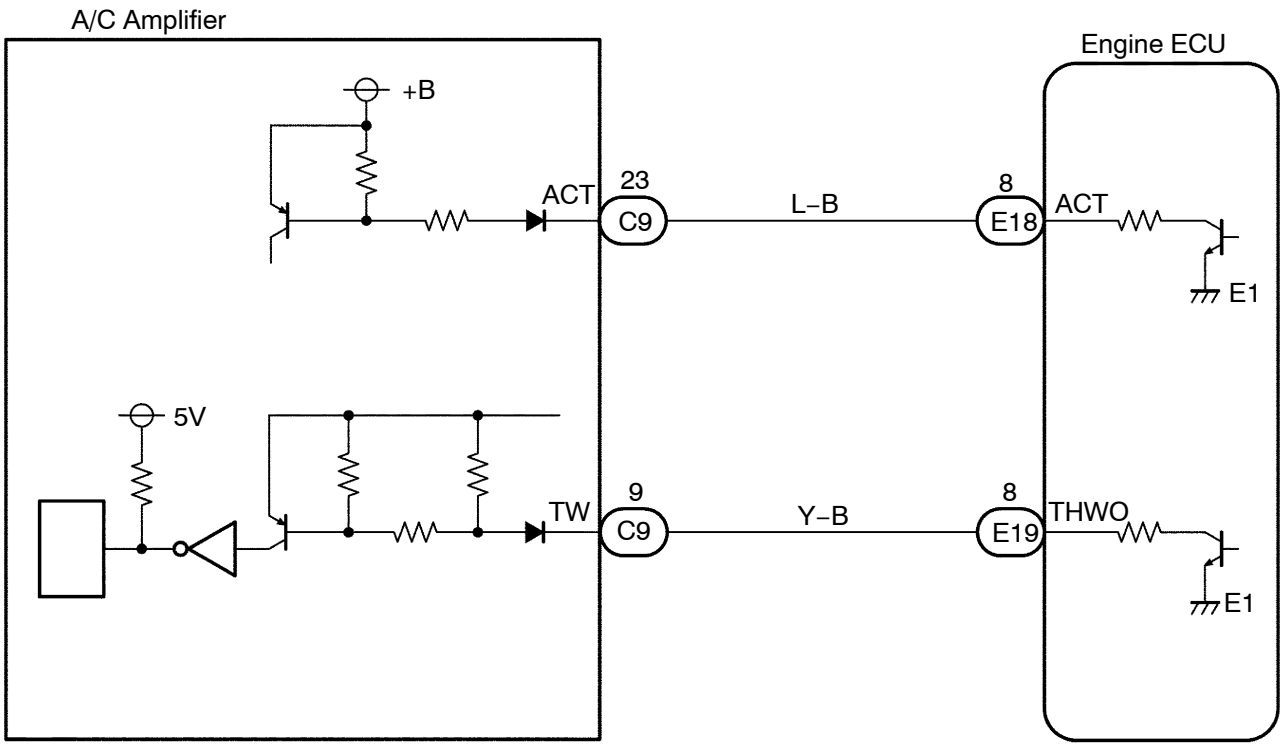
DI3SD–01

A/C Cut Control Circuit

CIRCUIT DESCRIPTION

This circuit cuts air conditioning operation during vehicle acceleration in order to increase acceleration performance. During acceleration with the vehicle speed at 30 km/h (19 mph) or less and accelerator pedal opening angle at 45° or more, the A/C magnetic switch is turned OFF for several seconds.
The air conditioning is also controlled by the ECU out putting the engine coolant temperature to A/C amplifier.

WIRING DIAGRAM



INSPECTION PROCEDURE
When using hand–held tester

1	**Connect the hand–held tester and check operation of air conditioning cut control.**

PREPARATION:

(a) Connect the hand–held tester to the DLC3.

(b) Turn the ignition switch ON and push the hand–held tester main switch ON.

(c) Start the engine and air conditioning switch ON.

HINT:

A/C magnetic clutch is turned ON.

(d) Select the ACTIVE TEST mode on the hand–held tester.

CHECK:

Check operation of A/C magnetic clutch cut when air conditioning cut control is operated by the hand–held tester.

OK:

A/C magnet clutch is turned OFF.

OK → **Proceed to next circuit inspection shown on problem symptoms table (See page DI–19).**

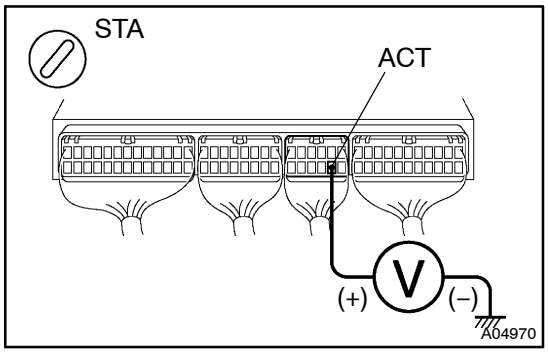
NG

2	**Check for open and short in harness and connector between engine ECU and A/C amplifier (See page IN–19).**

NG → **Repair or replace harness or connector.**

OK

3	Check voltage between terminal ACT of engine ECU and body ground.



PREPARATION:

(a) Remove the glove compartment door.

(b) Start the engine.

CHECK:

Measure voltage between terminal ACT of engine ECU connector and body ground when A/C switch is turned to ON and OFF.

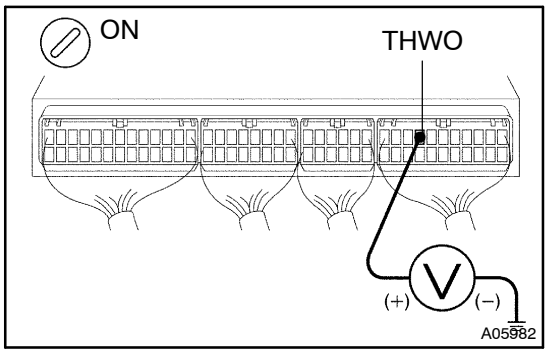
OK:

A/C switch condition	Voltage
ON	9 – 14 V
OFF	0 – 3 V

NG → **Check and replace A/C amplifier.**

OK

4	Check voltage between terminal THWO of engine ECU and body ground.



PREPARATION:

(a) Remove the glove compartment door.

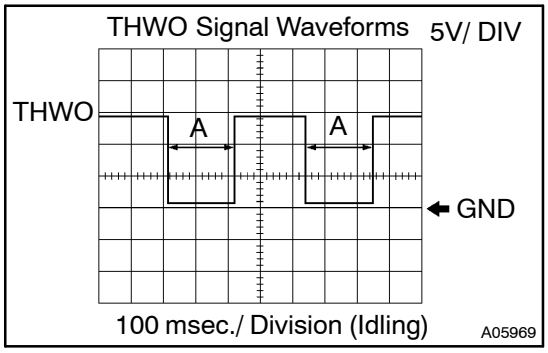
(b) Turn the ignition switch ON.

CHECK:

Measure voltage between terminal THWO of engine ECU and body ground.

OK:

Voltage is generated intermittently.



Reference: INSPECTION USING OSCILLOSCOPE

During idling, check waveform between terminals THWO and E1 of engine ECU.

HINT:

The correct waveform is as shown.

Water temp.	30˚C or less	Approx. 75˚C	90˚C or more
A	65 msec.	335.8 msec.	393 msec.

NG → **Check and replace A/C amplifier.**

OK

Check and replace engine ECU (See page IN–19).

When not using hand–held tester

1	Check voltage between terminal ACT of engine ECU and body ground (See page DI–96, Step 3).

OK → Check and replace engine ECU (See page IN–19).

NG

2	Check voltage between terminal THWO of engine ECU and body ground (See page DI–96, Step 4).

OK → Check and replace engine ECU (See page IN–19).

NG

3	Check for open and short in harness and connector between engine ECU and A/C amplifier (See page IN–19).

NG → Repair or replace harness or connector.

OK

Check and replace A/C amplifier.