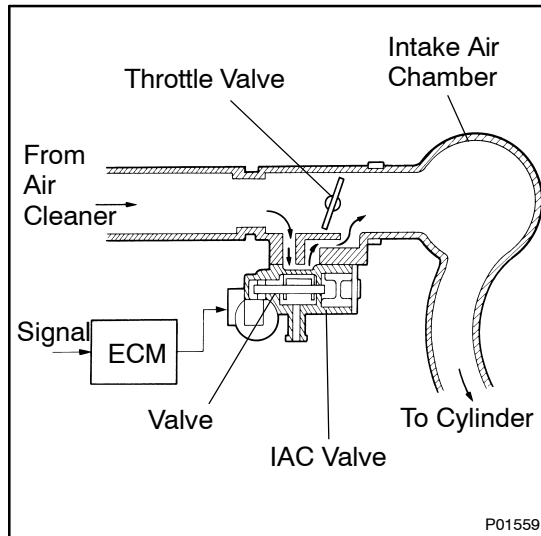


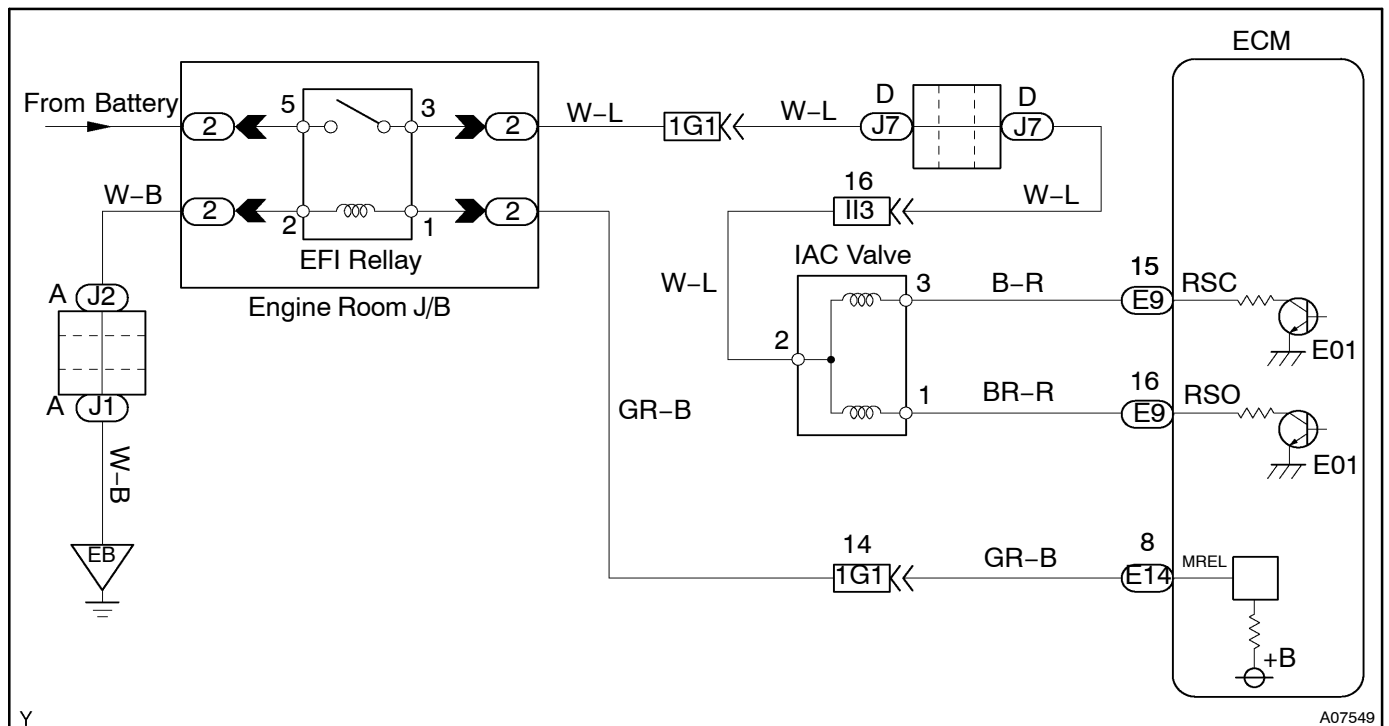
DTC**P0505****Idle Control System Malfunction****CIRCUIT DESCRIPTION**

The rotary solenoid type IAC valve is located in front of the intake air chamber and intake air bypassing the throttle valve is directed to the IAC valve through a passage.

In this way the intake air volume bypassing the throttle valve is regulated, controlling the engine speed.

The ECM operates only the IAC valve to perform idle-up and provide feedback for the target idling speed.

DTC No.	DTC Detecting Condition	Trouble Area
P0505	Idle speed continues to vary greatly from target speed (2 trip detection logic)	• Open or short in IAC valve circuit • IAC valve is stuck or closed • Open or short in A/C signal circuit • Air induction system • ECM

WIRING DIAGRAM

INSPECTION PROCEDURE

HINT:

Read freeze frame data using TOYOTA hand-held tester or OBD II scan tool. Because freeze frame records the engine conditions when the malfunction is detected. When troubleshooting, it is useful for determining whether the vehicle was running or stopped, the engine was warmed up or not, the air-fuel ratio was lean or rich, etc. at the time of the malfunction.

1 Check idle speed.

PREPARATION:

- Warm up the engine to normal operating temperature.
- Switch off all the accessories.
- Switch off the A/C.
- Shift the transmission into the N or neutral position.
- Connect the OBD II scan tool or TOYOTA hand-held tester to the DLC3 on the vehicle.
- Using SST, connect terminals TE1 and E1 of the DLC1.

CHECK:

Check the difference of engine speed between the ones, less than 5 sec. and more than 5sec. after connecting terminals TE1 and E1 of the DLC1.

OK:

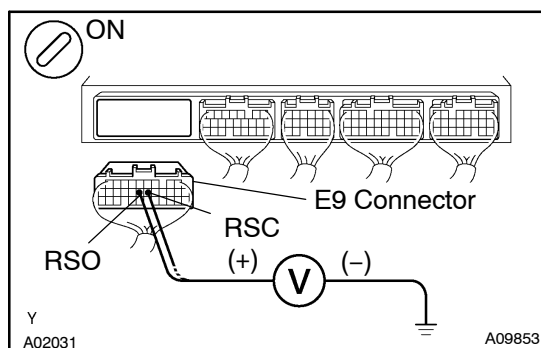
Difference of engine speed: More than 100 rpm

OK

Go to step 6.

NG

2 Check voltage between terminals RSO, RSC of ECM connector and body ground.



PREPARATION:

- Remove the glove compartment (See page [SF-57](#)).
- Disconnect the E9 connector from the ECM.
- Turn the ignition switch ON.

CHECK:

Measure the voltage between terminals RSO, RSC of the ECM connector and body ground.

OK:

Voltage: 9 - 14 V

OK

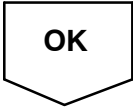
Go to step 5.

NG

3 Check IAC valve (See page [SF-35](#)).

NG

Replace IAC valve.

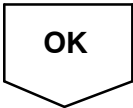
OK

Check for open and short in harness and connector between EFI main relay (Marking: EFI) and IAC valve, and IAC valve and ECM (See page [IN-27](#)).

4

Check operation of IAC valve (See page [SF-35](#)).NG

Repair or replace IAC valve.

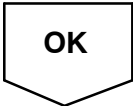
OK

5

Check blockage of IAC valve and the passage to bypass throttle valve.

NG

Repair or replace IAC valve.

OK

Check and replace ECM (See page [IN-37](#)).

6

Check A/C signal circuit (See page [AC-91](#)).NG

Repair or replace.

OK

Check air induction system
(See page [SF-1](#)).