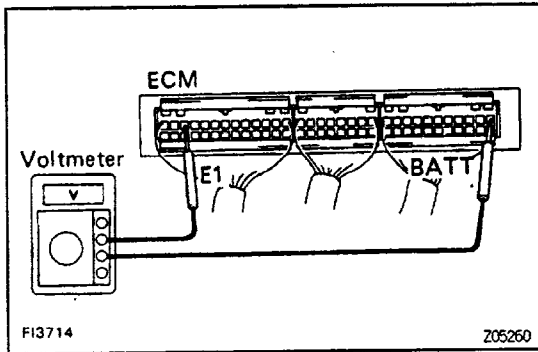


ENGINE CONTROL MODULE (ECM)

ENGINE CONTROL MODULE (ECM)

INSPECTION

HINT: The MFI circuit can be checked by measuring the voltage and resistance at the wiring connectors of the engine control module (ECM).



1. INSPECT VOLTAGE OF ENGINE CONTROL MODULE (ECM)

Check the voltage between each terminal of the wiring connectors.

- Turn the ignition switch ON.
- Measure the voltage at each terminal.

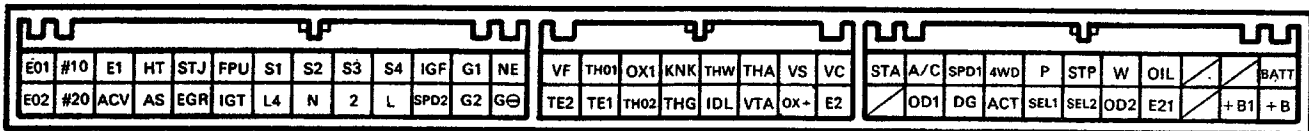
HINT:

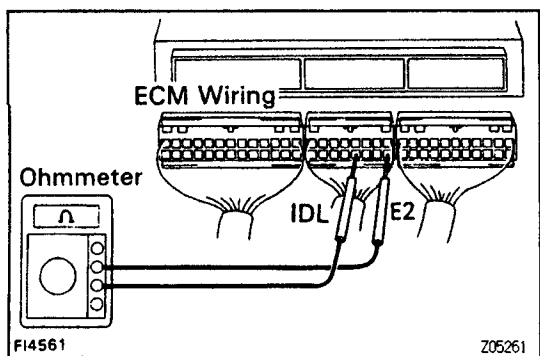
- Perform all voltage measurements with the connectors connected.
- Verify that the battery voltage is 11 V or more when the ignition switch is ON.

Engine Control Module (ECM) Wiring Connectors Voltage

Terminals	Condition		STD voltage
BATT - E1	-		9 - 14
+ B - E1	Ignition SW ON		
+ B1 - E1			
IDL - E2 (E21)	Ignition SW ON	Throttle valve open	9 - 14
VC - E2 (E21)		-	4.5 - 5.5
VTA - E2 (E21)		Throttle valve fully closed (Throttle opener must be cancelled first)	0.3 - 0.8
		Throttle valve fully open	3.2 - 4.9
VC - E2 (E21)		-	4.5 - 5.5
VS - E2 (E21)	Ignition SW ON	Measuring plate fully closed	4.0 - 5.5
		Measuring plate fully open	0.2 - 0.5
	Idling	2.3 - 2.8	
	3,000 rpm	0.3 - 1.0	
THA - E2 (E21)	Ignition SW ON	Intake air temperature 20°C (68°F)	0.5 - 3.4
THW - E2 (E21)	Ignition SW ON	Engine coolant temperature 80°C (176°F)	0.2 - 1.0
STA - E1	Cranking		6 V or more
#10 - E01 #20 - E02	Ignition SW ON		9 - 14
IGT - E1	Idling		Pulse generation
W - E1	No trouble (malfunction indicator lamp off) and engine running)		9 - 14
STJ - E1	Cranking	Engine coolant temperature 80°C (176°F)	6 V or more
STP - E1	Stop light switch ON		7.5 - 14

Engine Control Module (ECM) Terminals





2. INSPECT RESISTANCE OF ENGINE CONTROL MODULE (ECM)

NOTICE:

- Do not touch the engine control module (ECM) terminals.
- The tester probe should be inserted into the wiring connector from the wiring side.

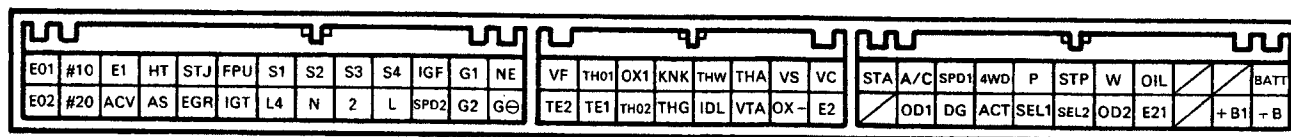
Check the resistance between each terminal of the wiring connectors.

- Disconnect the connectors from the engine control module (ECM).
- Measure the resistance at each terminal.

Engine Control Module (ECM) Wiring Connectors Resistance

Terminals	Condition	Resistance (kΩ)
IDL - E2 (E21)	Throttle valve open	Infinity
	Throttle valve fully closed (Throttle opener must be cancelled first)	2.3 or less
VTA - E2 (E21)	Throttle valve fully open	3.1 - 12.1
	Throttle valve fully closed (Throttle opener must be cancelled first)	0.47 - 6.1
VC - E2 (E21)	Intake air temperature 20°C (68°F)	3.9 - 9.0
THA - E2 (E21)	Volume air flow meter connector disconnected	2 - 3
THW - E2 (E21)	Engine coolant temperature 80°C (176°F)	0.2 - 0.4
+ B - E1	-	0.2 - 0.4
VC - E2 (E21)	Throttle position sensor connector disconnected	0.2 - 0.4
VS - E2 (E21)	Measuring plate fully closed	0.2 - 0.6
	Measuring plate fully open	0.02 - 1.20
G1, G2 - G ⊖	Cold (-10 ~ 50°C, 14 ~ 122°F)	0.125 - 0.200
	Hot (50~100°C, 122~212°F)	0.160 - 0.235
NE - G ⊖	Cold (-10 ~ 50°C, 14 ~ 122°F)	0.155 - 0.250
	Hot (50~100°C, 122~212T)	0.190 - 0.290

Engine Control Module (ECM) Terminals



FI2766