DTC	P0A78/523	DRIVE MOTOR ”A” INVERTER PERFORMANCE

CIRCUIT DESCRIPTION

Refer to DTC P0A78 (INF 266) on page 05–562.

DTC No.	INF Code	DTC Detection Condition	Trouble Area
P0A78	523	Inverter voltage (VH) sensor offset malfunction	• System main relay • w/ converter inverter assembly

MONITOR DESCRIPTION

The HV control ECU monitors the inverter voltage (VH) sensor signal. If the HV control ECU detects a fault in the sensor signal, the HV control ECU interprets this as a VH sensor failure. The HV control ECU then illuminates the MIL and sets a DTC.

MONITOR STRATEGY

Related DTCs	P0A78 (INF 523): Motor inverter/Voltage (VH) malfunction
Required sensor/components	Motor inverter, battery ECU
Frequency of operation	Continuous
Duration	TOYOTA's intellectual property
MIL operation	Immediately
Sequence of operation	None

TYPICAL ENABLING CONDITIONS

The monitor will run whenever the following DTCs are not present	TOYOTA's intellectual property
Other conditions belong to TOYOTA's intellectual property	–

TYPICAL MALFUNCTION THRESHOLDS

Motor inverter	Abnormal

COMPONENT OPERATING RANGE

Motor inverter	DTC P0A78 (INF 523) is not detected

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(HV ECU)

(a) Connect the hand–held tester to the DLC3.
(b) Turn the power switch ON (IG).
(c) Turn the hand–held tester ON.
(d) On the hand–held tester, enter the following menus: DIAGNOSIS / ENHANCED OBD II / HV ECU / DTC INFO / TROUBLE CODES.
(e) Read DTCs.
Result: DTC P0A78 (INF 523) and other DTCs are output

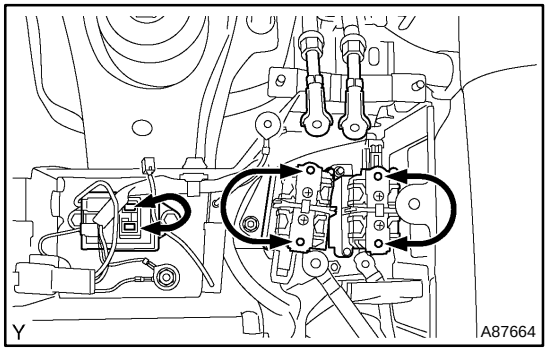
HINT:
If any other codes besides P0A78 (INF 523) are output, perform troubleshooting for those DTCs first.

YES → **GO TO RELEVANT DTC CHART (See page 05–440)**

NO

2	CHECK SYSTEM MAIN RELAYS FOR STICKING

CAUTION:
Wear insulated gloves before performing the following operation.
(a) Turn the power switch OFF.
(b) Remove the service plug grip (see page 21–116).
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 all the high–voltage terminals of the system main relays.
(d) Check the resistance at the switch side of the system main relays.
Standard: 10 kΩ or higher
(e) Connect the high–voltage terminals of the system main relays.
(f) Reinstall the service plug grip (see page 21–116).

NG → **REPLACE STUCK SYSTEM MAIN RELAY**

OK

REPLACE W/CONVERTER INVERTER ASSY (See page 21–23)