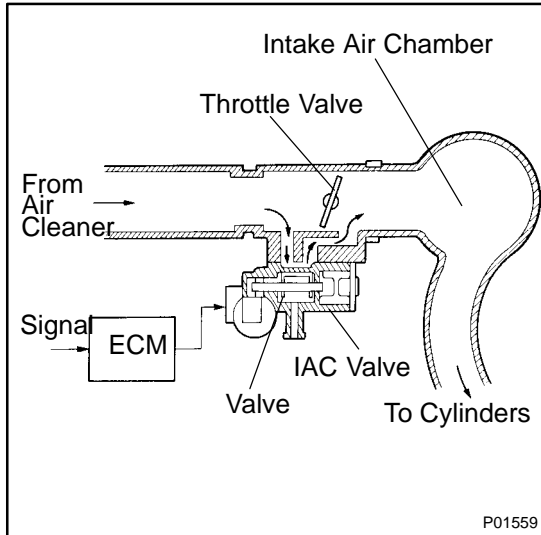


<b>DTC</b>	<b>P0505</b>	<b>Idle Control System Malfunction</b>
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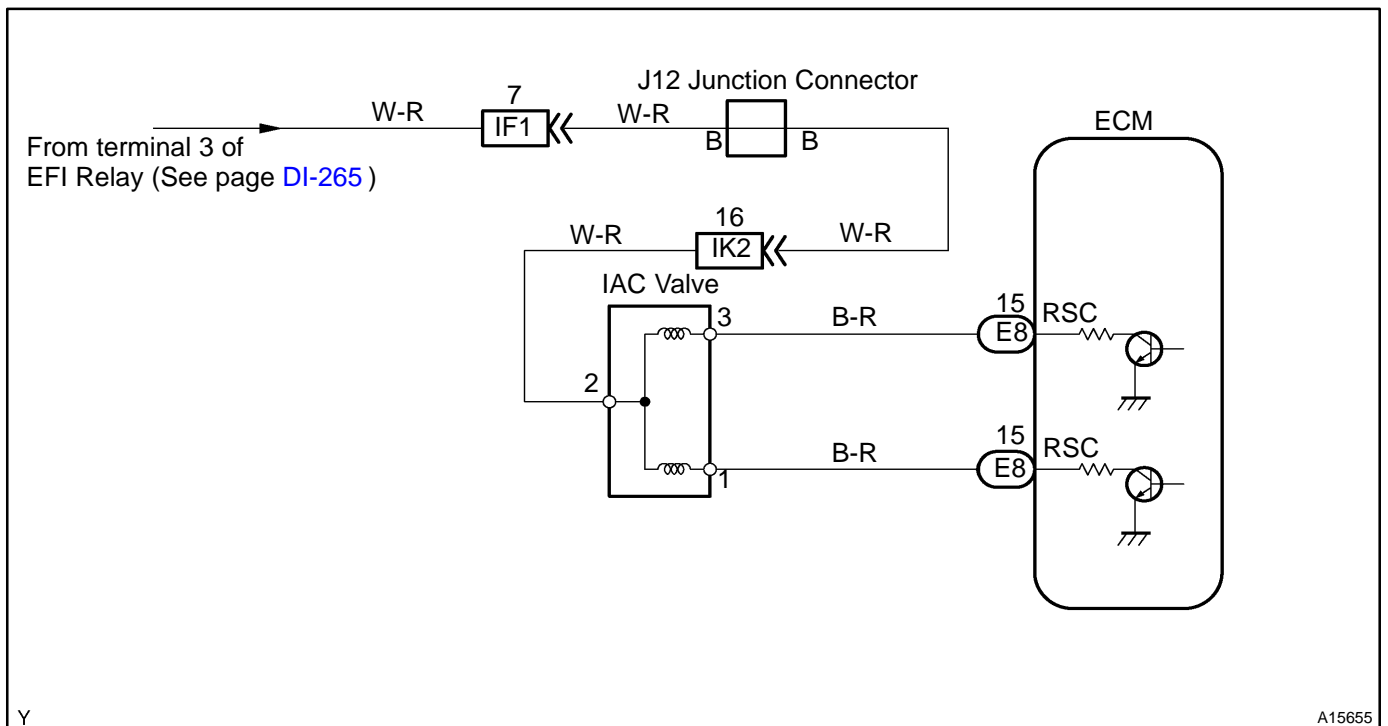
**CIRCUIT DESCRIPTION**



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 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 signal 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, as freeze frame data records the engine conditions when a 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:

- 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.

SST 09843-18020

#### CHECK:

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

#### OK:

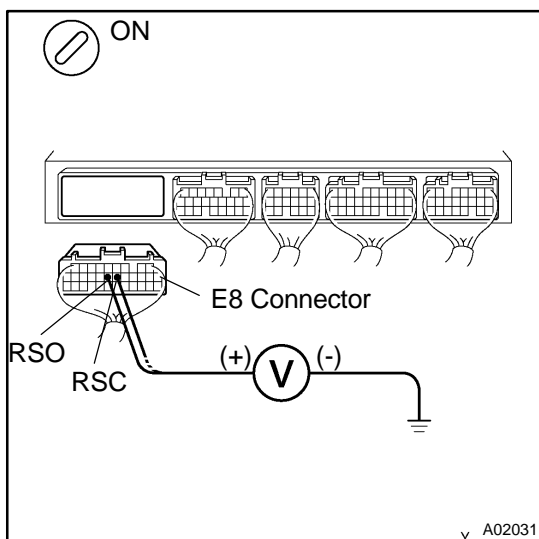
Difference of engine speed: More than 100 rpm

NG

Go to step 6.

OK

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



#### PREPARATION:

- Remove the glove compartment (See page SF-54).
- Disconnect the E8 connector from the ECM.
- Turn the ignition switch ON.

#### CHECK:

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

#### OK:

Voltage: 9 - 14 V

OK

Go to step 4.

NG

3 Check IAC valve (See page [SF-33](#)).

NG

Replace IAC valve.

OK

Check for open and short in harness and connector between R/B No.2 and IAC valve, and IAC valve and ECM (See page [IN-28](#)).

4 Check operation of IAC valve (See page [SF-37](#)).

NG

Repair or replace IAC valve.

OK

5 Check operation of IAC valve and passage to bypass throttle valve.

NG

Repair or replace IAC valve.

OK

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

6 Check A/C signal circuit (See page [AC-14](#)).

NG

Repair or replace.

OK

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