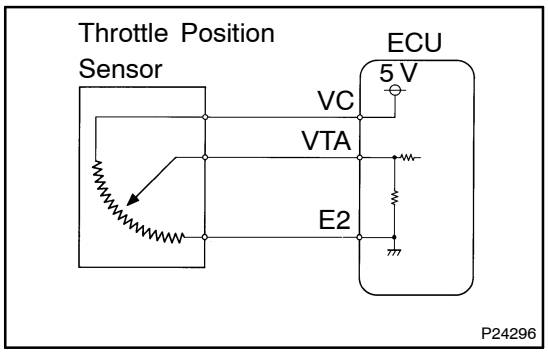
DI5RF–04

DTC	41	Throttle Position Sensor Circuit

CIRCUIT DESCRIPTION

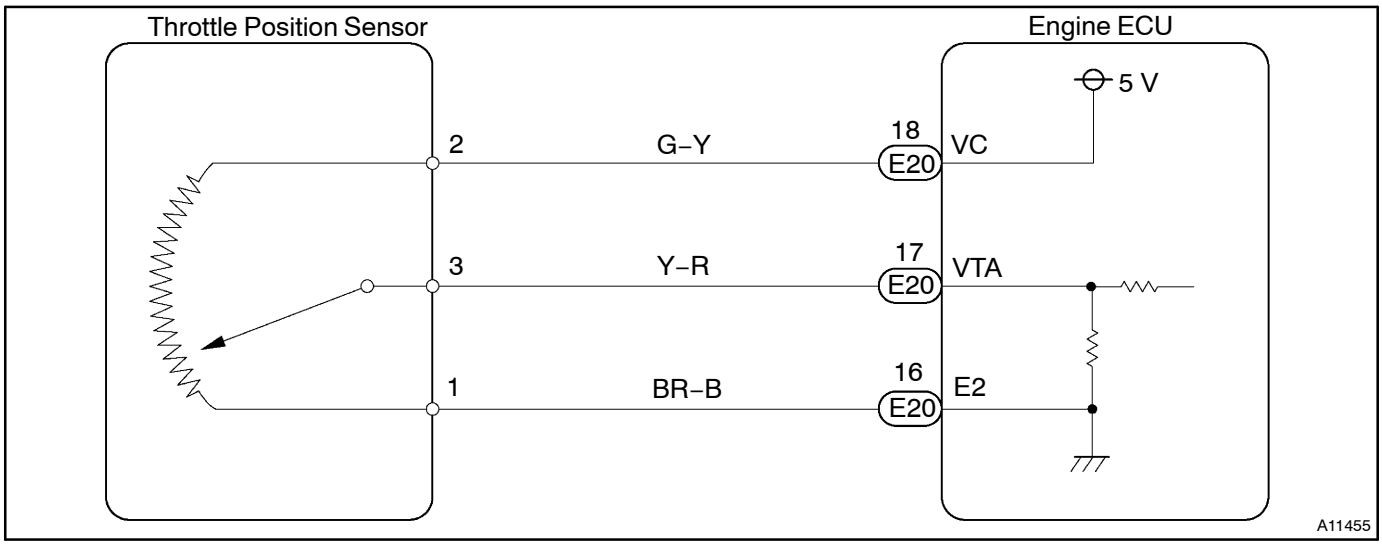


The throttle position sensor is mounted in the throttle body and detects the throttle valve opening angle. When the throttle valve is fully closed, a voltage of approximately 0.3 – 0.8 V is applied to the terminal VTA of the ECU. When the throttle valve is opened, the voltage applied to terminal VTA of the ECU increases in proportion to the opening angle of the throttle valve and becomes approximately 3.2 – 4.9 V when the throttle valve is fully opened. The ECU judges the vehicle driving conditions from these signals input from terminal VTA, and uses them as one of the conditions to decide the air–fuel ratio correction, power increase correction and fuel–cut control etc.

DTC No.	DTC Detecting Condition	Trouble Area
41	Open or short in throttle position sensor circuit for 0.5 sec. or more	• Open or short in throttle position sensor circuit • Throttle position sensor • Engine ECU

HINT:
When the connector for the throttle position sensor is disconnected, DTC 41 is not displayed. DTC 41 is displayed only when there is open or short in the VTA signal circuit of the throttle position sensor.

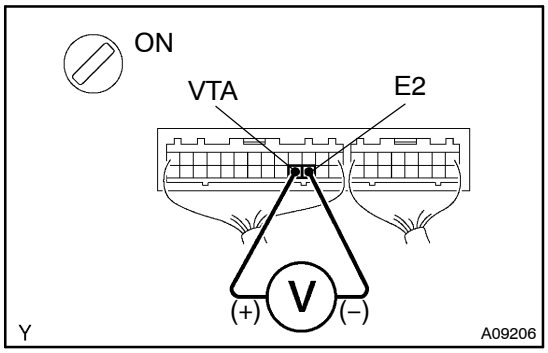
WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:
If DTCs 22, 24, 31 and 41 are output simultaneously, E2 (sensor ground) may be open.

1	Check voltage between terminals VTA and E2 of engine ECU connector.



PREPARATION:

(a) Disconnect the engine ECU from the body bracket (See page FI–36).
(b) Turn the ignition switch ON.
(c) Apply vacuum to the throttle opener.

CHECK:

Measure the voltage between terminals VTA and E2 of the engine ECU connector when the throttle valve is opened gradually from the closed condition.

OK:

Throttle Valve	Voltage
Fully closed	0.3 – 1.0 V
Fully open	2.7 – 5.2 V

HINT:

The voltage should increase steadily in proportion to the throttle valve opening angle.

OK	Check for problem symptoms table (See page DI–15).

NG

2	Check throttle position sensor (See page FI–20).

NG	Replace throttle position sensor.

OK

3	Check for open and short in harness and connector between engine ECU and throttle position sensor (See page IN–19).

NG	Repair or replace harness or connector.

OK

Check and replace engine ECU (See page FI–37).