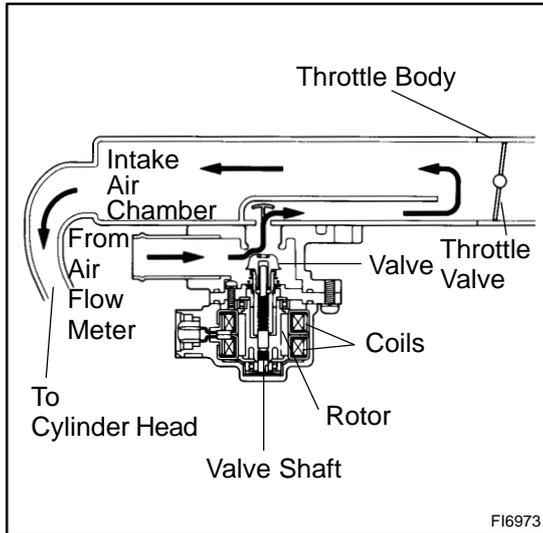


<b>DTC</b>	<b>P0505</b>	<b>Idle Control System Malfunction</b>
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**CIRCUIT DESCRIPTION**



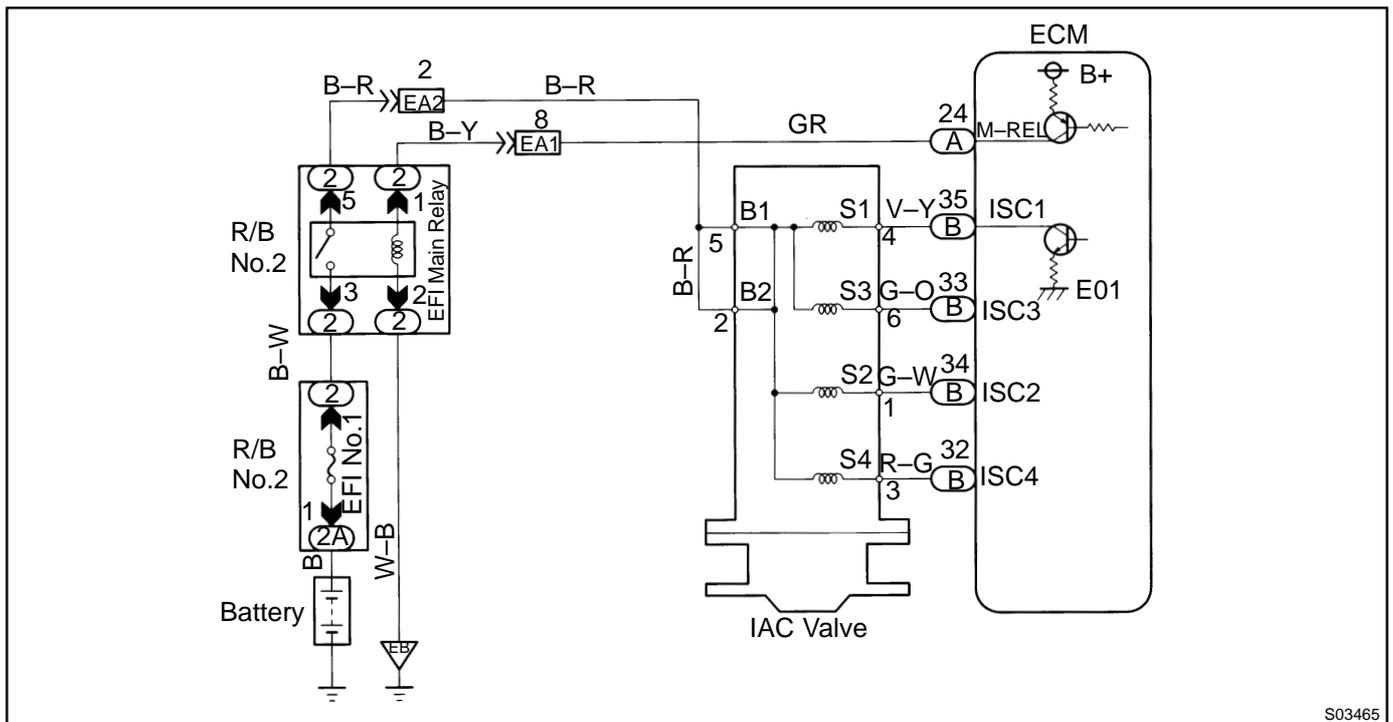
The step motor type IAC valve is located in front of the intake air chamber. Intake air bypassing the throttle valve is directed to the IAC valve through a passage. A step motor is built into the IAC valve. It consists of 4 coils, a magnetic rotor, valve shaft and valve.

When current flows to the coils due to signals from the ECM, the rotor turns and moves the valve shaft forward or backward, changing the clearance between the valve and the valve seat. In this way the intake air volume bypassing the throttle valve is regulated, controlling the engine speed.

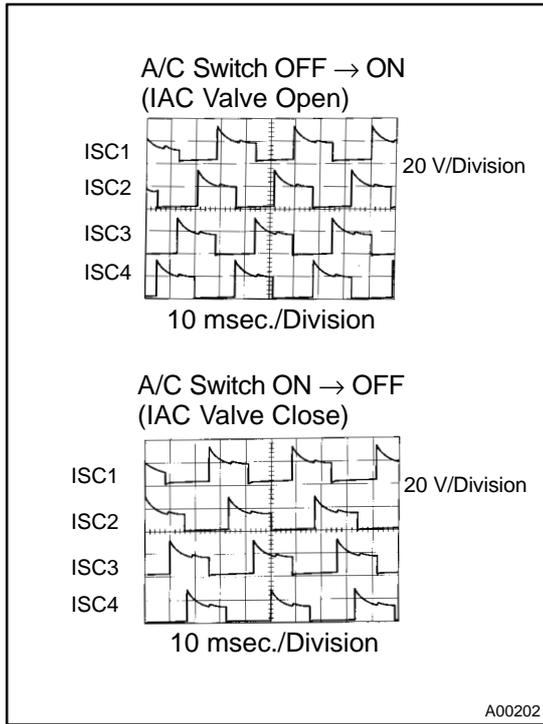
There are 125 possible positions to which the valve can be opened.

DTC No.	DTC Detecting Condition	Trouble Area
P0505	Idle speed continues to vary greatly from the target speed (2 trip detection logic)	<ul style="list-style-type: none"> <li>• IAC valve is stuck or closed</li> <li>• Open or short in IAC valve circuit</li> <li>• Open or short in A/C signal circuit</li> <li>• Air intake (hose loose)</li> </ul>

**WIRING DIAGRAM**



### Reference INSPECTION USING OSCILLOSCOPE



- With engine idling measure waveforms between terminals ISC1, ISC2, ISC3, ISC4 and E01 of ECM when A/C switch ON or OFF.

HINT:

The correct waveforms are as shown.

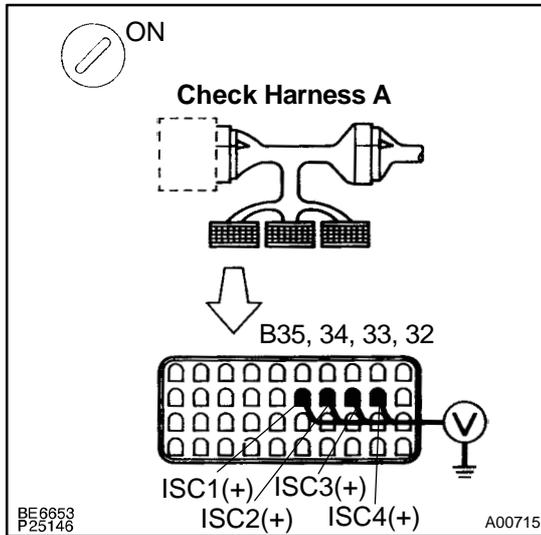
### INSPECTION PROCEDURE

1	Check air induction system (See page <a href="#">SF-1</a> ).
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<b>NG</b>	Repair or replace.
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<b>OK</b>
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**2 Check voltage between terminals ISC1, ISC2, ISC3, ISC4 of ECM connector and body ground.**

**PREPARATION:**

(a) Connect Check Harness A to the connectors on the wire harness side (See page [DI-164](#)).

**HINT:**

The other side of Check Harness A is not connected to the ECM terminals.

(b) Turn ignition switch ON.

**CHECK:**

Measure voltage between terminals ISC1, ISC2, ISC3, ISC4 of ECM connector and body ground.

**OK:**

**Voltage: 9 - 14 V**

OK

Go to step 4.

NG

**3 Check IAC valve (See page [SF-52](#)).**

NG

Replace IAC valve.

OK

Check for open and short in harness and connector between EFI main relay (Marking: EFI MAIN) and IAC valve, IAC valve and ECM (See page [IN-28](#)).

**4 Check operation of the IAC valve (See page [SF-52](#)).**

NG

Repair or replace IAC valve.

OK

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

1997 SUPRA (RM502U)