

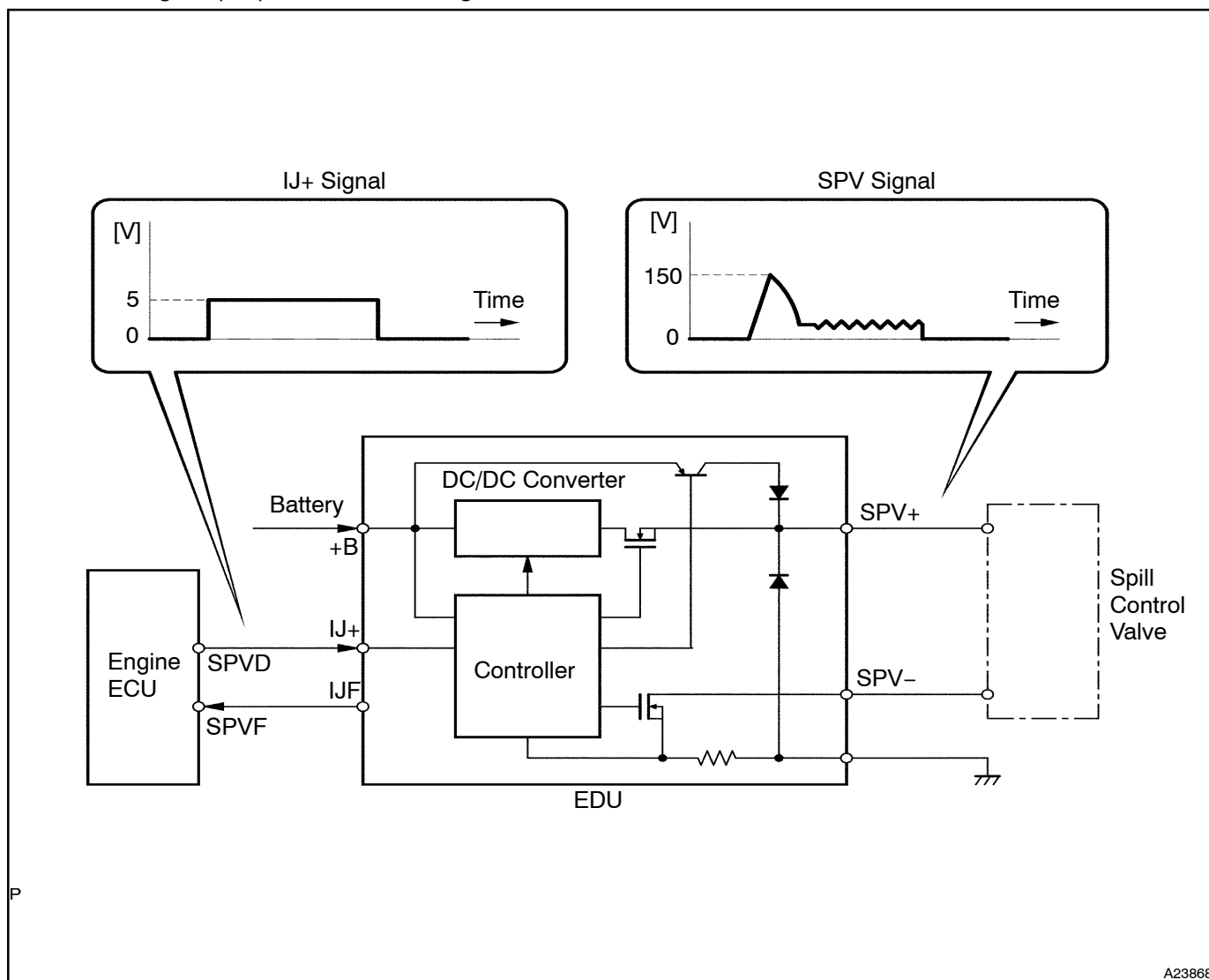
<b>DTC</b>	<b>P1215/97</b>	<b>EDU Circuit</b>
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## CIRCUIT DESCRIPTION

The EDU drives the spill control valve at high speeds. The EDU's high-speed driving under high fuel pressure conditions is achieved through the use of a DC/DC converter that provides a high-voltage, quick-charging system.

The engine ECU constantly monitors the EDU and stops the engine in case an abnormal condition is detected.

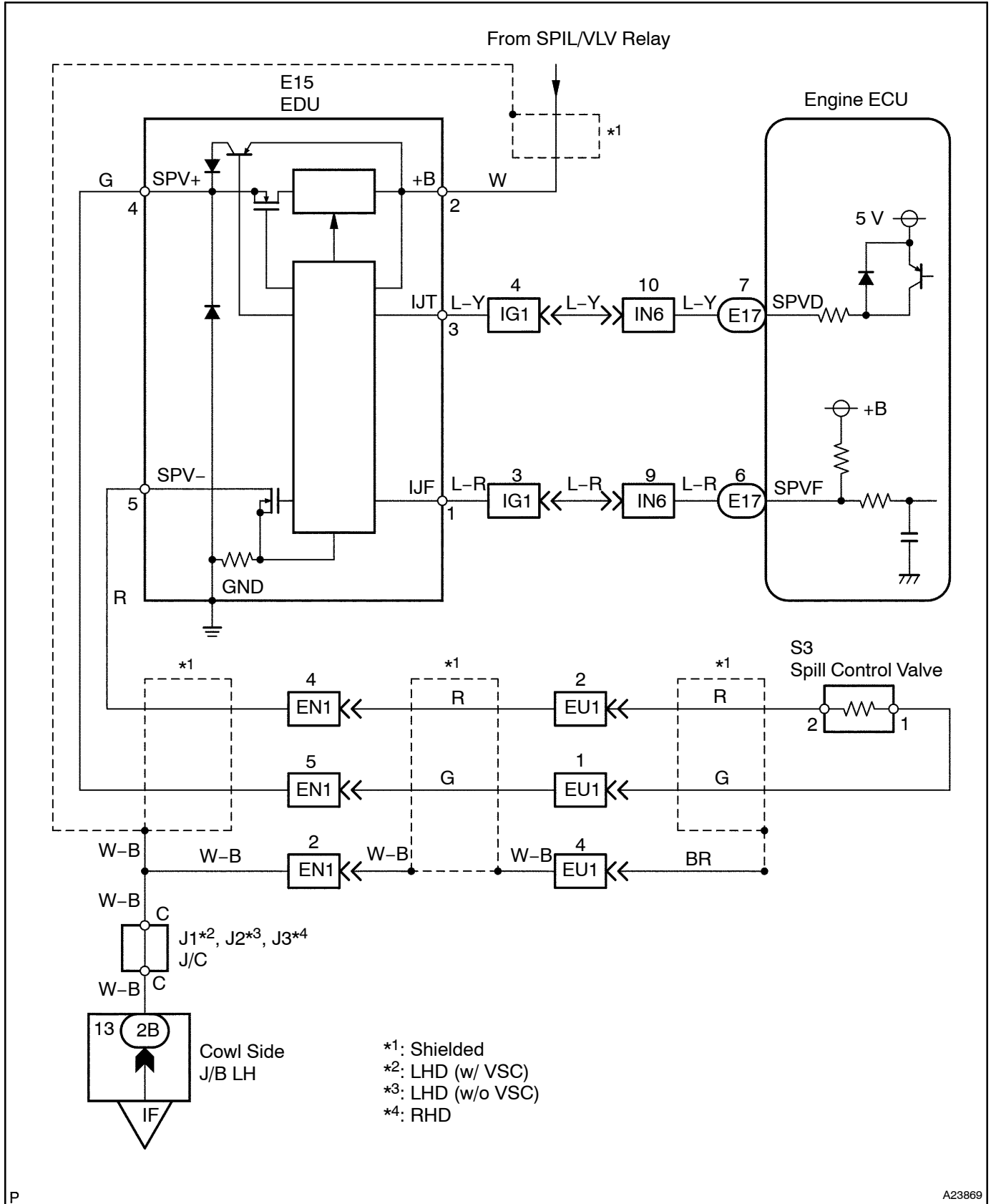
The battery voltage is increased by the DC/DC converter. A voltage of approximately 150 V is applied to the spill control valve in accordance with the IJ+ signal received from the engine ECU. At this time, the injection verification signal (IJF) is sent to the engine ECU.



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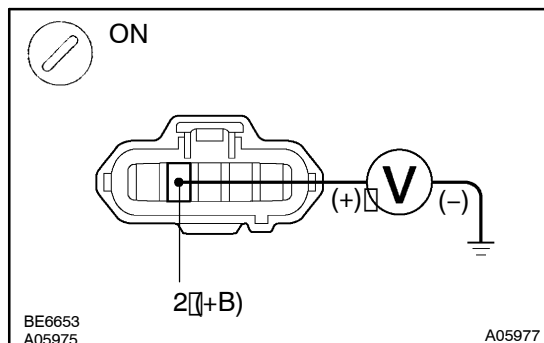
DTC No.	DTC Detection condition	Trouble Area
P1215/97	Although SPVD is output to EDU with engine speed at 500 rpm or more, SPVF is not input continuously 5 times or more	<ul style="list-style-type: none"> <li>• Open or short in EDU circuit</li> <li>• EDU</li> <li>• Spill control valve</li> </ul>

# WIRING DIAGRAM



## INSPECTION PROCEDURE

- 1 Check voltage between terminal 2 of wire harness side connector and body ground.

**PREPARATION:**

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

**CHECK:**

Measure the voltage between terminal 2 of wire harness side connector and body ground.

**OK:**

**Voltage: 10 to 14 V**

NG

Check Spill valve relay circuit  
 (See page DI-157).

OK

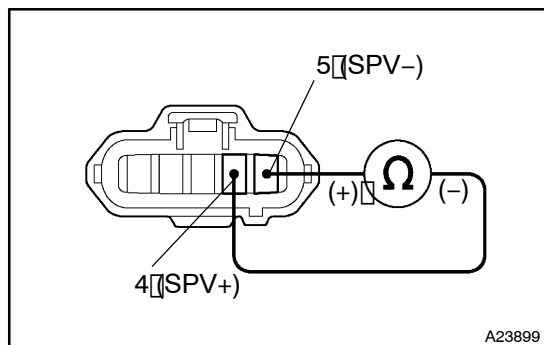
- 2 Check resistance EDU ground bolt and body ground.

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Tighten EDU ground bolt.

OK

- 3 Check resistance between terminals 4 and 5 of wire harness side connector.

**CHECK:**

Measure resistance between terminals 4 and 5 of wire harness side connector.

**OK:**

**Resistance: Approx. 1.7 Ω**

OK

Go to step 5.

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**4 Check spill control valve (See Pub No. RM617E, page FU-113).**

**NG**

**Check and replace injection pump  
(See Pub No. RM617E, page FU-113).**

**OK**

**Check for open and short in harness and connector between spill control valve and EDU  
(See page IN-19).**

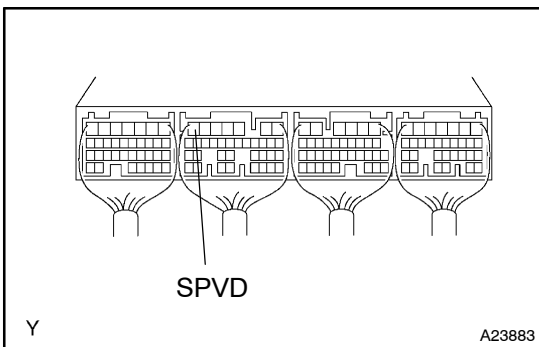
**5 Check for open and short in harness and connector between engine ECU and EDU (See page IN-19).**

**NG**

**Repair or replace harness or connector.**

**OK**

**6 Check voltage between terminal SPVD of engine ECU connector and body ground.**



**PREPARATION:**

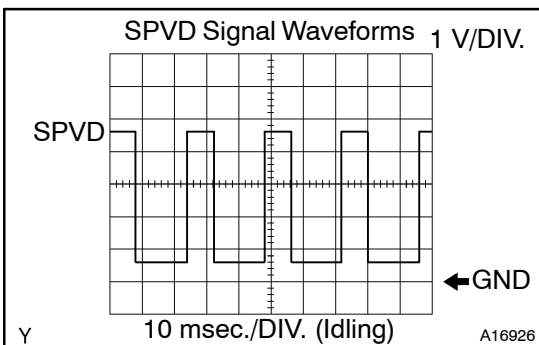
- (a) Remove the glove compartment door.
- (b) Turn the ignition switch ON.

**CHECK:**

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

**OK:**

**Voltage: Approx. 0 V**



**Reference: INSPECTION USING OSCILLOSCOPE**

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

**HINT:**

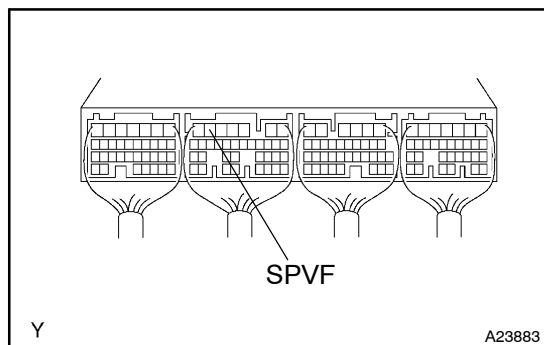
The correct waveform is as shown.

**NG**

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

OK

# 7 Check voltage between terminal SPVF of engine ECU and body ground.



## PREPARATION:

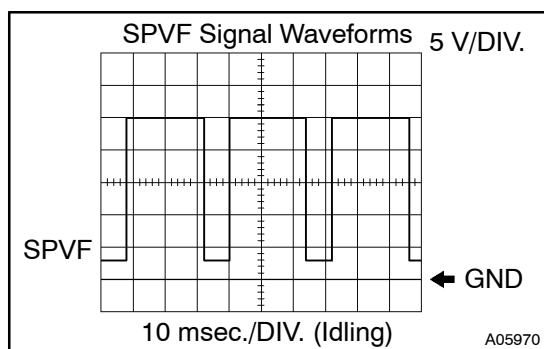
- (a) Remove the glove compartment door.
- (b) Turn the ignition switch ON.

## CHECK:

Measure the voltage between terminals SPVF of the engine ECU and body ground.

## OK:

**Voltage: 9 to 14 V**



## Reference: INSPECTION USING OSCILLOSCOPE

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

## HINT:

The correct waveform is as shown.

NG

**Check and replace engine ECU**  
(See [page IN-19](#))

OK

**Check and replace EDU (See Pub No. RM617E, page ED-15).**