

DTC	P0A90/604	DRIVE MOTOR "A" PERFORMANCE
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CIRCUIT DESCRIPTION

See the description of the MG1/MG2 on page [05-671](#).

DTC No.	INF Code	DTC Detection Condition	Trouble Area
P0A90	604	MG2 power balance malfunction (small power balance)	<ul style="list-style-type: none"> • Battery current sensor • Hybrid vehicle motor
P0A90	605	MG2 power balance malfunction (large power balance)	<ul style="list-style-type: none"> • Battery current sensor • Hybrid vehicle motor

MONITOR DESCRIPTION

The HV control ECU monitors the energy balance of the hybrid vehicle motor (MG2) system. If the HV control ECU detects a malfunction in the amount of electrical energy while the MG2 charges or discharges electricity, it illuminates the MIL and sets a DTC.

MONITOR STRATEGY

Related DTCs	P0A90 (INF 604/605): Hybrid vehicle motor/Power balance malfunction
Required sensor/components	Hybrid vehicle motor, motor resolver
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

Hybrid vehicle motor (power balance)	Small or large
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COMPONENT OPERATING RANGE

Hybrid vehicle motor	DTC P0A90 (INF 604/605) is not detected
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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 BATTERY)

- Connect the hand-held tester to the DLC3.
- Turn the power switch ON (IG).
- Turn the hand-held tester ON.
- On the hand-held tester, enter the following menus: DIAGNOSIS / ENHANCED OBD II / HV BATTERY / DTC INFO / TROUBLE CODES.
- Read DTCs.

Result: DTCs are output

YES

GO TO RELEVANT DTC CHART
(See page [05-893](#))

NO

2 READ OUTPUT DTC(HV ECU)

- Connect the hand-held tester to the DLC3.
- Turn the power switch ON (IG).
- Turn the hand-held tester ON.
- On the hand-held tester, enter the following menus: DIAGNOSIS / ENHANCED OBD II / HV ECU / DTC INFO / TROUBLE CODES.
- Read DTCs.

Result: DTC P0A90 (INF 604 or 605) and other DTCs are output

HINT:

If any other codes besides P0A90 (INF 604 or 605) are output, perform troubleshooting for those DTCs first.

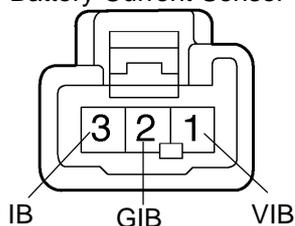
YES

GO TO RELEVANT DTC CHART
(See page [05-440](#))

NO

3 INSPECT BATTERY CURRENT SENSOR

Component Side:
Battery Current Sensor



Y

A77580

- Remove the battery current sensor (see page [21-95](#)).
- Measure the resistance between terminals 1 (VIB) and 2 (GIB).

Standard:

Tester Connection	Resistance
Positive probe to terminal 1 (VIB) Negative probe to terminal 2 (GIB)	3.5 to 4.5 kΩ
Positive probe to terminal 2 (GIB) Negative probe to terminal 1 (VIB)	5 to 7 kΩ or more

- Measure the resistance between terminals 1 (VIB) and 3 (IB).

Standard:

Tester Connection	Resistance
Positive probe to terminal 1 (VIB) Negative probe to terminal 3 (IB)	3.5 to 4.5 kΩ
Positive probe to terminal 3 (IB) Negative probe to terminal 1 (VIB)	5 to 7 kΩ or more

- (d) Measure the resistance between terminals 2 (GIB) and 3 (IB).

Standard: 0.2 kΩ or less

NOTICE:

Even if the probes are changed around, the resistance will not vary.

- (e) Reinstall the battery current sensor (see page [21-95](#)).

NG	REPLACE BATTERY CURRENT SENSOR (See page 21-95)
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OK

REPLACE HYBRID VEHICLE MOTOR ASSY