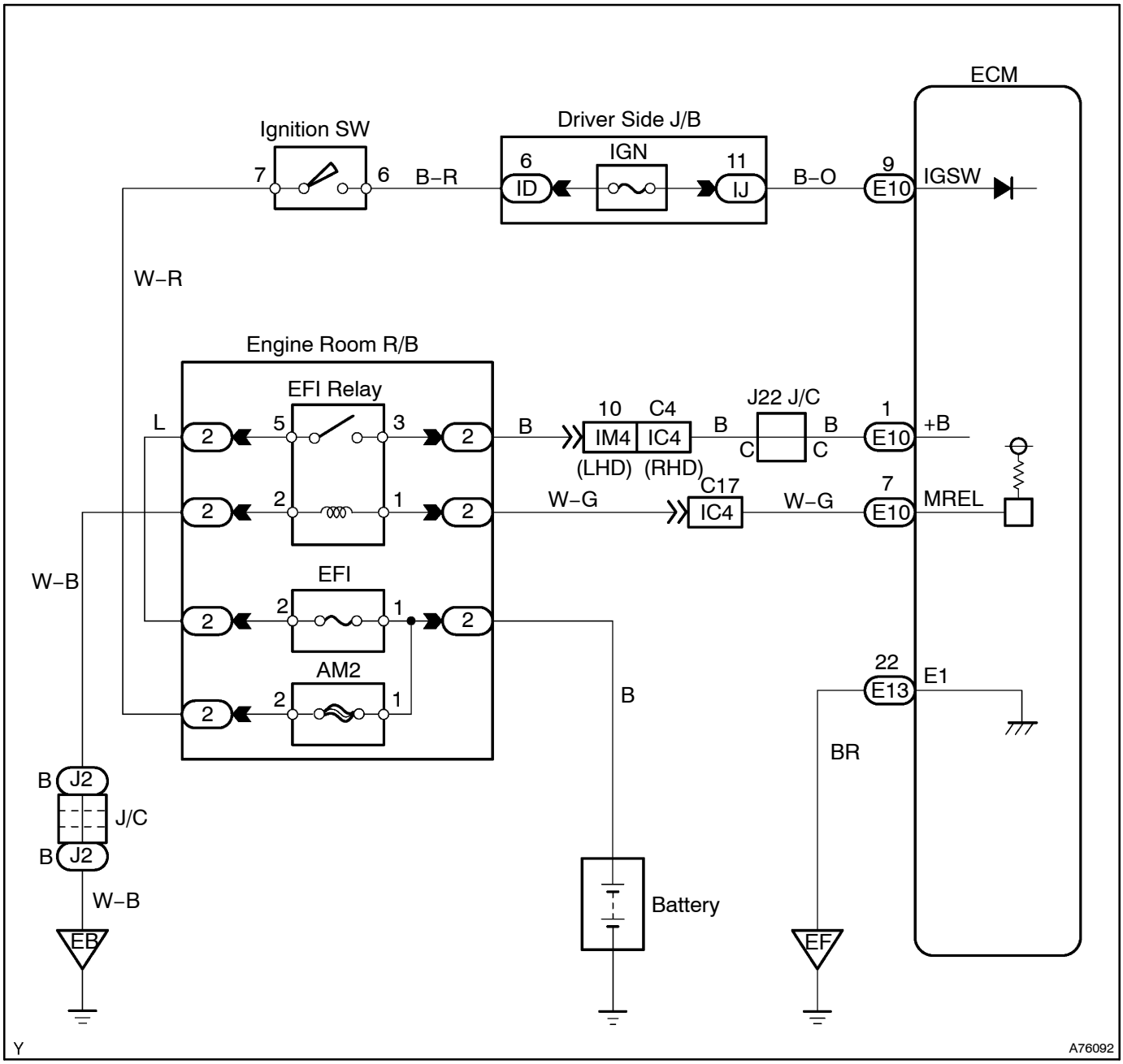
ECM POWER SOURCE CIRCUIT

CIRCUIT DESCRIPTION

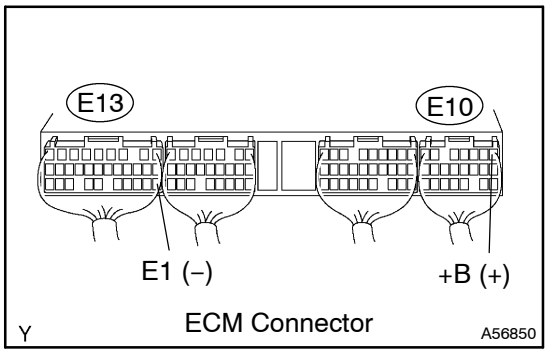
When the ignition switch is turned ON, battery positive voltage is applied to the coil, closing the contacts of the EFI main relay (Marking: EFI) and supplying power to the terminal +B of the ECM.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT ECM(CHECK VOLTAGE)



(a) Turn the ignition switch ON.
(b) Measure the voltage between the terminals of the ECM E13 and E10 connector.

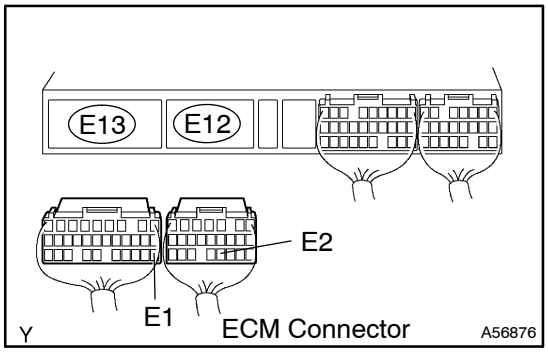
Voltage:

Symbols (Terminal No.)	Specified condition
+B (E10 – 1) ⇔ E1 (E13 – 22)	9 – 14 V

OK → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE (See page 05–443)**

NG

2 CHECK HARNESS AND CONNECTOR(ECM GROUND)



(a) Disconnect the ECM E12 and E13 connector.
(b) Check the continuity between the wire harness side connector and body ground.

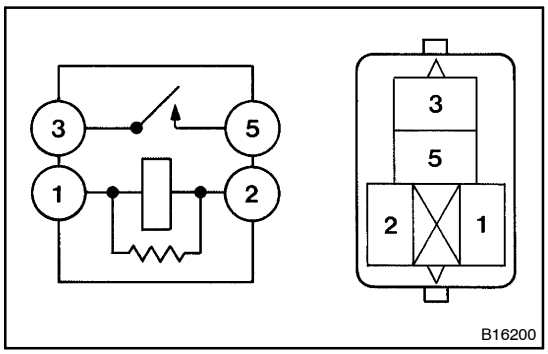
Standard (Check for open):

Symbols (Terminal No.)	Specified condition
E1 (E13 – 22) ⇔ Body ground	Continuity
E2 (E12 – 20) ⇔ Body ground	

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

3 INSPECT EFI RELAY



(a) Check the EFI relay for continuity.
(1) Using an ohmmeter, check that there is continuity between each terminal.

Specified condition:

Between Terminal	Specified condition
1 – 2	Continuity
3 – 5	No continuity

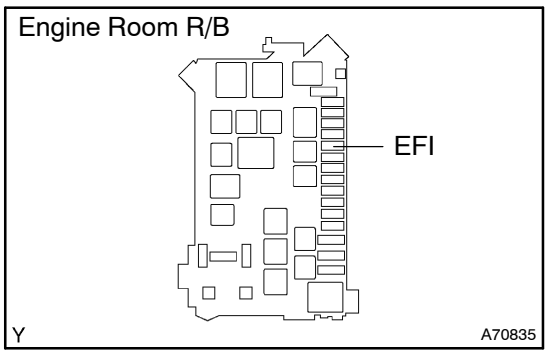
(2) Using an ohmmeter, check that there is continuity between terminals 3 and 5 when the battery voltage is applied across terminals 1 and 2.

Specified condition: Continuity

NG → **REPLACE ECD RELAY**

OK

4 CHECK FUSE(EFI FUSE)

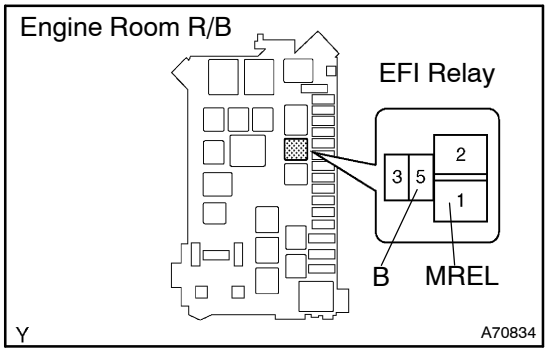


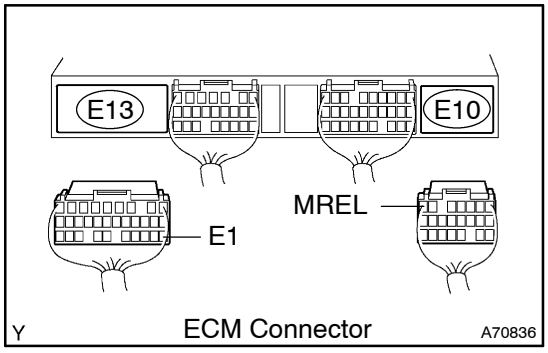
(a) Remove the EFI fuse from the engine room R/B.
(b) Check the continuity of the EFI fuse.
Result: Continuity

NG → **CHECK FOR SHORT IN ALL HARNESS AND COMPONENTS CONNECTED EFI FUSE**

OK

5 CHECK HARNESS AND CONNECTOR(ECM – EFI RELAY, EFI RELAY – BATTERY)





(a) Remove the EFI relay from the engine room R/B.
(b) Disconnect the ECM E10 and E13 connector.
(c) Check the continuity between the wire harness side connector.

Standard (Check for open):

Symbols (Terminal No.)	Specified condition
MREL (EFI relay terminal 1 of R/B) ⇔ MREL (E10 – 7)	Continuity
B (EFI relay terminal 5 of R/B) ⇔ Positive terminal of the battery	

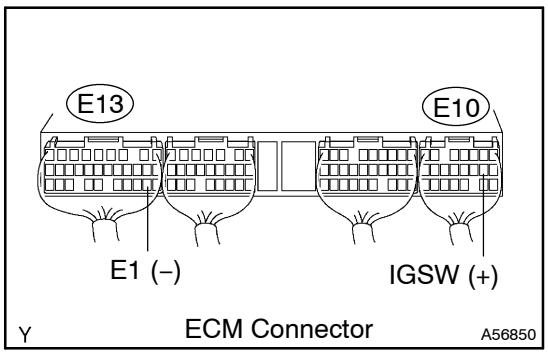
Standard (Check for short):

Symbols (Terminal No.)	Specified condition
MREL (E10 – 7) ⇔ E1 (E13 – 22)	No continuity

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

6 INSPECT ECM(CHECK VOLTAGE)



(a) Turn the ignition switch ON.
(b) Measure the voltage between the terminals of the ECM E10 and E13 connector.

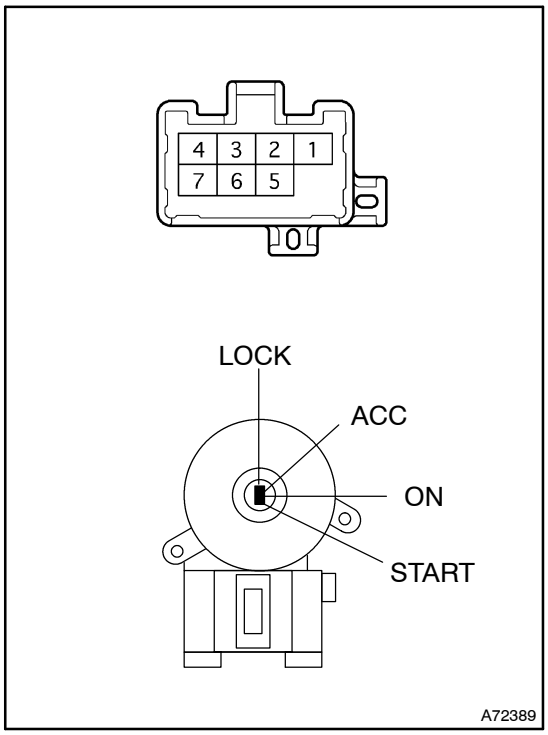
Voltage:

Symbols (Terminal No.)	Specified condition
IGSW (E10 – 9) ⇔ E1 (E13 – 22)	9 – 14 V

OK → **Go to step 9**

NG

7 CHECK IGNITION OR STARTER SWITCH ASSY



(a) Check the continuity between the terminals.

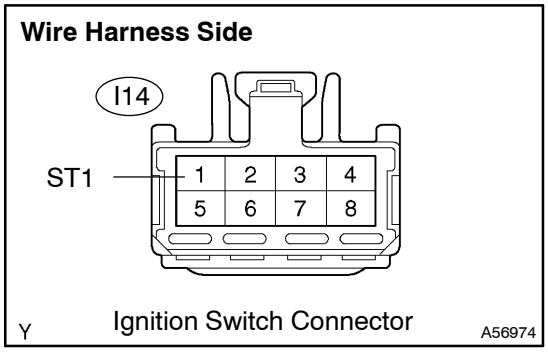
Standard:

Switch position	Terminal No.	Specified condition
LOCK	All Terminals	No continuity
ACC	2 ⇔ 3	Continuity
ON	2 ⇔ 3 ⇔ 4 5 ⇔ 6	
START	1 ⇔ 2 ⇔ 3 5 ⇔ 7	

NG → **REPLACE IGNITION OR STARTER SWITCH ASSY**

OK

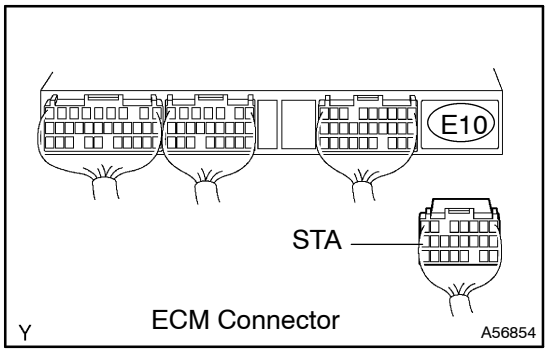
8 CHECK HARNESS AND CONNECTOR(ECM – IGNITION OR STARTER SWITCH ASSY)



(a) Disconnect the ignition switch connector.
(b) Disconnect the ECM E10 connector.
(c) Check the continuity between the wire harness side connector.

Standard (Check for open):

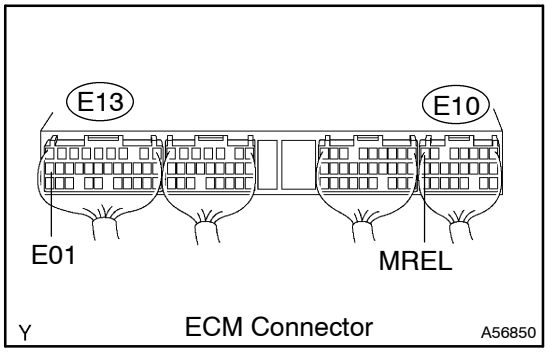
Symbols (Terminal No.)	Specified condition
ST1 (I14 – 1) ⇔ STA (E10 – 15)	Continuity



NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

9 INSPECT ECM(CHECK VOLTAGE)



(a) Turn the ignition switch ON.
(b) Measure the voltage between the terminals of the ECM E10 and E13 connector.

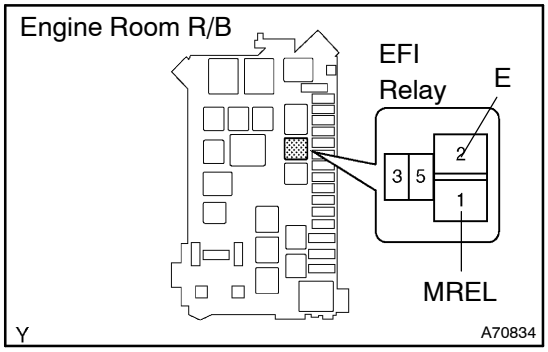
Voltage:

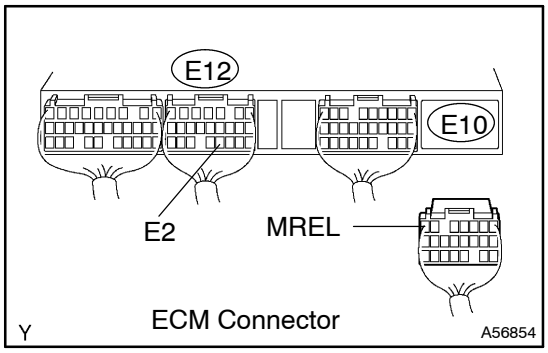
Symbols (Terminal No.)	Specified condition
MREL (E10 – 7) ⇔ E01 (E13 – 21)	9 – 14 V

OK → **CHECK AND REPLACE ECM**

NG

10	CHECK HARNESS AND CONNECTOR(ECM – EFI RELAY, EFI RELAY – BODY GROUND)





(a) Remove the EFI relay from the engine room R/B.
(b) Disconnect the ECM E10 connector.
(c) Check the continuity between the wire harness side connector.

Standard (Check for open):

Symbols (Terminal No.)	Specified condition
MREL (EFI relay terminal 1 of R/B) ⇔ MREL (E10 – 7)	Continuity
E (EFI relay terminal 2 of R/B) ⇔ Body ground	

Standard (Check for short):

Symbols (Terminal No.)	Specified condition
MREL (E10 – 7) ⇔ E2 (E12 – 20)	No continuity

NG → **REPAIR OR REPLACE HARNESS OR CONNECTOR**

OK

REPLACE ENGINE ROOM RELAY BLOCK