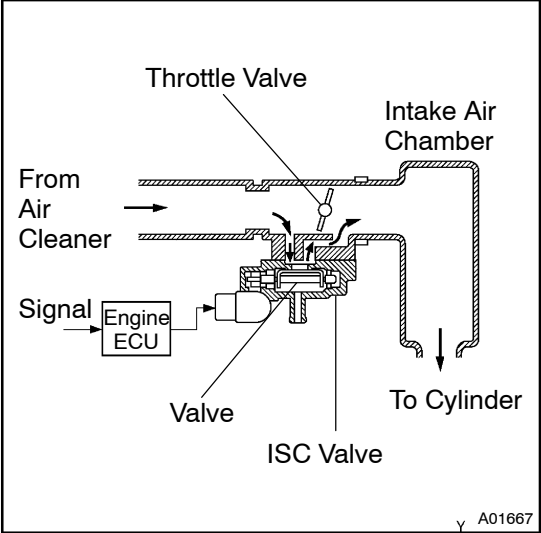


DTC	P0505/33	Idle Control System Malfunction
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CIRCUIT DESCRIPTION

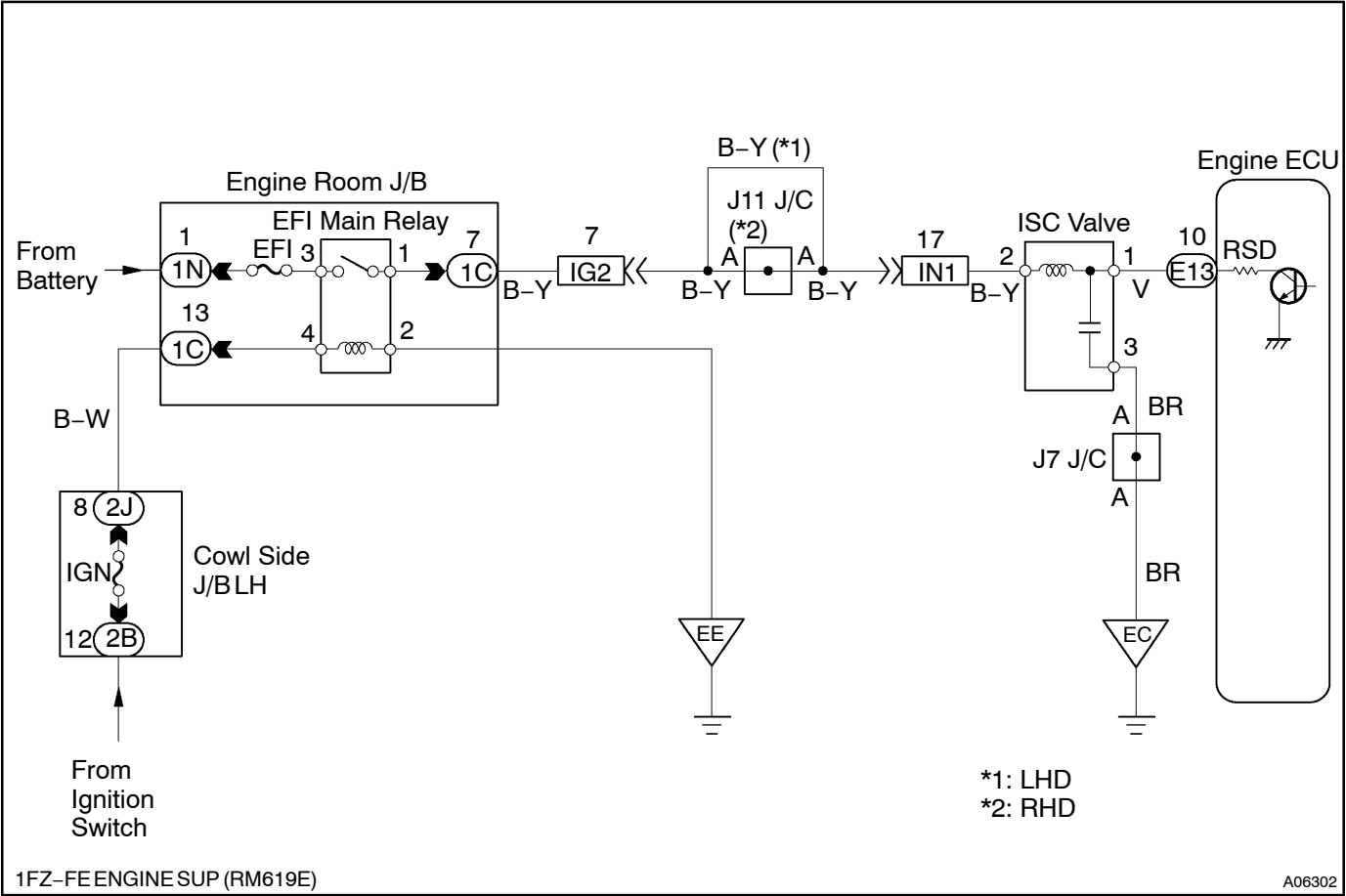


The rotary solenoid type ISC valve is located in front of the intake air chamber and intake air bypassing the throttle valve is directed to the ISC valve through a passage. In this way the intake air volume bypassing the throttle valve is regulated, controlling the engine speed. The engine ECU operates only the ISC valve to perform idle

-up

DTC No.	DTC Detecting Condition	Trouble Area
P0505/33	Open or short in ISC valve circuit	<ul style="list-style-type: none"><li>• Open or short in ISC valve circuit</li><li>• ISC valve</li><li>• Engine ECU</li></ul>

WIRING DIAGRAM



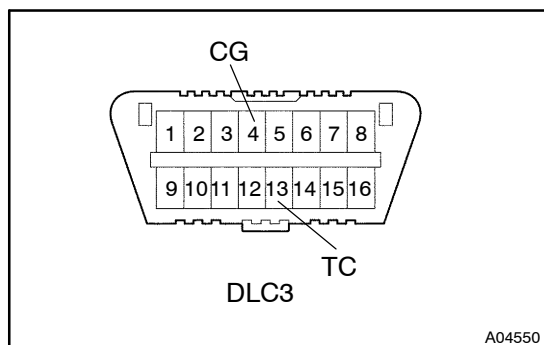
## INSPECTION PROCEDURE

### HINT:

Read freeze frame data using hand-held tester. 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 warmed up or not, the air-fuel ratio lean or rich, etc. at the time of the malfunction.

### When using hand-held tester

#### 1 Check engine idle speed.



#### PREPARATION:

- (a) Warm up engine to normal operating temperature.
- (b) Switch off all accessories.
- (c) Switch off air conditioning.
- (d) Shift transmission into "N" or neutral position.
- (e) Connect hand-held tester to DLC3 on the vehicle.
- (f) Using SST, connect terminals 13 (TC) and 4 (CG) of the DLC3.

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#### CHECK:

Check the difference of engine speed between the ones less than 5 sec. and more than 5 sec. after connecting terminals 13 (TC) and 4 (CG) of the DLC3.

#### OK:

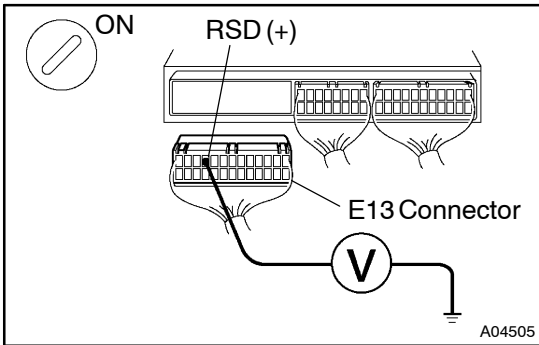
**Difference of engine speed: More than 100 rpm**

OK

**Proceed to next circuit inspection shown on problem symptom table ([See page DI-21](#)).**

NG

## 2 Check voltage between terminal RSD of engine ECU connector and body ground.



### PREPARATION:

- (a) Remove the glove compartment door.
- (b) Disconnect the E13 connector of engine ECU.
- (c) Turn the ignition switch ON.

### CHECK:

Measure voltage between terminal RSD of engine ECU connector and body ground.

### OK:

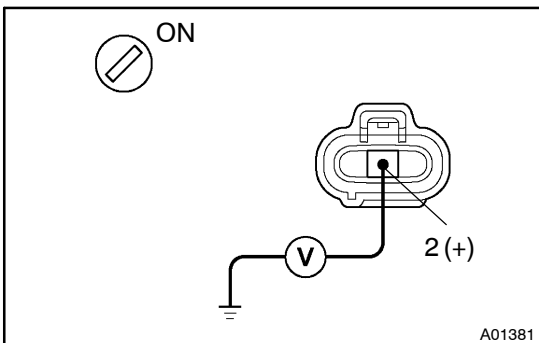
**Voltage: 9 - 14 V**

OK

Go to step 5.

NG

## 3 Check voltage between terminal of ISC valve connector and body ground.



### PREPARATION:

- (a) Disconnect the ISC valve connector.
- (b) Turn the ignition switch ON.

### CHECK:

Measure voltage between terminal 2 of ISC valve connector and body ground.

### OK:

**Voltage: 9 - 14 V**

NG

Check for open and short in harness and connector between ISC valve and engine room J/B.

OK

**4 Check for open and short in harness and connector in RSD circuit.**

**NG**

**Repair or replace.**

**OK**

**Replace ISC valve.**

**5 Check for open and short in harness and connector between terminal 3 of ISC valve connector and body ground.**

**NG**

**Repair or replace.**

**OK**

**6 Check operation of the ISC valve ([See page FI-42](#)).**

**NG**

**Replace ISC valve.**

**OK**

**7 Check the blockage of ISC valve and the passage to bypass the throttle valve.**

**NG**

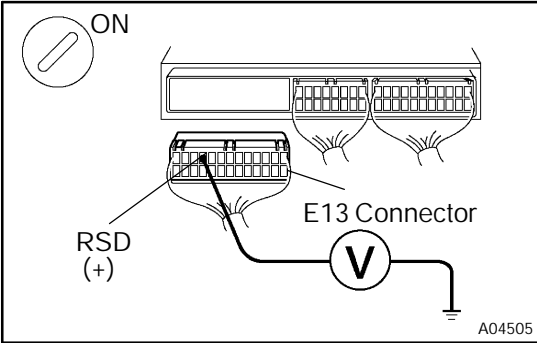
**Repair or replace ISC valve and throttle body.**

**OK**

**Proceed to next circuit inspection shown on problem symptom table ([See page DI-21](#)).**

## When not using hand-held tester

**1** Check voltage between terminal RSD of engine ECU and body ground.



### PREPARATION:

- (a) Remove the glove compartment door.
- (b) Disconnect the E13 connector of engine ECU.
- (c) Turn the ignition switch ON.

### CHECK:

Measure voltage between terminal RSD of engine ECU connector and body ground.

### OK:

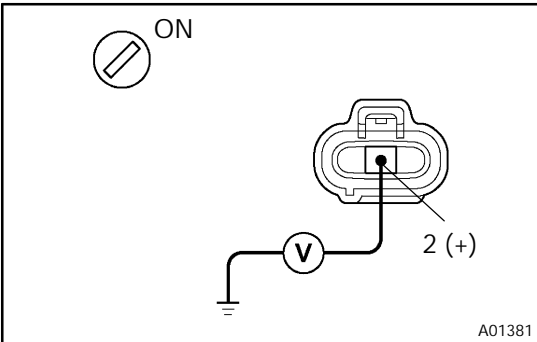
**Voltage: 9 – 14 V**

**OK**

**Go to step 4.**

**NG**

**2** Check voltage between terminal of ISC valve connector and body ground.



### PREPARATION:

- (a) Disconnect the ISC valve connector.
- (b) Turn the ignition switch ON.

### CHECK:

Measure voltage between terminal 2 of ISC valve connector and body ground.

### OK:

**Voltage: 9 – 14 V**

**NG**

**Check for open and short in harness and connector between ISC valve and engine room J/B.**

**OK**

3 Check for open and short in harness and connector in RSD circuit.

NG

Repair or replace.

OK

Replace ISC valve.

4 Check for open and short in harness and connector between terminal 3 of ISC valve connector and body ground.

NG

Repair or replace.

OK

5 Check operation of the ISC valve ([See page FI-42](#)).

NG

Replace ISC valve.

OK

6 Check the blockage of ISC valve and the passage to bypass the throttle valve.

NG

Repair or replace ISC valve and throttle body.

OK

Proceed to next circuit inspection shown on problem symptom table ([See page DI-21](#)).