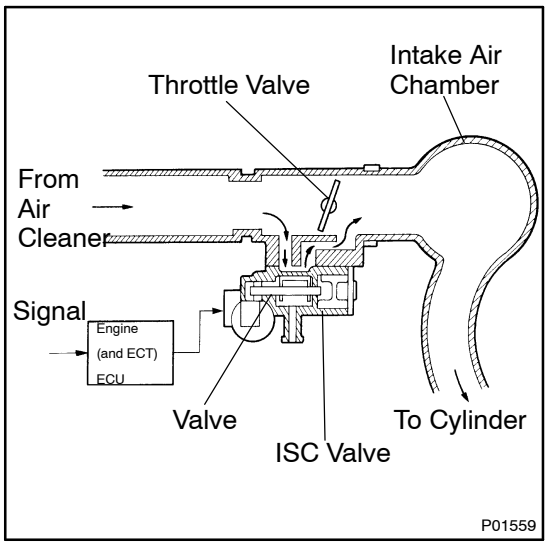
DIAG2–01

DTC	P0505/33	Idle Control System Malfunction

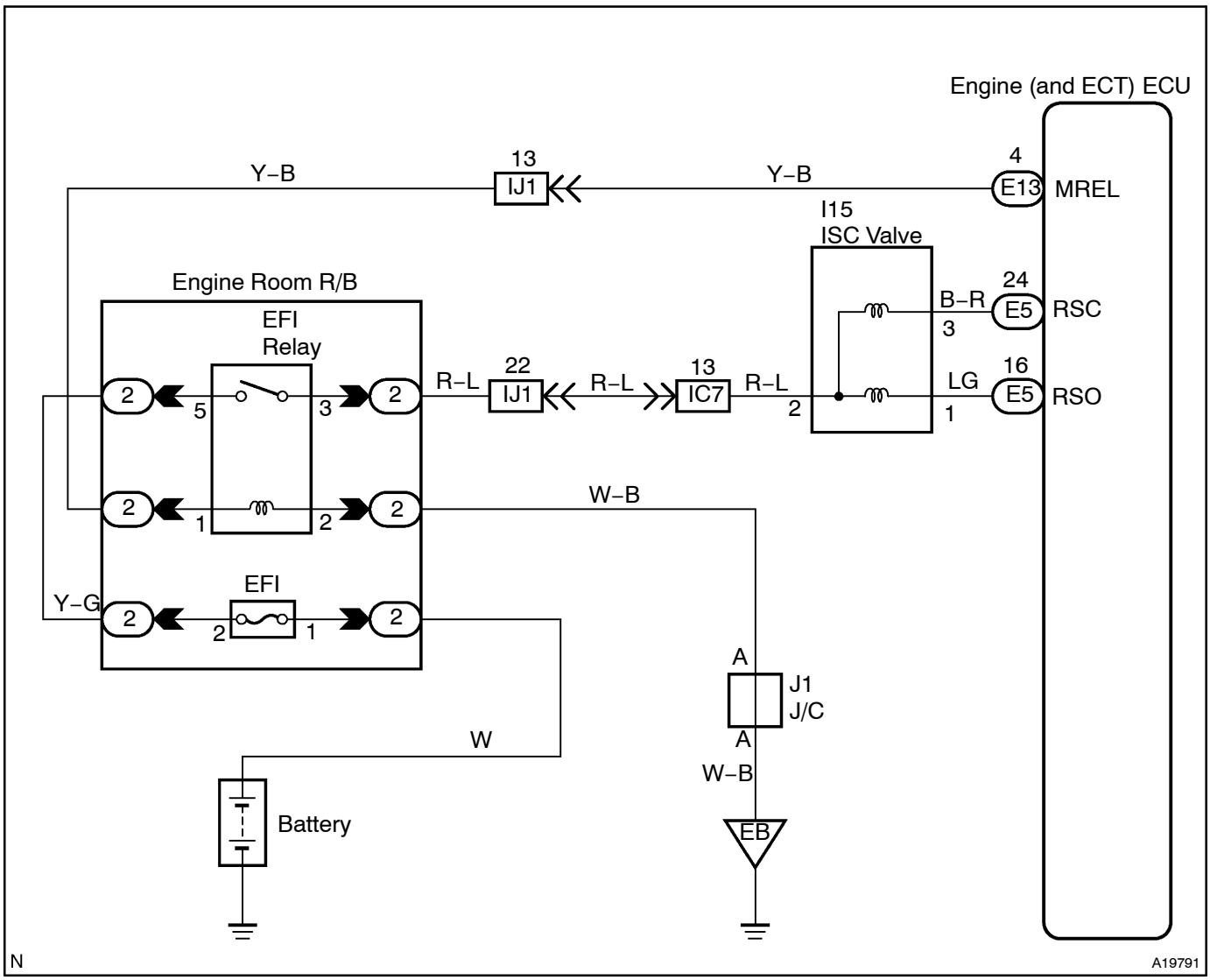
CIRCUIT DESCRIPTION



The rotary solenoid type ISC valve is located in front of the intake air chamber. Since the intake air is partially directed to the ISC valve, the air volume going through the throttle valve is regulated, and thus the engine speed is controlled.
The engine (and ECT) ECU operates only the ISC valve to perform idle–up and provide feedback for the target idling speed.

DTC No.	DTC Detecting Condition	Trouble Area
P0505/33	Open or short in ISC valve circuit.	• Open or short in ISC valve circuit • ISC valve • Engine (and ECT) ECU

WIRING DIAGRAM



INSPECTION PROCEDURE

HINT:

Read the freed frame data using hand–held tester, which is recorded when a malfunction is detected on the engine. Because freeze frame records the engine conditions when the malfunction is detected, when troubleshooting, it is useful to determine 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 operation of the ISC valve.**

PREPARATION:

(a) Connect the hand–held tester to the DLC3.
(b) Turn ignition switch ON and hand–held tester main switch ON.
(c) Select the active test mode on the hand–held tester.

CHECK:

Check engine speed when the ISC valve is operated by hand–held tester.

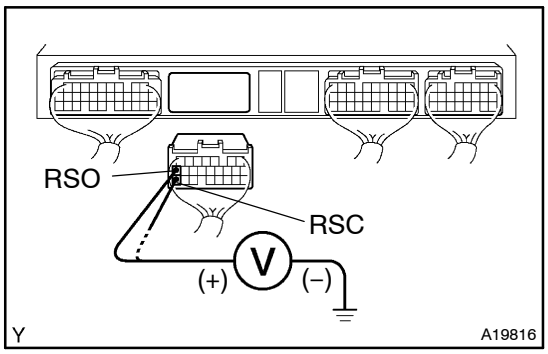
OK:

Engine speed is increased and decreased in response to the change of ISC duty ratio.

OK → **Go to step 4.**

NG

2	**Check voltage between terminals RSO, RSC of the engine (and ECT) ECU connector and body ground.**



PREPARATION:

(a) Remove the glove compartment door.
(b) Disconnect the E5 connector of the engine (and ECT) ECU.
(c) Turn the ignition switch ON.

CHECK:

Measure the voltage between terminals RSO and RSC of the engine (and ECT) ECU connector and the body ground.

OK:

Voltage: 9 – 14 V

OK → **Go to step 4.**

NG

3	Check ISC valve (See Pub. No. RM519E, page EG–150).

NG → Replace ISC valve.

OK

Check for open and short in harness and connector between E/G Room J/B and ISC valve, ISC valve and engine (and ECT) ECU (See page IN–20).

4	Check air induction system.

NG → Repair or replace.

OK

5	Check the A/C signal circuit.

NG → Repair or replace.

OK

Check and replace engine (and ECT) ECU (See page IN–20).

When not using hand–held tester

1	**Check air induction system.**

OK → **Repair or replace.**

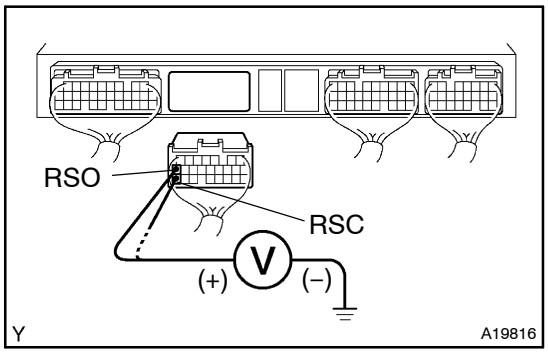
OK

2	**Check for A/C signal circuit.**

OK → **Repair or replace.**

OK

3	**Check voltage between terminals RSO, RSC of engine (and ECT) ECU and body ground.**



PREPARATION:

(a) Remove glove compartment door.
(b) Disconnect the E5 connector of the engine (and ECT) ECU.
(c) Turn ignition switch ON.

CHECK:

Measure the voltage between terminals RSO and RSC of the engine (and ECT) ECU connector and the body ground.

OK:

Voltage: 9 – 14 V

OK → **Go to step 5.**

NG

4	Check ISC valve.

NG → Replace ISC valve.

OK

Check for open and short in harness and connector between J/B and ISC valve and engine (and ECT) ECU (See page IN–20).

5	Check operation of the ISC valve.

NG → Replace ISC valve.

OK

Check and replace engine (and ECT) ECU (See page IN–20).