

DTC	P0A08-264	DC / DC Converter Status Circuit
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DESCRIPTION

The HV Control ECU monitors the DC / DC converter circuit status via the NODD terminal. If the ECU detects an internal circuit malfunction in the converter and stops converter operation with its fail-safe function, causing the auxiliary battery voltage to drop below 11 V, the ECU outputs DTC P0A08 (INF 264).

DTC No.	INF Code	DTC Detection Condition	Trouble Area
P0A08	264	All conditions below are detected <ul style="list-style-type: none"> • DC / DC converter internal circuit malfunction is detected • DC / DC converter enters fail-safe mode • Auxiliary battery voltage drops below 11 V 	<ul style="list-style-type: none"> • Auxiliary battery • Fusible link block assembly • Fuse (for 12 V electrical equipment) • Engine room relay block • Inverter cooling hose • Water pump with motor assembly • Cooling fan motor • No. 2 cooling fan motor • Wire harness or connector • Inverter with converter assembly (DC / DC converter)

WIRING DIAGRAM

Refer to DTC P0A09 (INF265) (see page HV-125).

INSPECTION PROCEDURE

1	CHECK FOR DTC
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- (a) Clear the DTC(s) (see page HV-39).
- (b) Connect the intelligent tester to the DLC3.
- (c) Turn the power switch ON (IG) and turn the intelligent tester ON.
- (d) Read DTC(s).

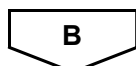


Result:

Result	Proceed to
One or more of following DTCs is output: P0A94, P0AA1, P0AA4, P0AA6, P0AE0, P0AE6, P0AE7, P0ADB, P0ADF, P3000, P3004, P3110	A
P0A08 is output	B

A

GO TO DIAGNOSTIC TROUBLE CODE CHART



2	CHECK CABLE CONNECTION FROM AUXILIARY BATTERY TERMINAL
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- (a) Turn the power switch OFF.
- (b) Check the auxiliary battery (12 V) cable connections at places listed below:
 - The battery positive and negative terminals are not loose.

- The body ground of the battery negative cable is not loose.
- The FL block nut is not loose.

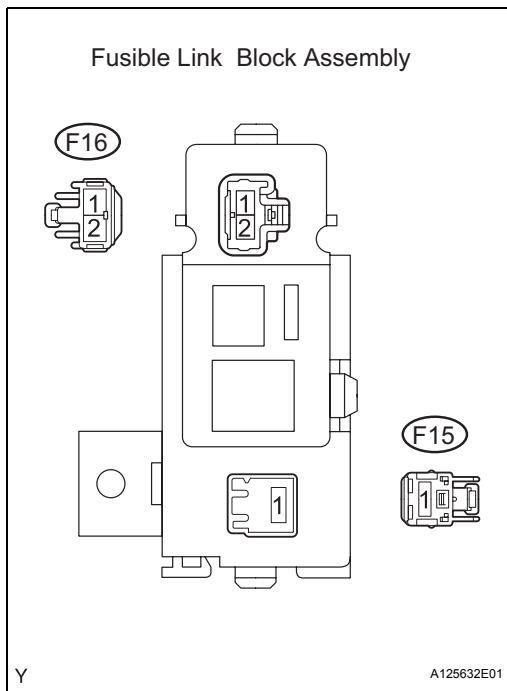
OK:

They are not loose.

NG **CONNECT OR INSTALL SECURELY**

OK

3 CHECK CONNECTION OF CONNECTORS (FUSIBLE LINK BLOCK ASSEMBLY)



- (a) Check that the F15 and F16 connectors are securely connected to the fusible link block assembly.

OK:

Connectors are connected securely.

OK **Go to step 5**

HV

NG

4 CHECK CONNECTOR (FUSIBLE LINK BLOCK ASSEMBLY)

- (a) Check that the F15 and F16 connector terminals do not have burnout.

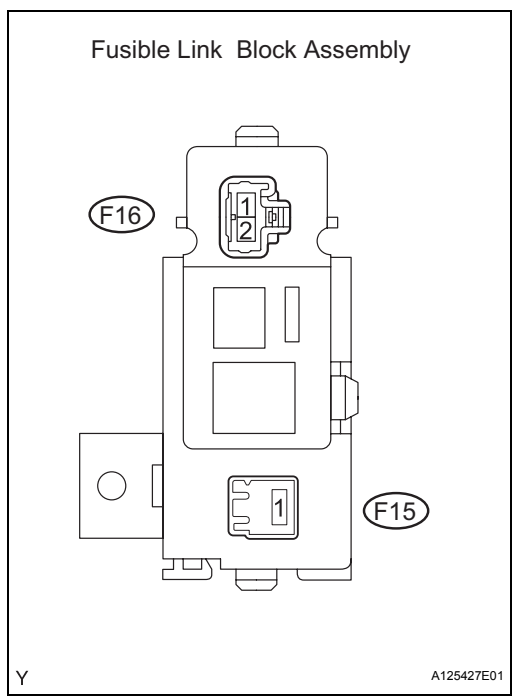
OK:

There is no burnout.

NG **REPAIR OR REPLACE CONNECTOR**

OK

5 INSPECT FUSIBLE LINK BLOCK ASSEMBLY



(a) Measure the resistance between the F15 fusible link block assembly and body ground.

Standard resistance

Tester Connection	Specified Condition
F15-1 Body ground	Below 1 Ω

If the result is not as specified, proceed to NG-A.

(b) Measure the resistance between the F16 fusible link block assembly and body ground.

Standard resistance

Tester Connection	Specified Condition
F16-1 Body ground	Below 1 Ω
F16-2 Body ground	Below 1 Ω

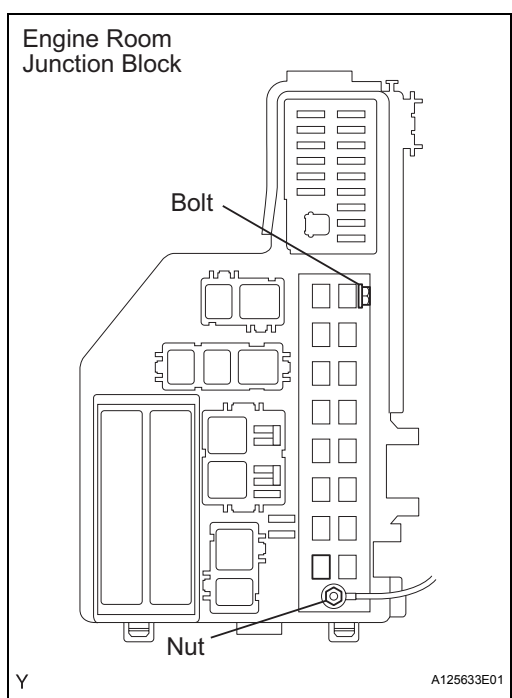
If the result is not as specified, proceed to NG-B.

NG-A REPAIR OR REPLACE FUSIBLE LINK BLOCK ASSEMBLY

NG-B REPAIR FUSIBLE LINK BLOCK ASSEMBLY AND REPLACE DC / DC FUSE

OK

6 CHECK INSTALLATION CONDITION OF DC / DC FUSE (ENGINE ROOM JUNCTION BLOCK)



(a) Check the installation condition of the DC / DC fuse.

OK:

No bolts or nuts are loose.

NG TIGHTEN BOLT OR NUT

HV

OK

7 CHECK FUSIBLE LINK BLOCK ASSEMBLY (100A DC / DC-S)

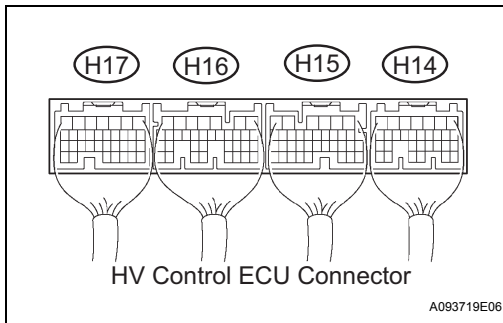
- (a) Remove the DC / DC-S fuse from the fusible link block assembly.
- (b) Measure the resistance of the fuse.

Standard resistance:**Below 1 Ω**

NG

REPLACE FUSIBLE LINK BLOCK ASSEMBLY

OK

8 CHECK CONNECTION OF CONNECTORS (HV CONTROL ECU)

- (a) Check that the H14, H15, H16 and H17 ECU connectors are securely connected.

OK:**Connectors are connected securely.**

NG

CONNECT SECURELY

OK

9 CHECK CONNECTION OF CONNECTORS (INVERTER WITH CONVERTER ASSEMBLY)**CAUTION:****Inverter with converter assembly:****Be sure to wear insulated gloves.**

- (a) Turn the power switch OFF.
- (b) Remove the service plug grip (see page [HV-1](#)).

CAUTION:**Keep the removed service plug grip in your pocket to prevent other technicians from reconnecting it while you are servicing the vehicle.****NOTICE:****After removing the service plug grip, do not operate the power switch as it may damage the hybrid vehicle control ECU.**

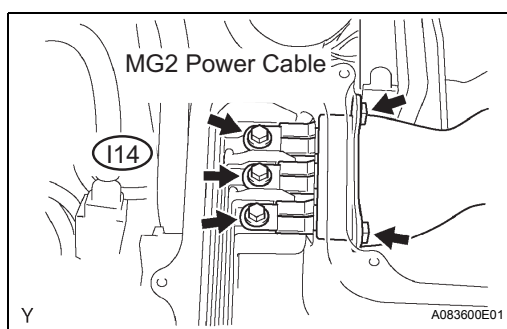
- (c) Leave the vehicle as is for 5 minutes.

HINT:

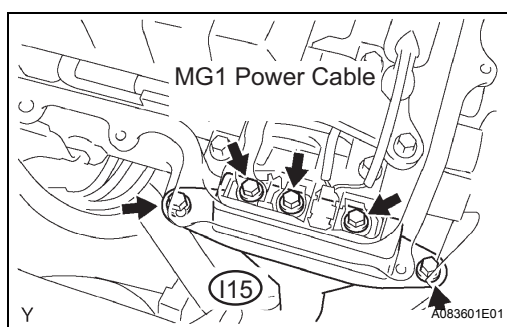
It takes 5 minutes for the high voltage condenser in the inverter to discharge its electricity.

- (d) Remove the inverter cover (see page [HV-531](#)).

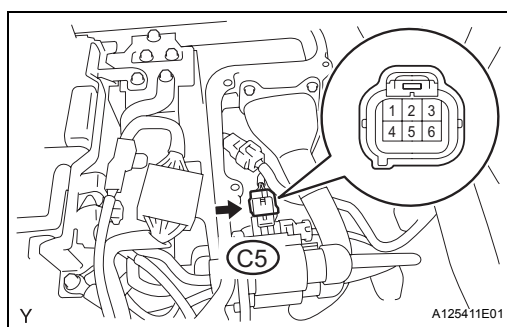
HV



(e) Remove the 5 bolts to disconnect the MG2 power cable.



(f) Remove the 5 bolts to disconnect the MG1 power cable.



(g) Check the connection condition of the C5 connector.

OK:

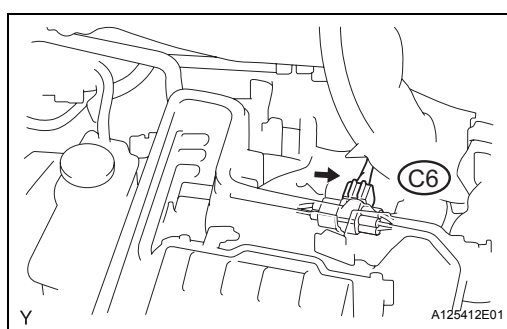
Connector has been connected securely.

NG → **CONNECT SECURELY**

OK

HV

10 CHECK CONNECTION OF CONNECTOR (INVERTER WITH CONVERTER ASSEMBLY)



(a) Check that the C6 connector is connected securely.

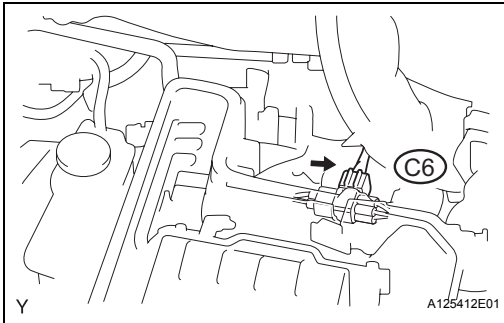
OK:

Connector is connected securely.

OK → **Go to step 12**

NG

11 CHECK INVERTER WITH CONVERTER ASSEMBLY



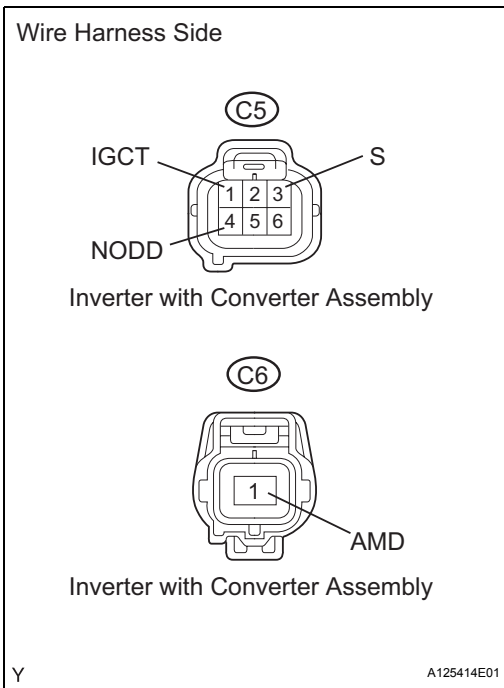
- (a) Disconnect the C6 connector.
- (b) Check that the C6 connector terminal does not have burnout.

OK:
There is no burnout.

NG REPAIR OR REPLACE CONNECTOR

OK

12 CHECK HARNESS AND CONNECTOR (INVERTER WITH CONVERTER ASSEMBLY - BATTERY AND BODY GROUND)



- (a) Disconnect the C5 and C6 converter inverter connectors.
- (b) Turn the power switch ON (IG).
- (c) Measure the voltage of the wire harness side connectors.

Standard voltage

Tester Connection	Condition	Specified Condition
C5-3 (S) - Body ground	Always	Some as 12 V battery voltage
C6-1 (AMD) - Body ground	Always	Some as 12 V battery voltage
C5-1 (IGCT) - Body ground	Power switch ON (IG)	8 to 16 V

- (d) Measure the resistance between the wire harness side connector.

Standard resistance

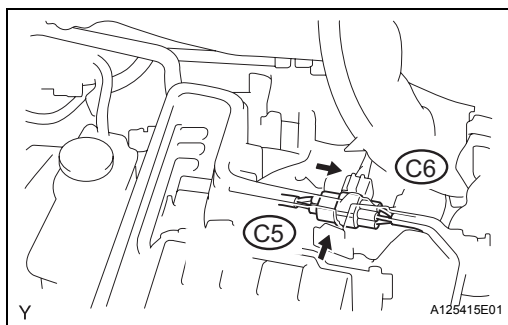
Tester Connection	Condition	Specified Condition
C5-4 (NODD) - Body ground	IG-OFF	100 to 140 Ω

NG REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

HV

13 CHECK OPERATION OF INVERTER WITH CONVERTER ASSEMBLY



- (a) Connect the C5 and C6 converter inverter connectors.
- (b) Set the electrical tester with the AC/DC 400 A probe to the wire harness of the C6 connector.
- (c) Connect the I14 and I15 connectors (color: orange) to the inverter.
- (d) Install the inverter cover.
- (e) Install the service plug grip.
- (f) Turn the power switch ON (READY).
- (g) Wait 5 minutes.
- (h) Operate the electrical devices as listed below:
 - Set the light control switch to High beam.
 - Set the heater blower fan to HI.
 - Turn on the defogger.
 - Depress the brake pedal.
 - Press all the switches of the window regulator master switch at the same time.
 - Turn the steering wheel to the right or left.
- (i) Measure the amperage and voltage.

Standard amperage

Item	Specified Condition
Output current	40 to 100 A

Standard voltage

Item	Specified Condition
Battery voltage	13 to 15 V

OK → **Go to step 15**

HV

NG

14 INSPECT FUSE

- (a) Remove the EPS-H, HEAD MAIN-H, H-LP LO LH, H-LP LO RH, H-LP HI LH, and H-LP HI RH fuses from the engine room relay block.
- (b) Remove the DEF-H, PWR-H, FR-DOOR, STOP M/HTR, A/C (HTR) fuses from the driver side junction block.
- (c) Measure the resistance of the fuses.

Standard resistance:

Below 1 Ω

NG → **CHECK FOR SHORT IN ALL HARNESS OR CONNECTORS CONNECTED TO FUSE AND REPLACE FUSE**

OK

15 CHECK COOLANT LEVEL OF INVERTER WITH CONVERTER ASSEMBLY

- (a) Check the coolant level in the reservoir tank.

OK:

Coolant level in the reservoir tank is between F and L line.

NG → **ADD COOLANT**

OK

16 CHECK INVERTER COOLANT HOSE

- (a) Check if the inverter cooling hoses are bent, twisted, damaged or clogged.

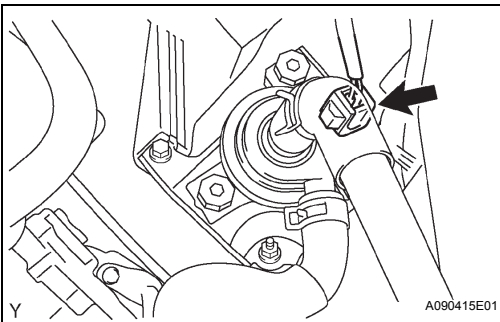
OK:

Hoses are not bent, twisted, damaged, or clogged.

NG → **REPAIR OR REPLACE HOSE**

OK

17 CHECK CONNECTION CONDITION OF WATER PUMP WITH MOTOR CONNECTOR (LOOSENESS AND POOR CONNECTION)



- (a) Check the connection condition of the pump and bracket connector.

OK:

Connector has been connected securely.

NG → **CONNECT SECURELY**

HV

OK

18 CHECK OPERATION OF WATER PUMP WITH MOTOR ASSEMBLY

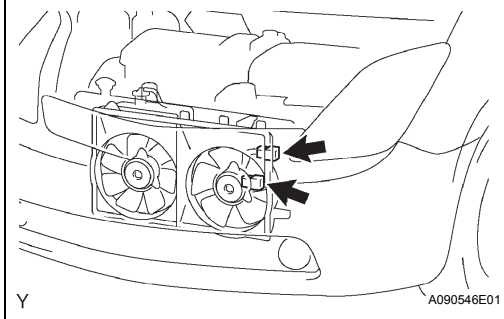
- (a) Turn the power switch ON (IG).
- (b) Check the operation of the motor.

OK:

Coolant surface in reservoir tank has waves.

NG → **REPLACE WATER PUMP WITH MOTOR ASSEMBLY**

OK

**19 CHECK CONNECTION CONDITION OF COOLING FAN MOTOR CONNECTOR
(LOOSENESS AND POOR CONNECTION)**

(a) Check the connection condition of the fan connectors.

OK:

Connectors have been connected securely.

NG

CONNECT SECURELY

OK

20 INSPECT COOLING FAN MOTOR

(a) Inspect cooling fan motor (see page [CO-5](#)).

NG

REPLACE COOLING FAN MOTOR

OK

REPLACE INVERTER WITH CONVERTER ASSEMBLY