TOYOTA

REPAIR MANUAL

1KD ENGINE

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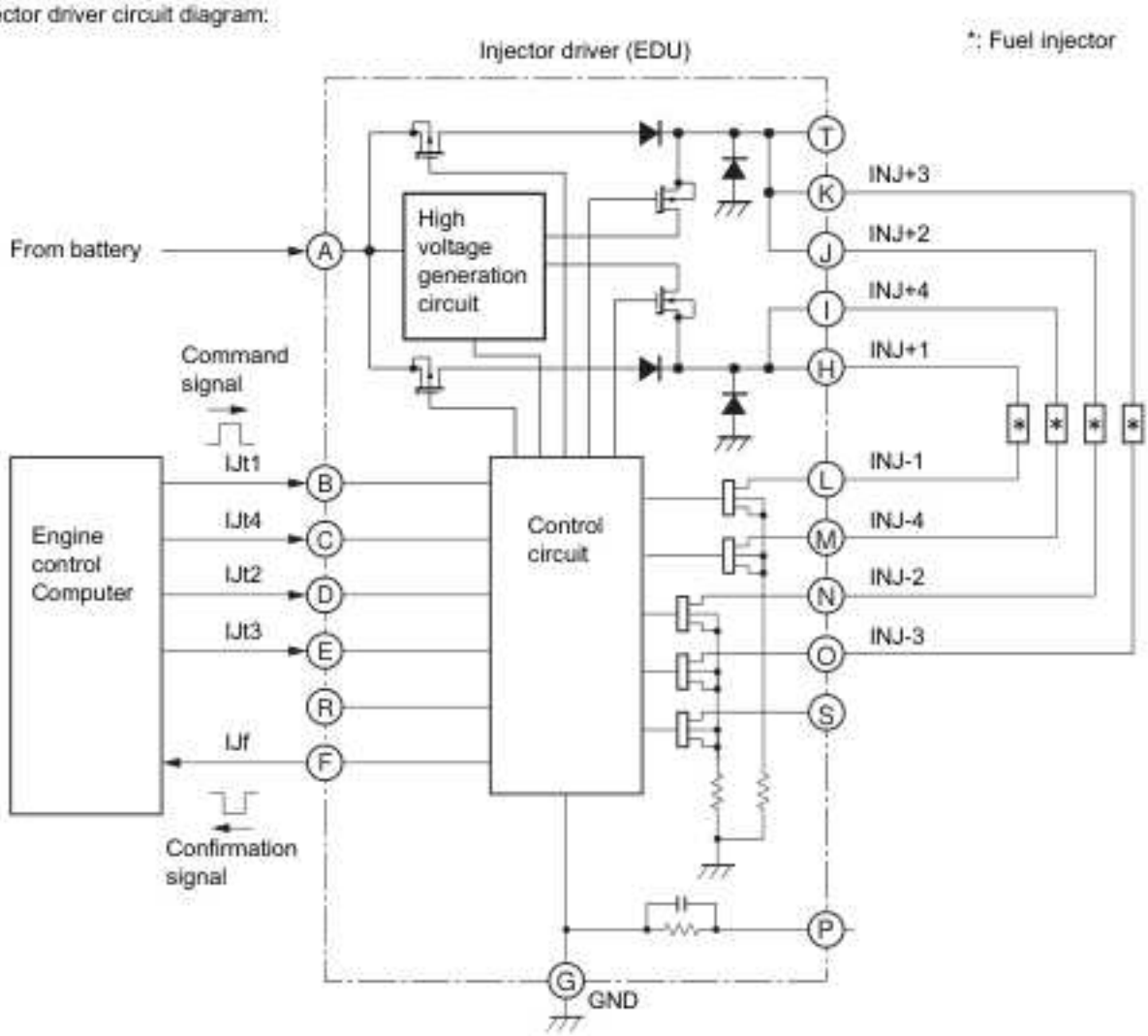
LIST OF SYMPTOMS

ECD System

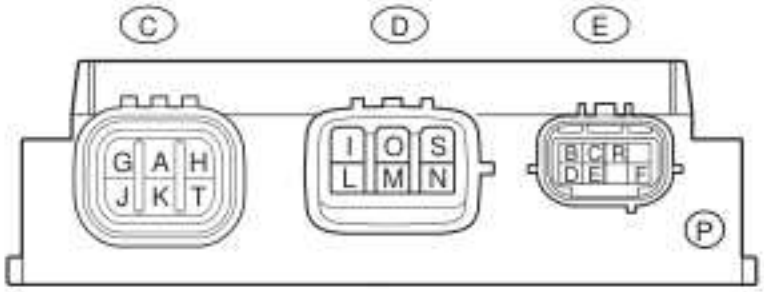
Symptom	Portion to be inspected	Page for reference
Does not crank	Battery	-
	Starter	5-2
	Starting relay	-
	Shift lever position	-
Fast idling rough	Fuel filter	-
	Injector ASSY	1-118
	Starter system	1-199
	Engine control computer	-
	Suction control valve ASSY	1-296
	Fuel pressure sensor	1-296
	Intake air flow meter	1-294
	Fuel property	1-3
	Water temperature sensor	1-295
	Fuel piping (blocking from the tank to the supply pump)	-
Idle speed high	Troubleshooting of rough idle and large vibration	1-270
	Injector ASSY	1-118
	Starter system	1-199
	Engine control computer	-
	Suction control valve ASSY	1-296
	Fuel pressure sensor	1-296
	Water temperature sensor	1-295
	Accelerator position sensor (potentiometer)	-
Idle speed low	Troubleshooting of rough idle and large vibration	1-270
	Injector ASSY	1-118
	Electric EGR control valve	1-296
	Compression	2-79
	Valve clearance	2-78
	Fuel piping	-
	Engine control computer	-
	Suction control valve ASSY	1-296
	Fuel pressure sensor	1-296
Idle unstable	Troubleshooting of rough idle and large vibration	1-270
	Injector ASSY	1-118
	Fuel piping	-
	Electric EGR control valve	1-296
	Compression	2-79
	Valve clearance	2-78
	Engine control computer	-
	Suction control valve ASSY	1-296
	Fuel pressure sensor	1-296
	Fuel property	1-3
	Power steering system	-
	Alternator ASSY (external accessory)	7-4

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Injector driver circuit diagram:

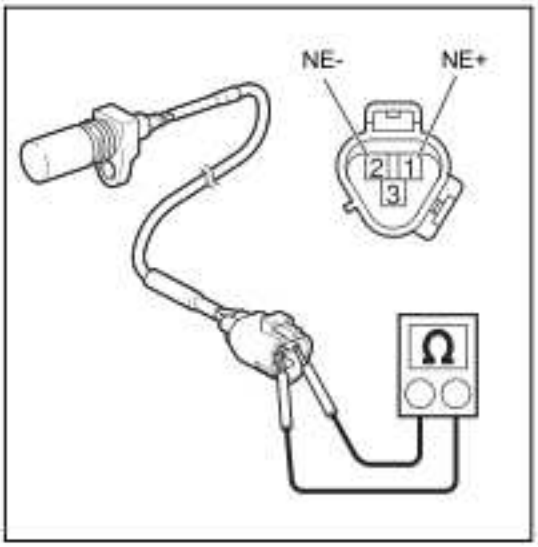


EDU connector



Be careful of high voltage: H, I, J, K, L, M, N, O, S and T terminals

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CRANK POSITION SENSOR NO.2 INSPECTION

Note:
See page 2-41 for the installation and removal procedure.

1. Resistance inspection
   (1) Measure the resistance between terminals using a tester.

Resistance

Inspection terminal	Inspection condition	Reference
1 (NE+) - 2 (NE-)	When cool (-10 to 50 °C) (14 to 122 °F)	1630 to 2740 Ω
1 (NE+) - 2 (NE-)	When warm (50 to 100 °C) (122 to 212 °F)	2065 to 3225 Ω

INTAKE AIR FLOW METER S/A INSPECTION

1. Intake air quantity inspection

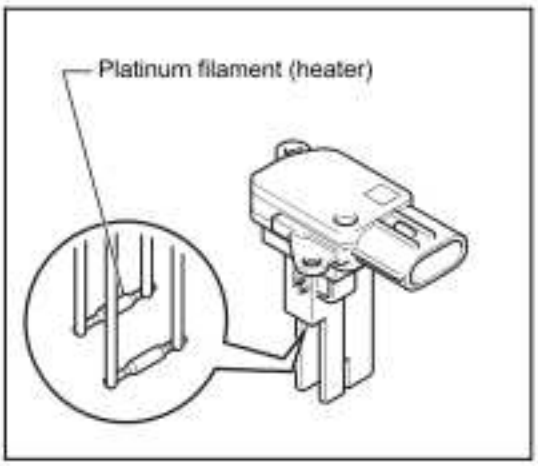
Caution:
- **With the engine stopped, keep the machine horizontal and inspect these functions indoors.**
- **Perform inspection with the intake air flow meter S/A mounted on the intake pipe (with the machine installed).**
- **Do not suck air from the exhaust tail pipe in the exhaust duct.**

SST 09111-36760-71 (09991-70201)

(1) Turn the ignition key switch ON and wait for 30 seconds. (Engine is in stop condition)

(2) According to the instruction of the 'Engine Diagnostic Program' screen, press [Data monitor] and monitor [MAF] and read a numerical value.

Standard 1.2 g/sec. (0.0027 lb/sec.) or less

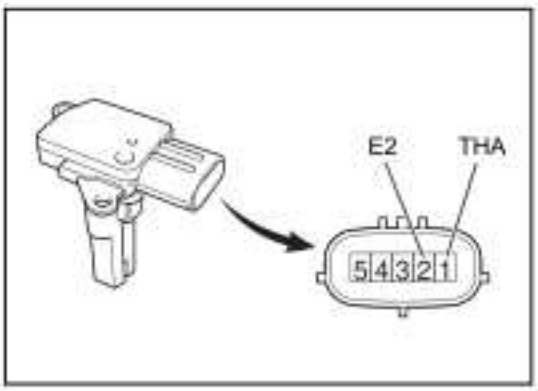


2. Sensor foreign matter adhesion inspection

Note:
See page 2-16 for the installation and removal procedure.

(1) Visually check the platinum filament (heater) portion in flow paths.

Standard No foreign matter that can be visually checked



3. Resistance inspection
   (1) Measure the resistance between terminals using a tester.

Resistance

Inspection terminal	Inspection condition	Reference
1 (THA) - 2 (E2)	-20 °C (-4 °F)	13.6 to 18.4 kΩ
1 (THA) - 2 (E2)	20 °C (68 °F)	2.21 to 2.69 kΩ
1 (THA) - 2 (E2)	60 °C (140 °F)	0.49 to 0.67 kΩ

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TOYOTA
INDUSTRIAL EQUIPMENT

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