

CIRCUIT DESCRIPTION

Since the width of the IGT signal is constant, the dwell angle control circuit in the igniter determines the time the control circuit starts primary current flow to the ignition coil based on the engine rpm and ignition timing one revolution ago, that is, the time the Tr2 turns on.

This turns Tr2 off, interrupting the primary current flow and generating a high voltage in the secondary coil which causes the spark plug to spark. Also, by the counter electromotive force generated when the primary current is interrupted, the igniter sends an ignition confirmation signal (IGF) to the ECM. The ECM stops fuel injection as a fail safe function when the IGF signal is not input to the ECM.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 Check for spark (See page [IG-1](#)).

NG

Go to step 4.

OK

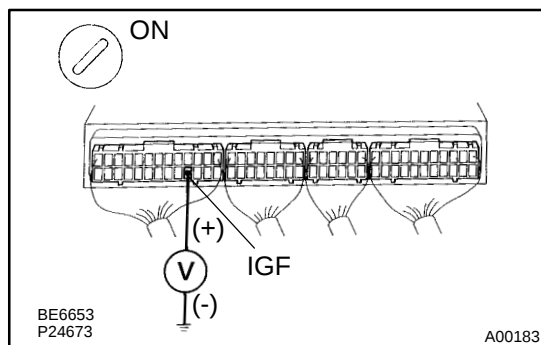
2 Check for open and short in harness and connector in IGF signal circuit between ECM and igniter (See page [IN-28](#)).

NG

Repair or replace harness or connector.

OK

3 Disconnect igniter connector and check voltage between terminal IGF of ECM connector and body ground.

**PREPARATION:**

- (a) Disconnect igniter connector.
- (b) Remove instrument panel speaker No.1 panel (See page [SF-65](#)).
- (c) Turn ignition switch ON.

CHECK:

Measure voltage between terminal IGF of ECM connector and body ground.

OK:

Voltage: 4.5 - 5.5 V

OK

Replace igniter.

NG

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

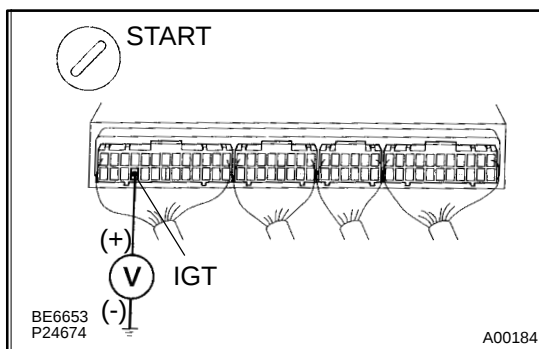
- 4** Check for open and short in harness and connector in IGT signal circuit between ECM and igniter (See page [IN-28](#)).

NG

Repair or replace harness or connector.

OK

- 5** Check voltage between terminals IGT of ECM connector and body ground.

**PREPARATION:**

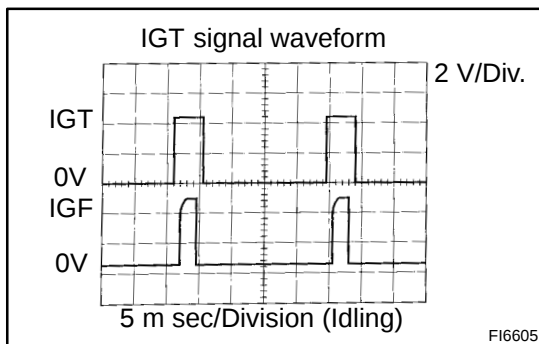
Remove instrument panel speaker No.1 panel (See page [SF-65](#)).

CHECK:

Measure voltage between terminal IGT of ECM connector and body ground when engine is cranked.

OK:

Voltage: More than 0.1 V and less than 4.5 V

**Reference: INSPECTION USING OSCILLOSCOPE**

During cranking or idling, check waveforms between terminals IGT and E1 of engine control module.

HINT:

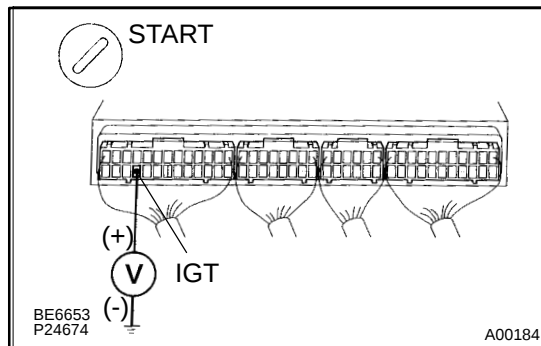
The correct regulator waveforms are as shown.

NG

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

NG

6 Disconnect igniter connector and check voltage between terminals IGT of ECM connector and body ground.



PREPARATION:

- (a) Disconnect igniter connector.
- (b) Remove instrument panel speaker No.1 panel (See page [SF-65](#)).

CHECK:

Measure voltage between terminal IGT of ECM connector and body ground when engine is cranked.

OK:

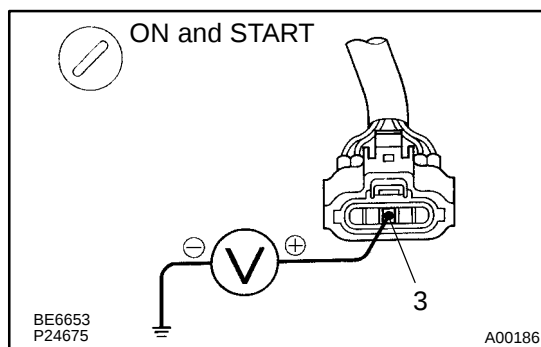
Voltage: More than 0.1 V and less than 4.5 V

OK

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

NG

7 Check voltage between terminal 3 of igniter connector and body ground.



PREPARATION:

Disconnect igniter connector.

CHECK:

Measure voltage between terminal 3 of igniter connector and body ground, when ignition switch is turned to "ON" and "START" position.

OK:

Voltage: 9 - 14 V

NG

Check and repair igniter power source circuit.

OK

8 Check for open and short in harness and connector between ignition switch and ignition coil, ignition coil and igniter (See page [IN-28](#)).

NG

Repair or replace harness or connector.

OK

9	Check ignition coil (See page IG-1).
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NG	Replace ignition coil.
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OK

Replace igniter.