

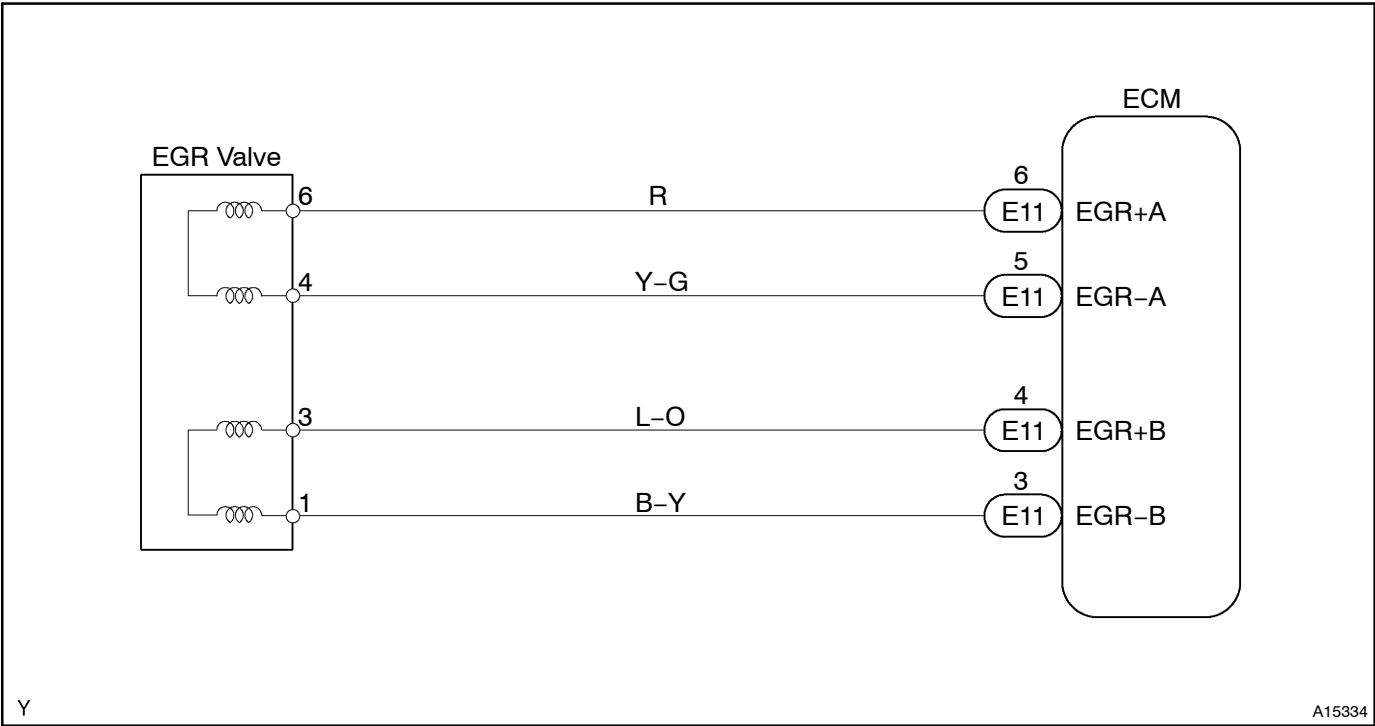
DTC	71	EGR STEP MOTOR CIRCUIT MALFUNCTION(OPEN)
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CIRCUIT DESCRIPTION

DTC No.	DTC Detecting Condition	Trouble Area
71	When temporary error* is detected and , while the step motor control is kept, 31 errors are detected within0.5 sec.	<ul style="list-style-type: none"><li>• Step motor</li><li>• Wire harness</li><li>• ECM</li></ul>

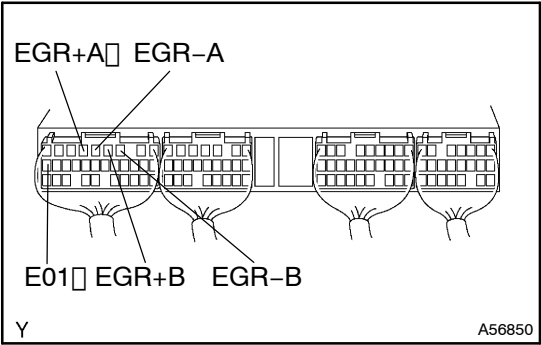
When an error is detected from comparison between the current condition of the step motor and the monitor signal.

WIRING DIAGRAM



INSPECTION PROCEDURE

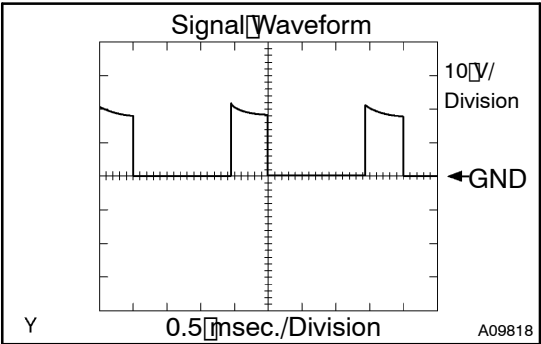
1 INSPECT ECM (STEP MOTOR FOR EGR CONTROL CIRCUIT)



(a) Check the output waveform.

Item	Contents
Terminal	EGR+A, EGR-A, EGR+B, EGR-B → E01
Equipment set	10V/DIV, 0.5ns/DIV
Condition	During engine cranking

HINT:  
The correct waveforms are as shown.



OK CHECK AND REPLACE ECM

NG

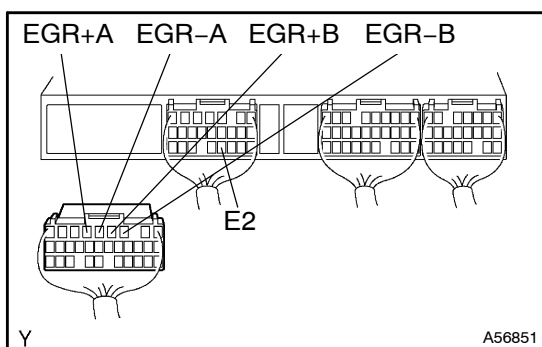
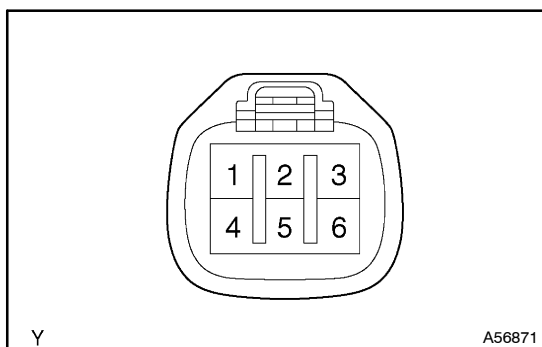
2 INSPECT EGR VALVE ASSY (See page 12-7)

(a) Check resistance of EGR valve control motor.

NG REPLACE EGR VALVE ASSY

OK

### 3 CHECK HARNESS AND CONNECTOR(EGR VALVE-ECM)



- (a) Disconnect the EGR valve connector.
- (b) Disconnect the ECM E11 connector.
- (c) Check for open between the terminals 6 of the EGR valve harness side connector and EGR+A of the ECM E11 connector.

**Resistance: 1  $\Omega$  or less**

- (d) Check for open between the terminals 4 of the EGR valve harness side connector and EGR-A of the ECM E11 connector.

**Resistance: 1  $\Omega$  or less**

- (e) Check for open between the terminals 3 of the EGR valve harness side connector and EGR+B of the ECM E11 connector.

**Resistance: 1  $\Omega$  or less**

- (f) Check for open between the terminals 3 of the EGR valve harness side connector and EGR-B of the ECM E11 connector.

**Resistance: 1  $\Omega$  or less**

- (g) Check for short between the terminals EGR+A and EGR-A, EGR+B and EGR-B of the ECM E11 connector.

**Resistance: 1 M $\Omega$  or more**

- (h) Check for short between the terminals EGR+A, EGR-A, EGR+B, EGR-B of the ECM E11 connector and E2 of the ECM E10 connector.

**Resistance: 1 M $\Omega$  or more**

NG

**REPAIR OR REPLACE  
HARNESS AND CONNECTOR**

OK

**CHECK AND REPLACE ECM**