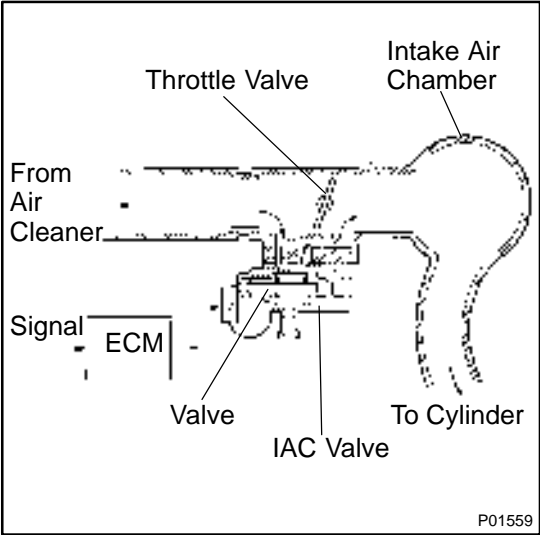


DTC	P0505	Idle Control System Malfunction
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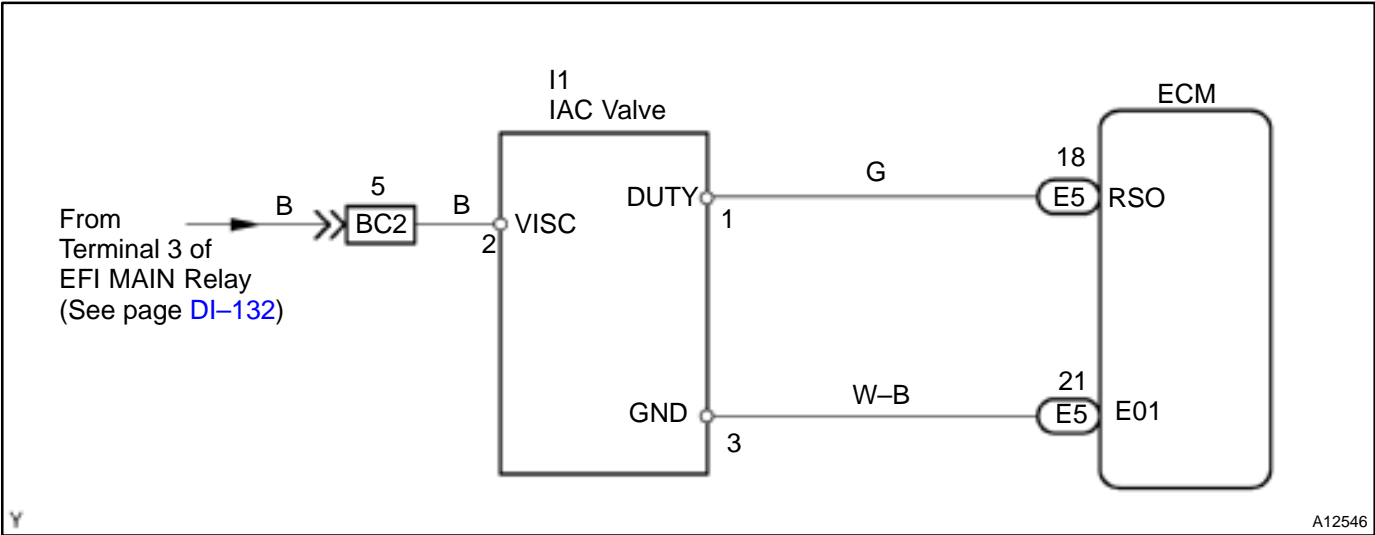
CIRCUIT DESCRIPTION



The rotary solenoid type IAC valve is located on the throttle body 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 Detection Condition	Trouble Area
P0505	Idle speed continues to vary greatly from target speed (2 trip detection logic)	<ul style="list-style-type: none"><li>• Open or short in IAC valve circuit</li><li>• IAC valve is stuck or closed</li><li>• Open or short in A/C switch circuit</li><li>• Air induction system</li><li>• ECM</li></ul>

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 engine idle speed.

## PREPARATION:

- (a) Warm up the engine to normal operating temperature.
- (b) Switch off all the accessories.
- (c) Switch off the A/C.
- (d) Shift the transmission into neutral position.
- (e) Connect the OBD II scan tool or TOYOTA hand-held tester to the DLC3 on the vehicle.

## CHECK:

Check the difference of engine speed in less than 5 sec. and more than 5 sec.

## OK:

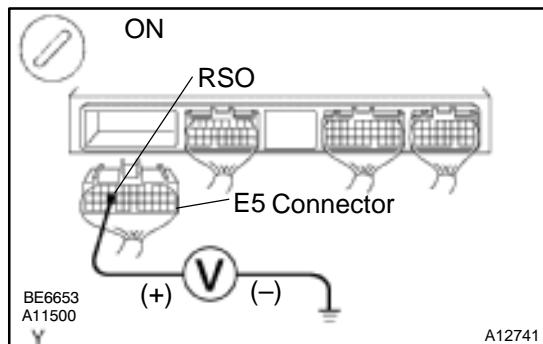
Difference of engine speed: More than 100 rpm.

OK

Go to step 6.

NG

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



## PREPARATION:

- (a) Disconnect the ECM with connector from body panel (See page [SF-62](#)).
- (b) Disconnect the E5 connector from ECM.
- (c) Turn the ignition switch ON.

## CHECK:

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

## OK:

Voltage: 9 – 14 V

OK

Go to step 4.

NG

# 3 Check IAC valve (See page [SF-38](#)).

NG

Replace IAC valve.

OK

Check for open and short in harness and connector between IAC valve and ECM (See page [IN-28](#)).

**4** Check operation of IAC valve (See page [SF-38](#)).

NG

Replace IAC valve.

OK

**5** Check blockage of IAC valve and passage to bypass throttle valve.

NG

Replace IAC valve.

OK

Check and replace ECM (See page [IN-28](#)).

**6** Check for A/C signal circuit (See page [AC-84](#)).

NG

Repair or replace.

OK

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