

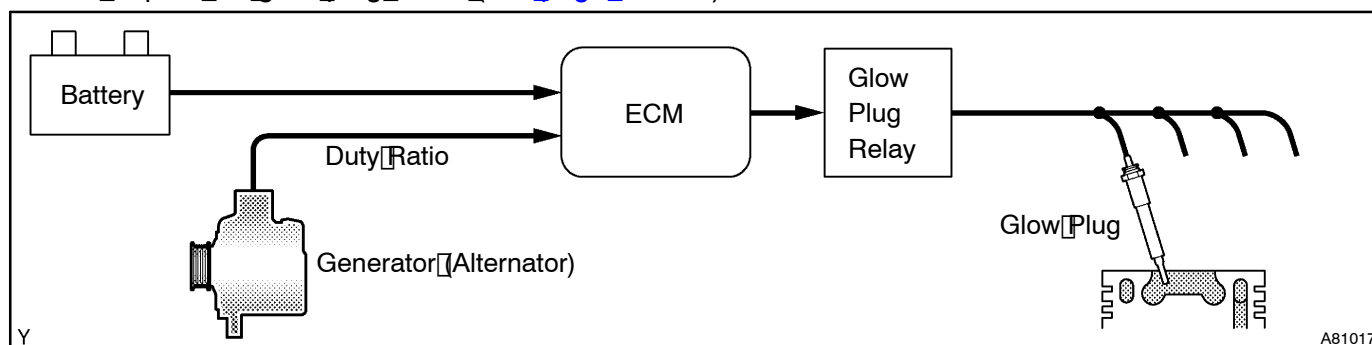
## DTC P0622 GENERATOR FIELD "F" TERMINAL CIRCUIT

### CIRCUIT DESCRIPTION

While the generator (alternator) is generating current, a duty ratio is sent from terminal M of the generator to the ECM terminal ALT. This duty ratio is used for detecting an open malfunction of the generator circuit and DTC P0380.

HINT:

DTC P0380 is prepared for indicating an open or short malfunction in the glow plug circuit. If this DTC is detected, inspect the glow plug circuit (see page 05-518).



DTC No.	DTC Detection Condition	Trouble Area
P0622	No duty ratio from terminal M of the generator (alternator) while the engine is running (1 trip detection logic)	<ul style="list-style-type: none"> <li>• Open in generator (alternator) circuit</li> <li>• Generator (alternator)</li> <li>• Drive belt</li> <li>• ECM</li> </ul>

### MONITOR DESCRIPTION

The ECM detects a generator (alternator) failure or an open malfunction of the circuit, if the duty ratio is not transmitted from terminal M of the generator (alternator) despite the engine running.

### MONITOR STRATEGY

Required sensors	Generator (alternator) circuit
Frequency of operation	Continuous
Duration	10 seconds
MIL operation	1 driving cycle

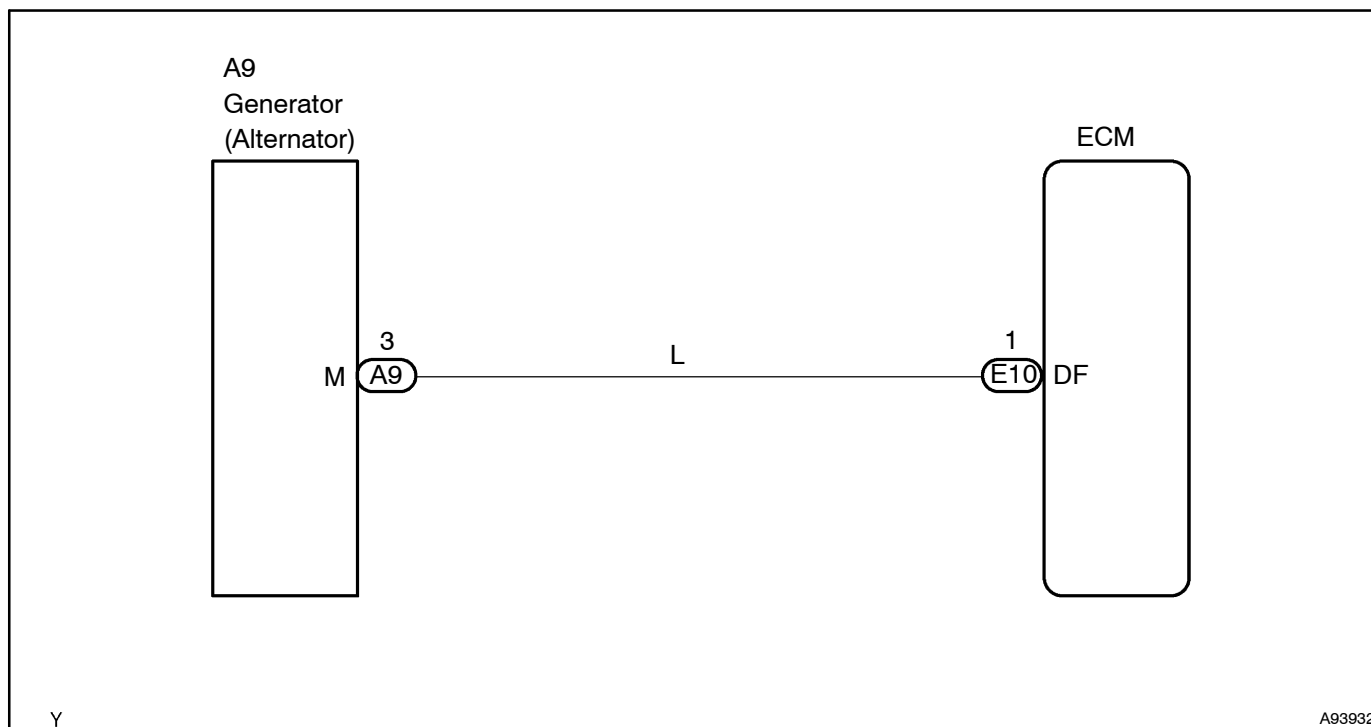
### TYPICAL ENABLING CONDITIONS

Item	Specification	
	Minimum	Maximum
Battery voltage	11 V	–
Engine speed	700 rpm	2,000 rpm

### TYPICAL MALFUNCTION THRESHOLDS

Threshold
There is no duty ratio output from terminal M of the generator (alternator)

## WIRING DIAGRAM



## INSPECTION PROCEDURE

### HINT:

- If different DTCs related to different systems that have terminal E2 as the ground terminal are output simultaneously, terminal E2 may have an open circuit.
- Read freeze frame data using the intelligent tester II. Freeze frame data record the engine condition when malfunctions are detected. When troubleshooting, freeze frame data can help determine if the vehicle was moving or stationary, if the engine was warmed up or not, and other data from the time the malfunction occurred.

### 1 CHECK IF CHARGE LAMP IS ILLUMINATED

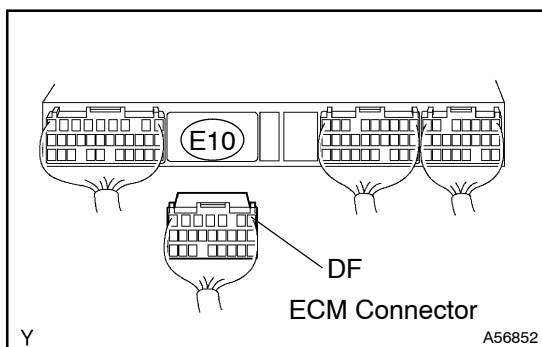
### HINT:

Run the engine at 2,000 rpm, and check if the charge lamp located in the combination meter remains illuminated.

YES

Go to step 3

NO

**2 CHECK HARNESS AND CONNECTOR(GENERATOR (ALTERNATOR) - ECM)**

- (a) Disconnect the E10 ECM connector.
- (b) Disconnect the A9 generator (alternator) connector.
- (c) Check the resistance.

**Standard (Check for open):**

Tester Connection	Specified Condition
DF (E10-1) - M (A9-3)	Below 1 $\Omega$

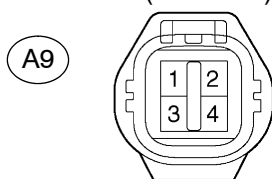
**Standard (Check for short):**

Tester Connection	Specified Condition
DF (E10-1) or M (A9-3) - Body ground	10 k $\Omega$ or higher

- (d) Reconnect the ECM connector.
- (e) Reconnect the generator (alternator) connector.

**Wire Harness Side:**

Generator (alternator) Connector



Front View

**NG****REPAIR OR REPLACE HARNESS OR CONNECTOR****OK****3 INSPECT DRIVE BELT  
(See page 14-72 of Pub. No. RM864E AVENSIS VERSO/ PICNIC REPAIR MANUAL)****NG****REPAIR OR REPLACE DRIVE BELT  
(See page 14-75 of Pub. No. RM864E AVENSIS  
VERSO/ PICNIC REPAIR MANUAL)****OK****4 INSPECT CHARGING SYSTEM  
(See page 19-5 of Pub. No. RM864E AVENSIS VERSO/ PICNIC REPAIR MANUAL)****GO****CHECK IF DTC OUTPUT RECURS (DTC P0622)****HINT:**

After clearing the DTC, start the engine and let it idle for 10 seconds or more, and then confirm that P0622 is not set again.