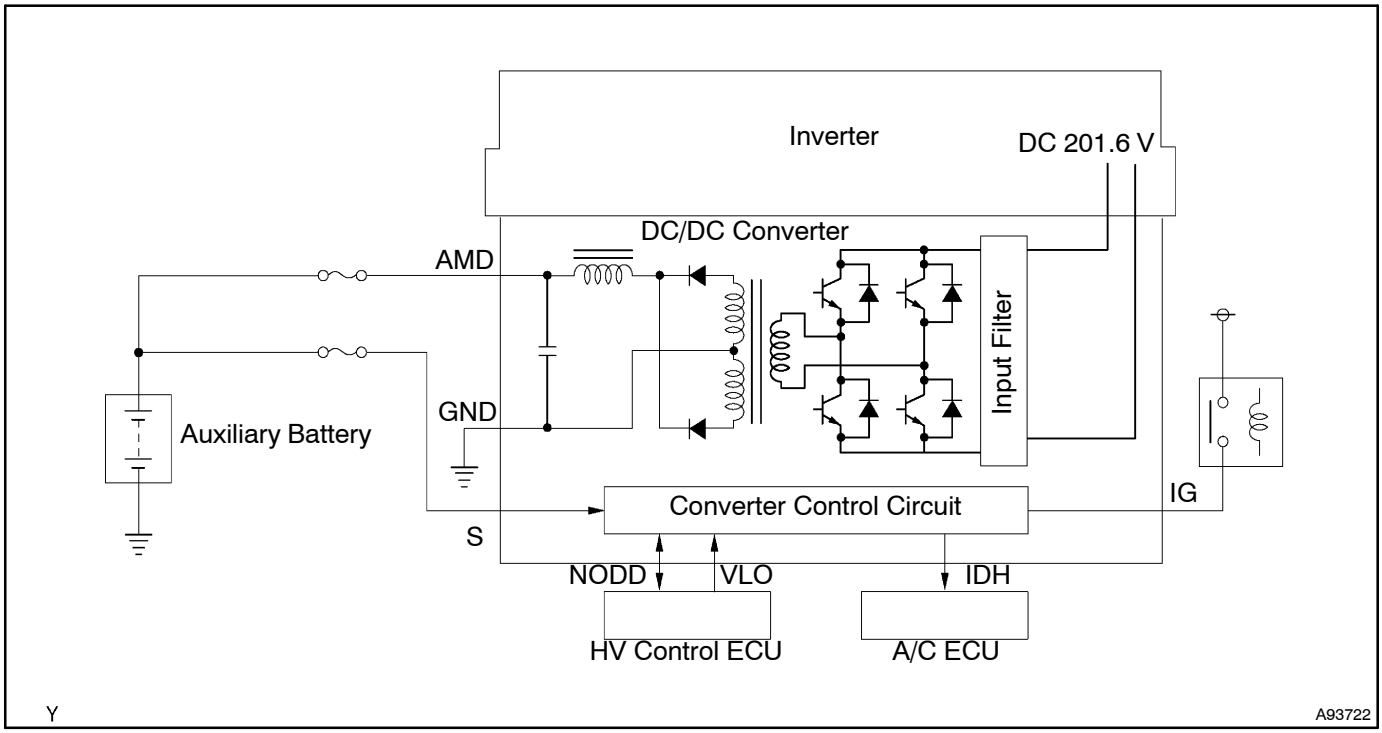
DTC	P0A09/265	DC/DC CONVERTER STATUS CIRCUIT LOW INPUT

DTC	P0A10/263	DC/DC CONVERTER STATUS CIRCUIT HIGH INPUT

CIRCUIT DESCRIPTION

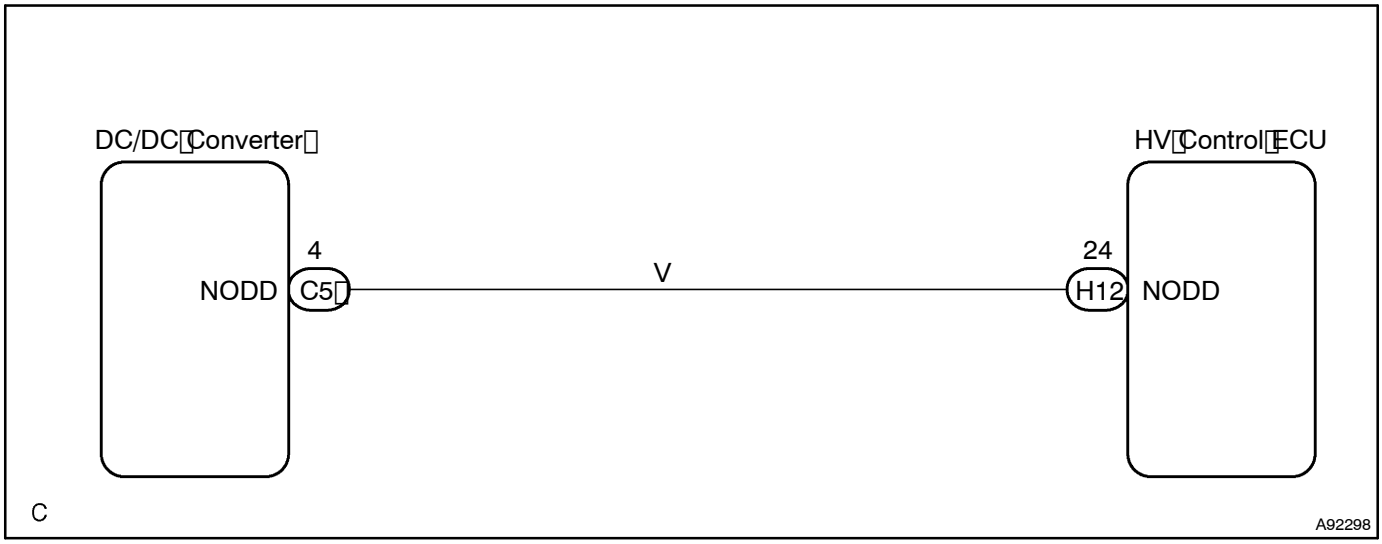
The DC/DC converter converts the DC 201.6 V of the HV battery into DC 12 V in order to supply power to the vehicle's lighting, audio and ECU systems. In addition, it charges the auxiliary battery.
A transistor bridge circuit initially converts DC 201.6 V into alternating current, and a transformer lowers its voltage. Then, it is rectified and smoothed (into DC) and converted into DC 12 V.
The DC/DC converter controls the output voltage in order to keep a constant voltage at the terminals of the auxiliary battery.



The HV control ECU uses the NODD signal line to transmit a stop command to the DC/DC converter and receive signals indicating the normal or abnormal conditions of the 12 V charging system.
If the vehicle is being driven with an inoperative DC/DC converter, the voltage of the auxiliary battery will drop, which will prevent the continued operation of the vehicle. Therefore, the HV control ECU monitors the operation of the DC/DC converter and alerts the driver if it detects malfunction.

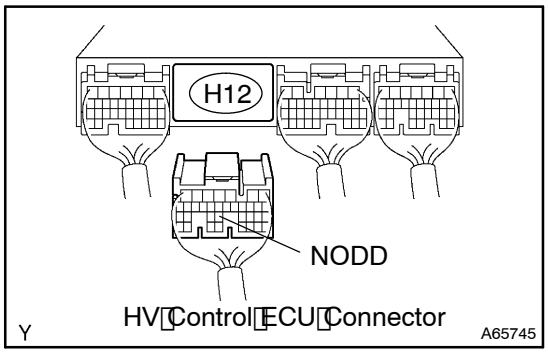
DTC No.	INF Code	DTC Detection Condition	Trouble Area
P0A09	265	Open or GND short in NODD signal circuit of DC/DC converter	• Wire harness or connector • w/ converter inverter assembly
P0A10	263	+B short in NODD signal circuit of DC/DC converter	• Wire harness or connector • w/ converter inverter assembly

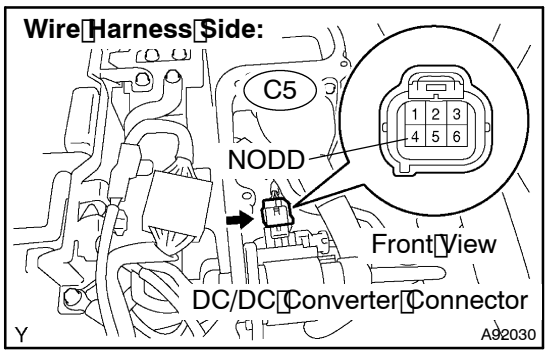
WIRING DIAGRAM



INSPECTION PROCEDURE

1	CHECK HARNESS AND CONNECTOR(HYBRID VEHICLE CONTROL ECU – DC/DC CONVERTER)





(a) Disconnect the H12 HV control ECU connector.
(b) Disconnect the C5 DC/DC converter connector.
(c) Turn the power switch ON (IG).
(d) Measure the voltage between the terminal of the HV control ECU connector and body ground.

Standard:

Tester Connection	Specified Condition
NODD (H12–24) – Body ground	Below 1 V

(e) Turn the power switch OFF.
(f) Check the resistance between the wire harness side connectors.

Standard (Check for open):

Tester Connection	Specified Condition
NODD (H12–24) – NODD (C5–4)	Below 1 Ω

Standard (Check for short):

Tester Connection	Specified Condition
NODD (H12–24) or NODD (C5–4) – Body ground	10 kΩ or higher

(g) Reconnect the DC/DC converter connector.
(h) Reconnect the HV control ECU connector.

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

OK

REPLACE W/CONVERTER INVERTER ASSY (See page 21–25)