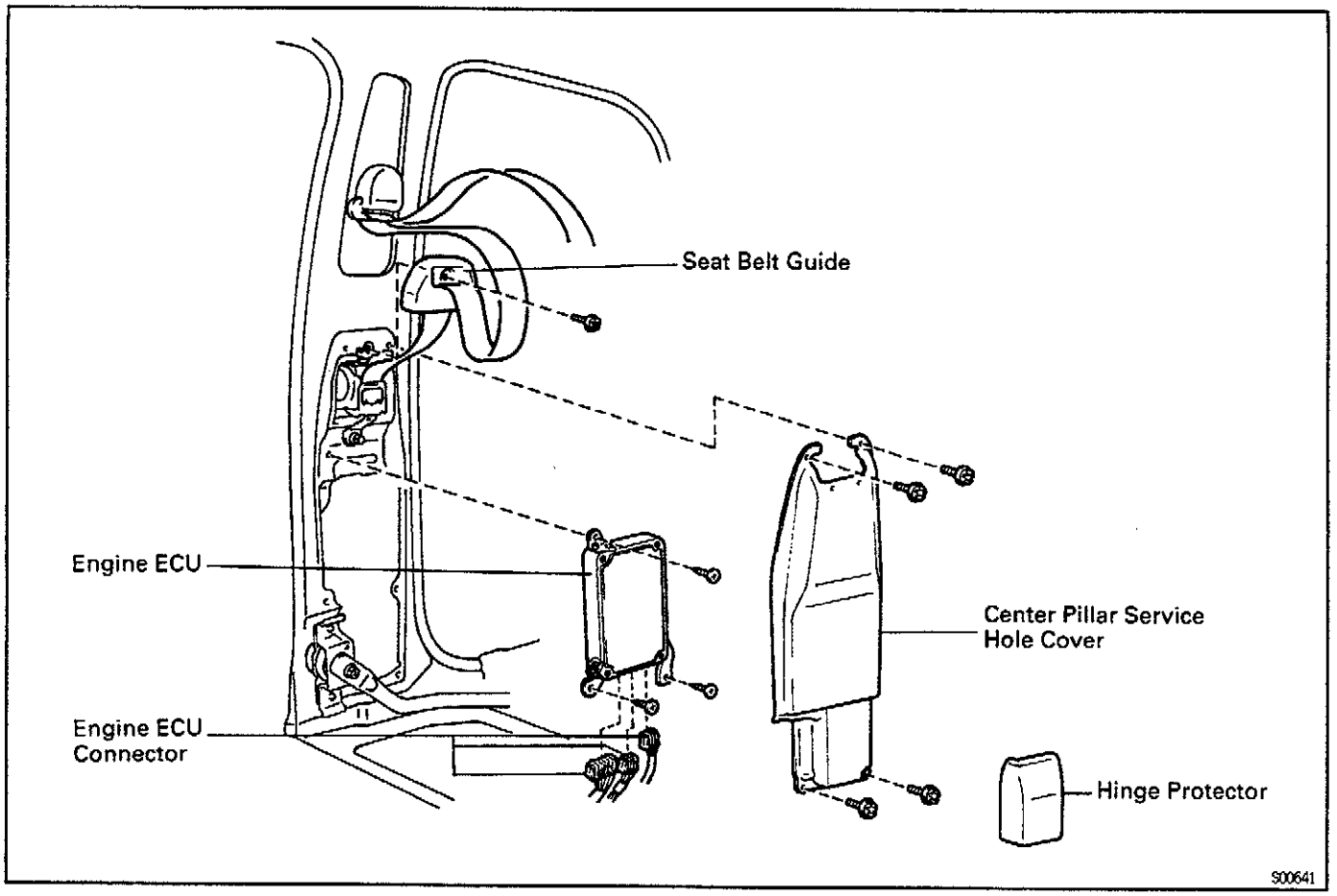
ENGINE ECU

COMPONENTS FOR REMOVAL AND INSTALLATION

EG076-16



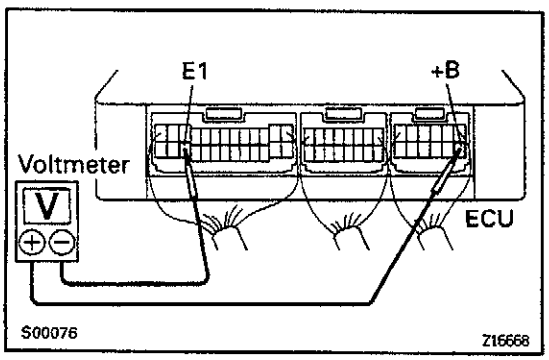
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ENGINE ECU INSPECTION

EG0R3-01

HINT: The EFI circuit can be checked by measuring the resistance and voltage at the wiring connectors of the engine ECU.

1. **DISCONNECT ECU FROM VEHICLE BODY**



2. **INSPECT VOLTAGE OF ECU**

(a) Turn the ignition switch ON.

(b) Measure the voltage between each terminal of the wiring connectors.

HINT:

- Perform all voltage measurements with the connectors connected.
- Verify that the battery voltage is 11 V or more when the ignition switch is ON.

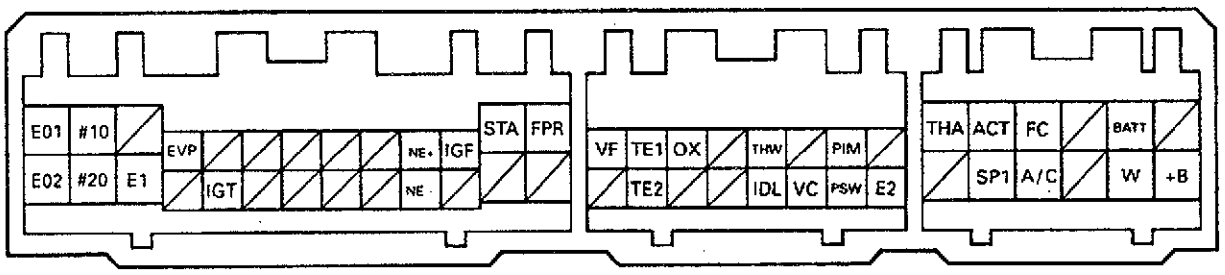
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ECU Wiring Connectors Voltage

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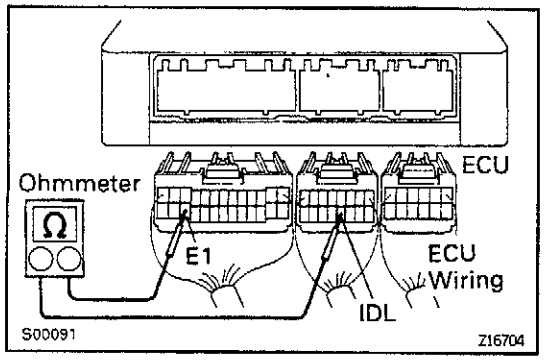
Terminals	Condition		STD voltage
+B – E1	IG SW ON		9 – 14 V
BATT – E1	–		9 – 14 V
IDL – E1	IG SW ON	Throttle valve open	9 – 14 V
PSW – E1		Throttle valve fully closed	4.5 – 5.5 V
PIM – E2	IG SW ON		3.3 – 3.9 V
VC – E2			4.5 – 5.5 V
#10 – E01 #20 – E02			9 – 14 V
	Idling		Pulse generation
THA – E2	IG SW ON	Intake air temperature 20°C (68°F)	0.5 – 3.4 V
THW – E2		Coolant temperature 80°C (176°F)	0.2 – 1.0 V
STA – E1	Cranking		6 V or more
IGT – E1	IG SW ON		1.5 V or less
	Idling		Pulse generation
W – E1	No trouble (check engine warning light off) and engine running		9 – 14 V
A/C – E1	IG SW ON	A/C ON	1.5 V or less
ACT – E1			4.5 – 5.5 V
IGF – E1	IG SW ON		4.5 – 5.5 V
	Idling		Pulse generation
NE+ – NE–			Pulse generation
EVP – E1	IG SW ON		9 – 14 V
FPR – E1	60 seconds or more after engine started		0 – 3 V
	Within 60 seconds after engine started		9 – 14 V
VF – E1	Maintain engine speed at 2,500 rpm for 2 minutes after warming up then return to idling		1.8 – 3.2 V
TE1 TE2 – E1	IG SW ON		9 – 14 V
OX – E1	Maintain engine speed 2,500 rpm for 2 minutes after warming up		Pulse generation
SP1 – E1	IG SW ON	Rotate driving wheel slowly	Pulse generation
FC – E1	IG SW ON		9 – 14 V
	Idling		0 – 3 V

Engine ECU Terminals



S00096

V07154



E0685-01

3. INSPECT RESISTANCE OF ECU

(a) Turn the ignition switch OFF.

(b) Disconnect the 3 connectors from the ECU.

(c) Measure the resistance between each terminal of the wiring connectors.

NOTICE:

- **Do not touch the ECU terminals.**
- **The tester probe should be inserted in the wiring connector from the wiring side.**

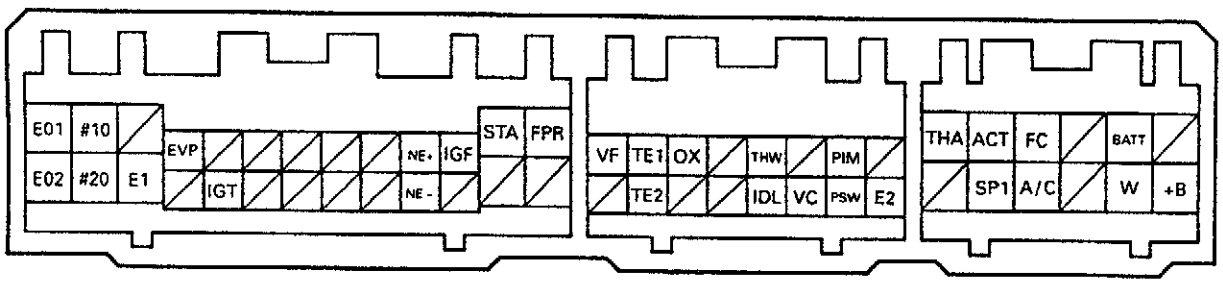
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Engine ECU Wiring Connectors Resistance

Terminals	Condition	STD resistance
IDL – E1	Throttle valve open	Infinity
	Throttle valve fully closed	0 Ω
PSW – E1	Throttle valve open	0 Ω
	Throttle valve fully closed	Infinity
THA – E2	Intake air temperature 20°C (68°F)	2,000 – 3,000 Ω
THW – E2	Coolant temperature 80°C (176°F)	200 – 400 Ω
NE+ – NE–	Cold (–10 – 50°C (14 – 122°F))	370 – 550 Ω
	Hot (50 – 100°C (122 – 212°F))	475 – 650 Ω

Engine ECU Terminals



S00096

V07155