DTC	P0A78/272	DRIVE MOTOR "A" INVERTER PERFORMANCE

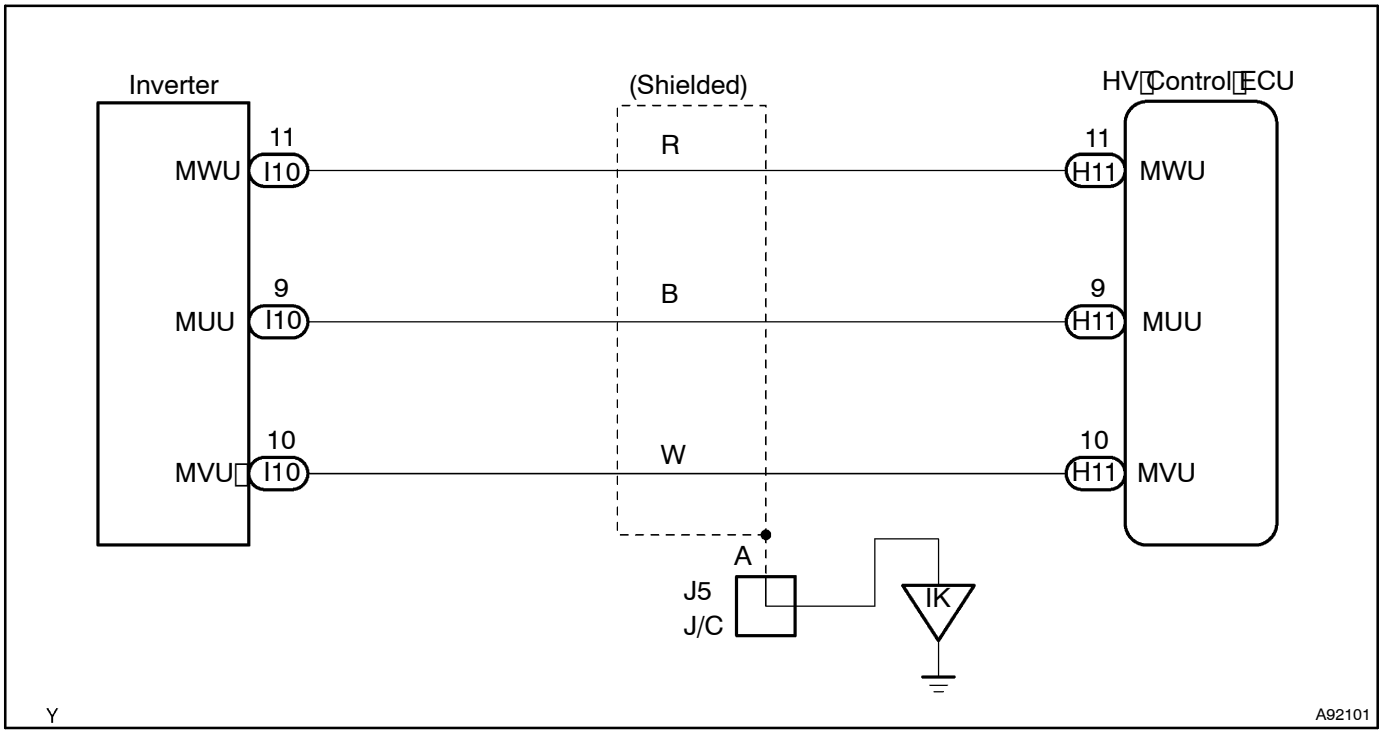
CIRCUIT DESCRIPTION

See the description of the inverter on page 05–365.

The inverter switches the power transistors ON and OFF in accordance with power transistor actuation signals received from the HV control ECU, in order to change the direction of the current that flows through the MG1/MG2. Also, the inverter regulates the duration of the switching time through PWM (Pulse Width Modulation) control, in order to control the voltage that is applied to the MG1/MG2.

DTC No.	INF Code	DTC Detection Condition	Trouble Area
P0A78	272	Abnormality in motor PWM circuit	• Wire harness or connector • w/ converter inverter assembly

WIRING DIAGRAM



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.

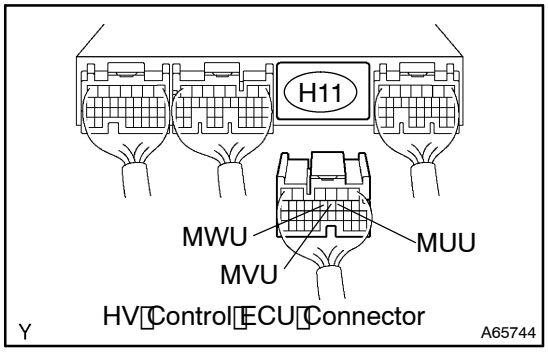
1	READ OUTPUT DTC(HYBRID CONTROL)

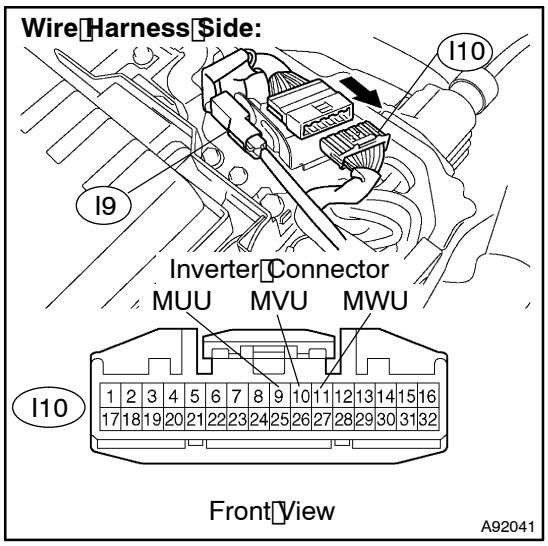
(a) Connect the Intelligent tester II to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the Intelligent tester II ON.
(d) On the Intelligent tester II, enter the following menus: Powertrain / Hybrid Control / DTC.
(e) Read DTCs.
Result: DTC P0A1D is output

YES → **GO TO RELEVANT DTC CHART (See page 05–268)**

NO

2	CHECK HARNESS AND CONNECTOR(HYBRID VEHICLE CONTROL ECU – INVERTER)





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 H11 HV control ECU connector.
(d) Remove the inverter cover (see page 21–25).
(e) Disconnect the I10 inverter connector.
(f) Check the resistance between the wire harness side connectors.

Standard (Check for open):

Tester Connection	Specified Condition
MUU (H11–9) – MUU (I10–9)	Below 1 Ω
MVU (H11–10) – MVU (I10–10)	Below 1 Ω
MWU (H11–11) – MWU (I10–11)	Below 1 Ω

Standard (Check for short):

Tester Connection	Specified Condition
MUU (H11–9) or MUU (I10–9) – Body ground	10 kΩ or higher
MVU (H11–10) or MVU (I10–10) – Body ground	10 kΩ or higher
MWU (H11–11) or MWU (I10–11) – Body ground	10 kΩ or higher

(g) Reconnect the inverter connector.
(h) Reconnect the HV control ECU connector.
(i) Reinstall the inverter cover (see page 21–25).
(j) Reinstall the service plug grip (see page 21–120).

NG → REPAIR OR REPLACE HARNESS OR CONNECTOR

OK

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