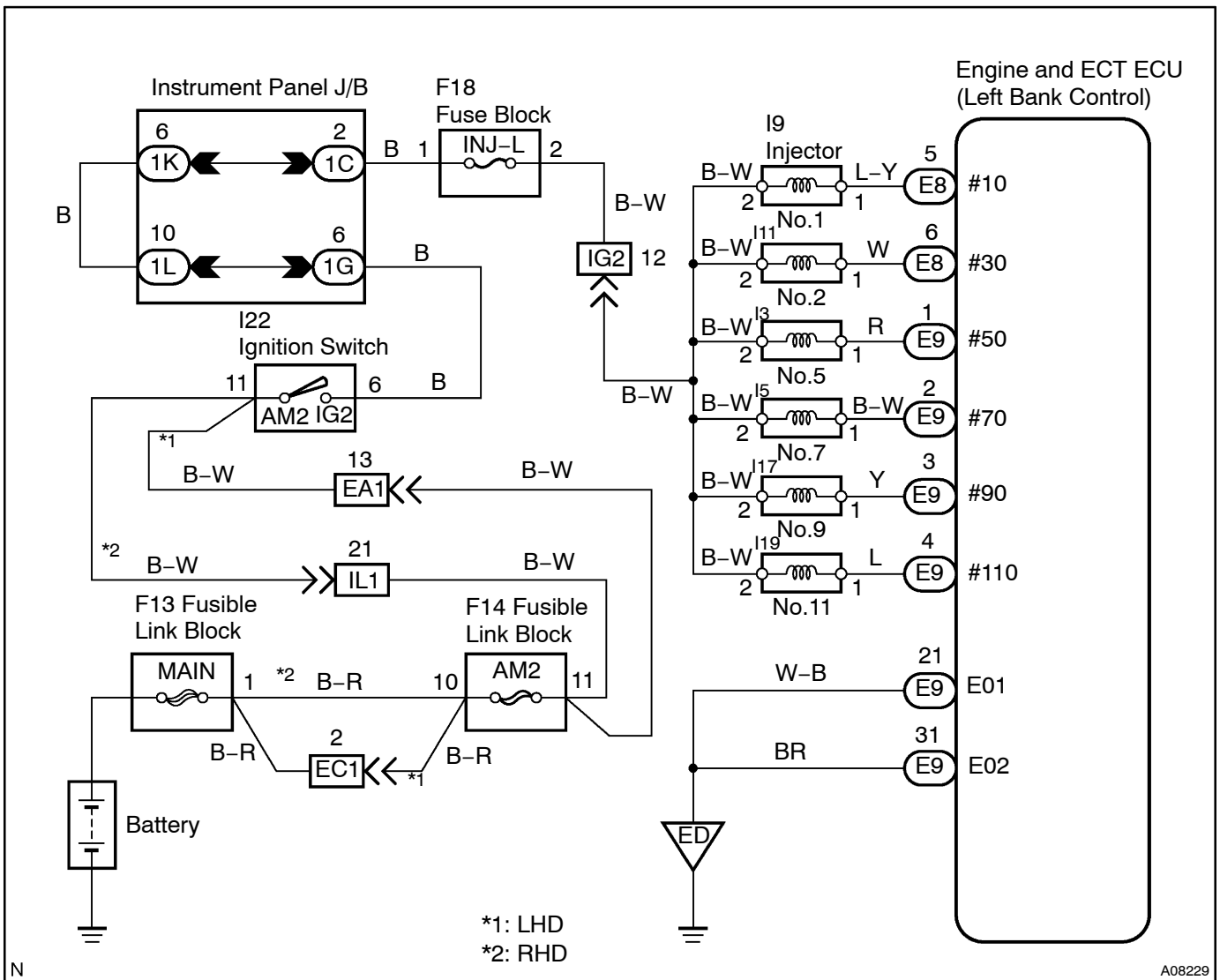


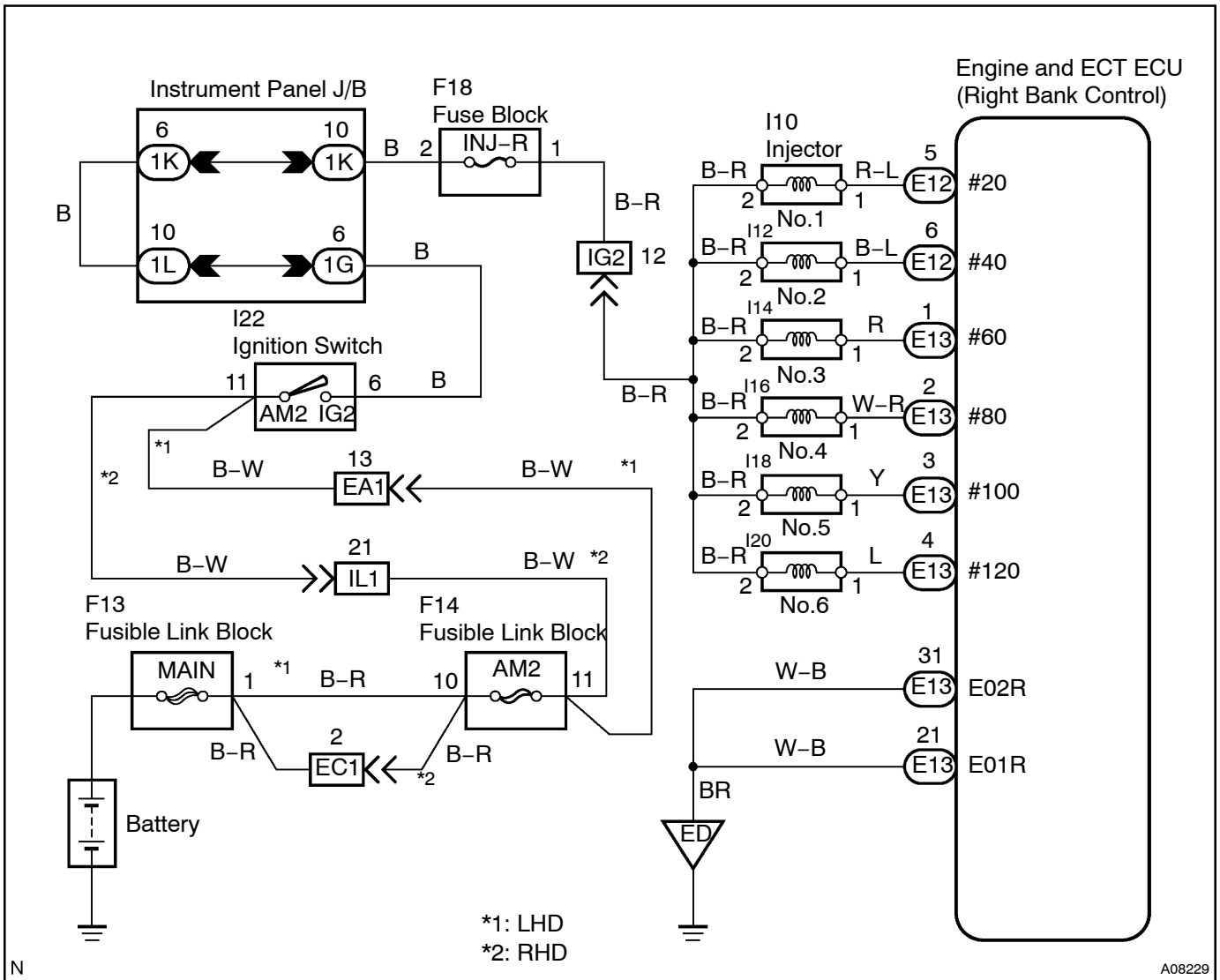
# Injector Circuit

## CIRCUIT DESCRIPTION

The injectors are provided to the intake manifold. They inject fuel into the cylinders based on the signals from engine ECU.

## WIRING DIAGRAM



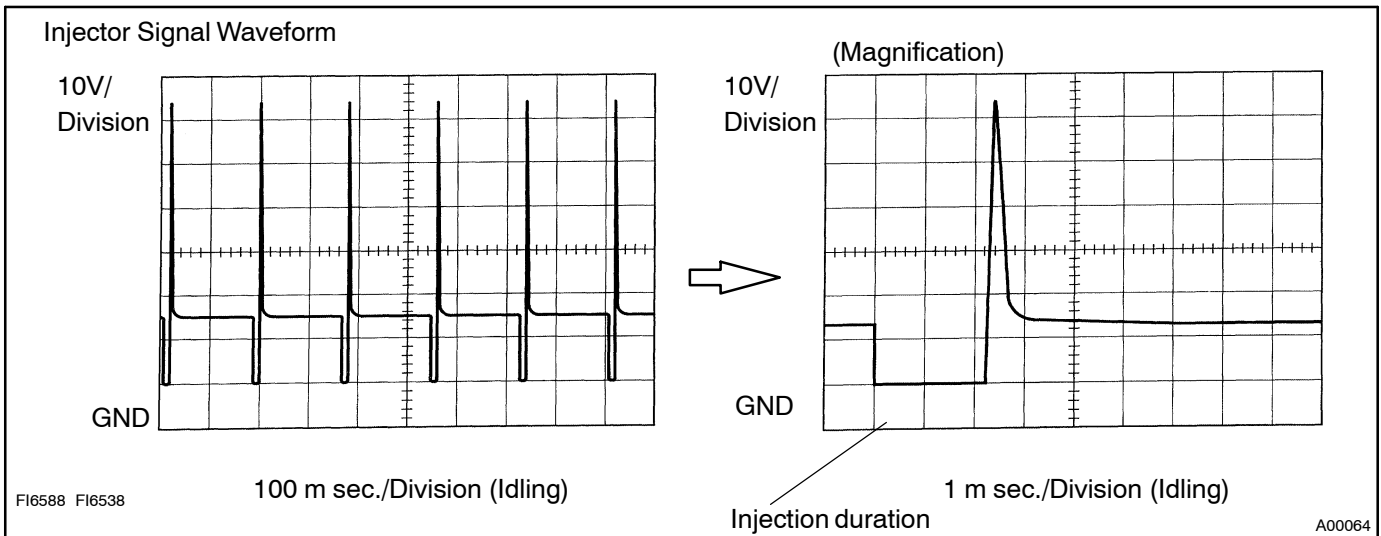


**Reference INSPECTION USING OSCILLOSCOPE**

With the engine idling, measure between terminals #1 ~ #6 and E01 of the engine ECU connector.

HINT:

The correct waveforms are as shown.

**INSPECTION PROCEDURE**

HINT:

The inspection procedures are same for both LH and RH bank engine ECU and described in this manual. Even though terminal name and part name on the side of RH bank are described in parenthesis, perform the inspection for only defective ECU.

<b>1</b>	<b>Check wire harness, connector and vacuum hose in engine room.</b>
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**CHECK:**

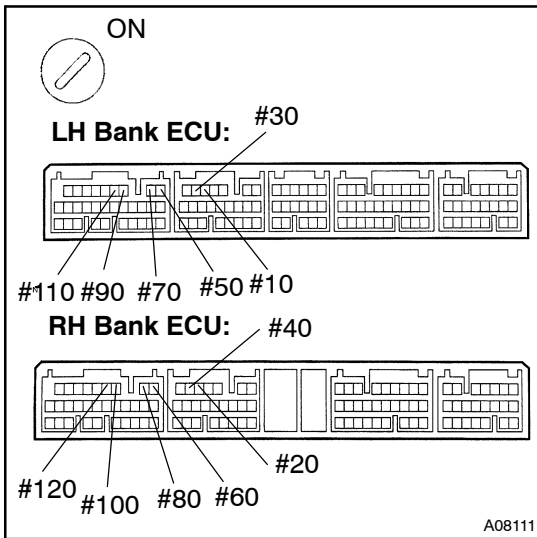
- (a) Check the connection conditions of wire harness and connector.
- (b) Check the disconnection, piping and break of vacuum hose.

**NG**

**Repair or replace, then confirm that there is no misfire (See confirmation driving pattern).**

**OK**

## 2 Check voltage of engine ECU terminal for injector of failed cylinder.



### PREPARATION:

- Remove the engine ECU with connectors still connected.
- Turn the ignition switch to ON.

### CHECK:

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

### OK:

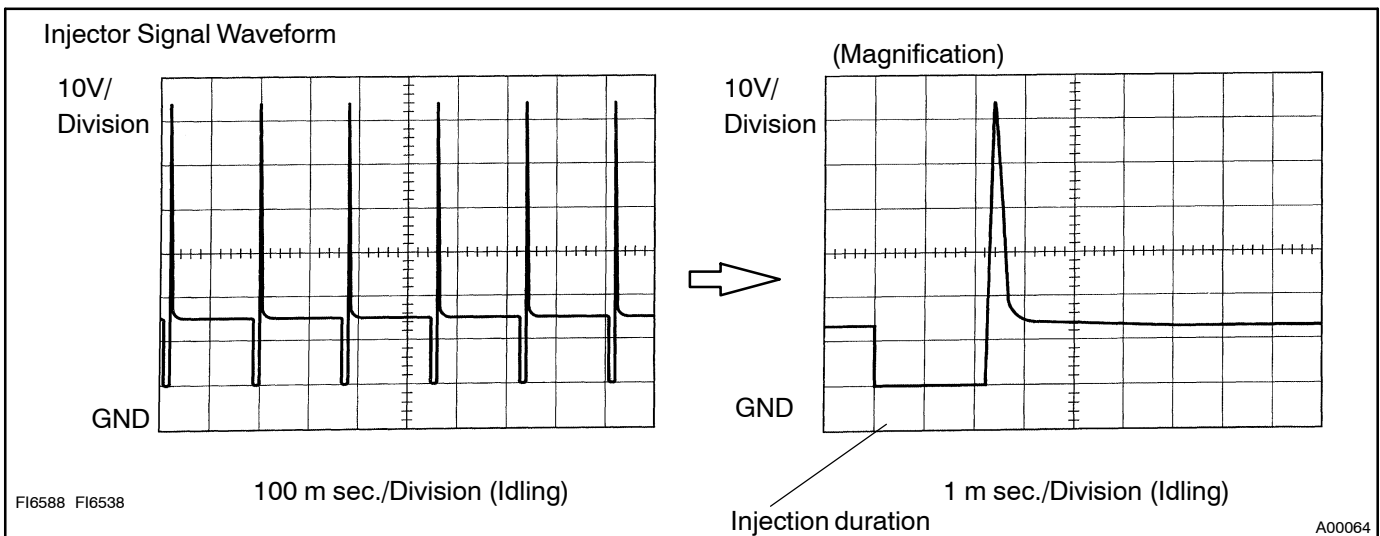
**Voltage: 9 – 14 V**

### Reference INSPECTION USING OSCILLOSCOPE

With the engine idling, measure between terminals #10 – #120 and E01 (E01R) of the engine ECU connector.

### HINT:

The correct waveforms are as shown.



OK

Go to step 4.

NG

**3 Check INJ-L (INJ-R) fuse.****PREPARATION:**

Remove the INS-L (INJ-R) fuse from the fuse block.

**CHECK:**

Check continuity of INJ-L (INJ-R) fuse.

**OK:**

Continuity

**NG**

Check for short circuits in all the harness and components connected to INJ-L (INJ-R) fuse.

**OK**

Check for open in harness and connector between engine ECU and battery.

**4 Check for open in harness and connector between terminals E01 (E01R), E02 (E02R) of engine ECU connector and body ground (See page N-20).****NG**

Repair or replace harness or connector.

**OK**

**5** Check resistance of injector (See Pub. No. RM677E, page FI-18).

NG

Replace injector.

OK

**6** Check fuel pressure (See Pub. No. RM677E, page FI-6).

NG

Check and repair fuel pump, pressure regulator, fuel pipe line and filter (See Pub. No. RM677E, page FI-6).

OK

**7** Check injector injection (See Pub. No. RM677E, page FI-18).

NG

Replace injector.

OK

Check and replace for engine ECU (See [page IN-20](#)).