ECM POWER SOURCE CIRCUIT

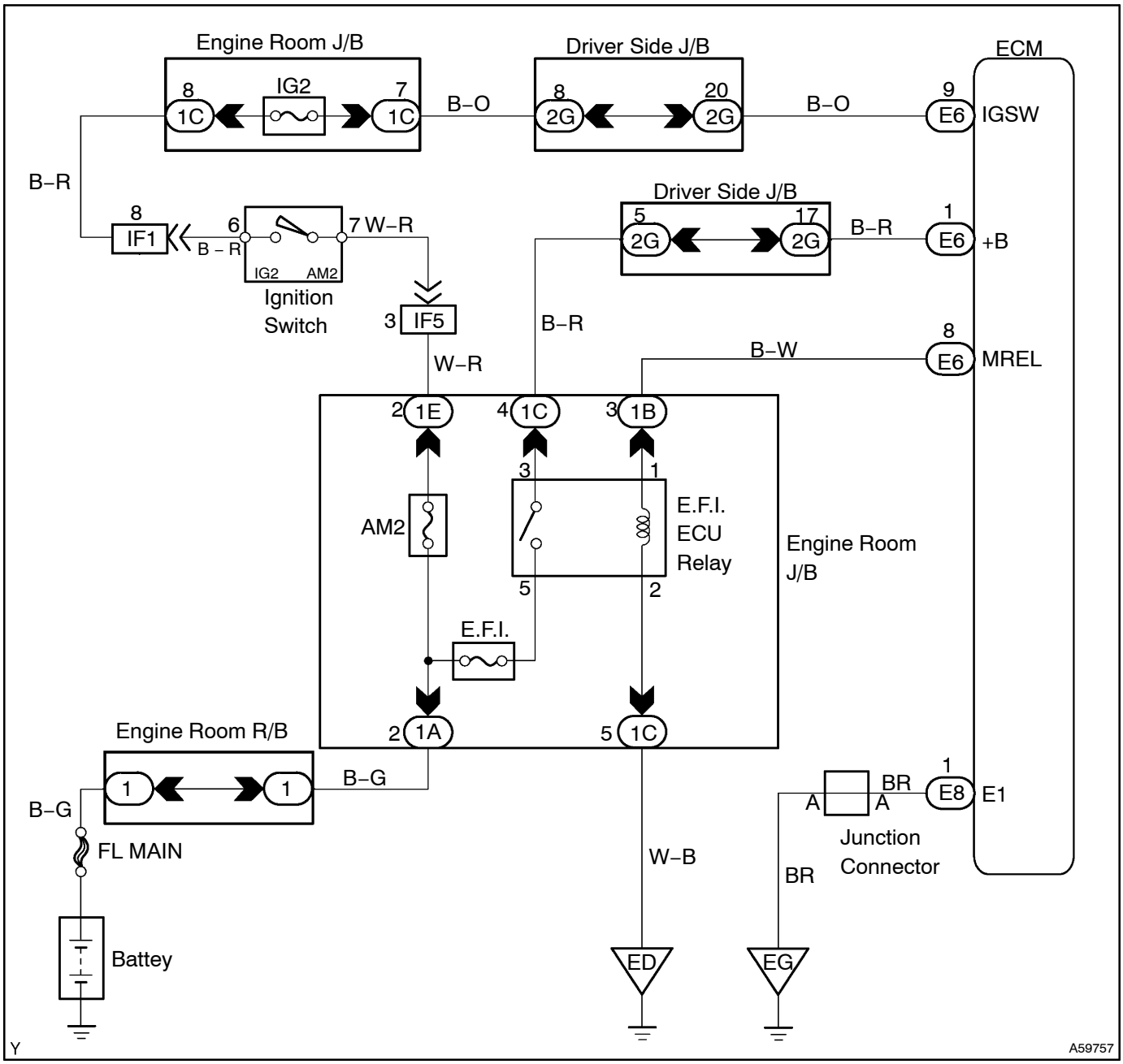
CIRCUIT DESCRIPTION

When the ignition switch is turned on, battery positive voltage is applied to IG2 Relay, terminal IGSW of the ECM and the E.F.I. ECU relay control circuit in the ECM sends a signal to terminal MREL of the ECM by switching on the E.F.I. ECU relay.

This signal causes current to flow to the coil, cutting off the contacts of the E.F.I. ECU relay and supplying power to terminals +B of the ECM.

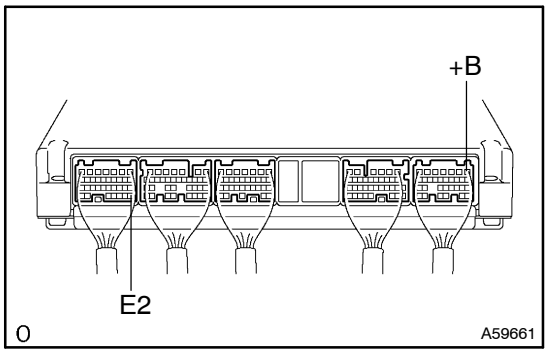
If the ignition switch is turned off, the ECM continues to switch on the E.F.I. ECU relay for a maximum of 2 seconds for the initial setting of the ISC valve.

WIRING DIAGRAM



INSPECTION PROCEDURE

1 INSPECT ECM(CHECK +B VOLTAGE)

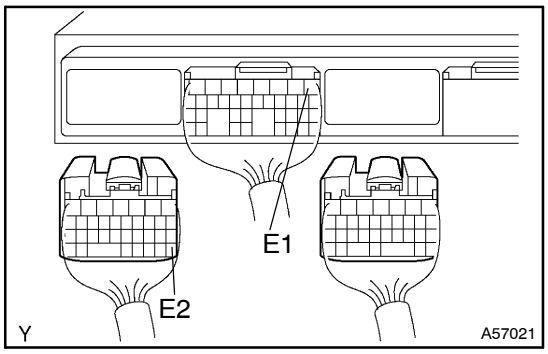


(a) Turn the ignition switch ON.
(b) Measure the voltage between terminals +B of the ECM connector and E2 of the ECM connector.
Voltage: 9 – 14 V

OK → **PROCEED TO NEXT CIRCUIT INSPECTION SHOWN ON PROBLEM SYMPTOMS TABLE**

NG

2 CHECK WIRE HARNESS OR CONNECTOR(ECM GROUND)

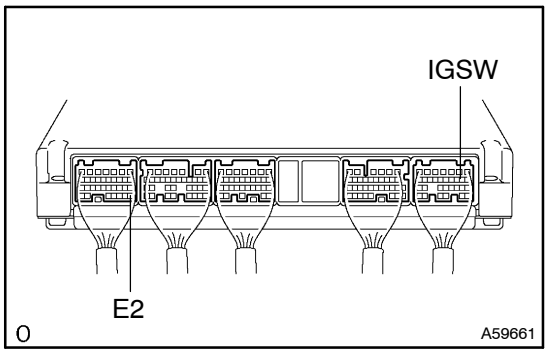


(a) Disconnect the ECM E10 and E8 connector.
(b) Check for open between the terminals E1 and E2 of the ECM connector and body ground.
Resistance: 1 Ω or less

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

OK

3 INSPECT ECM(CHECK IGSW VOLTAGE)

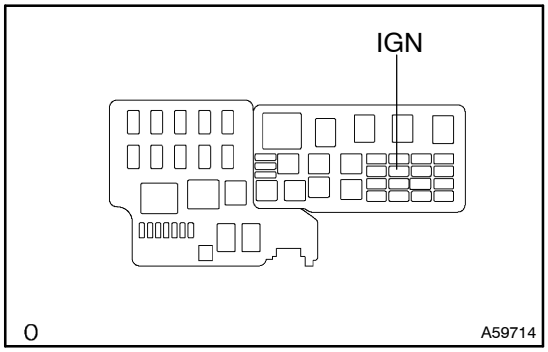


(a) Turn the ignition switch ON.
(b) Measure the voltage between terminals IGSW of the ECM connector and E2 of the ECM connector.
Voltage: 9 – 14 V

OK → **Go to step 7**

NG

4 CHECK FUSE(IGN FUSE)

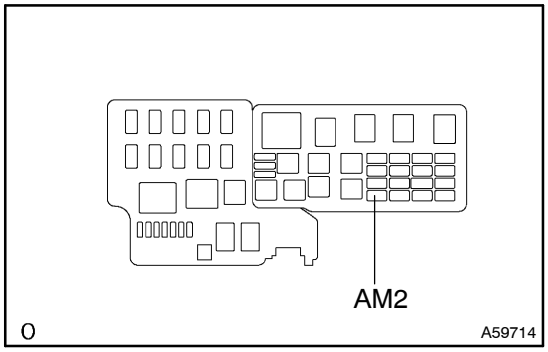


(a) Remove the IGN fuse from the enjine room J/B.
(b) Check the continuity of the IGN fuse.
Result: Continuity

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

OK

5 CHECK FUSE(AM2 FUSE)

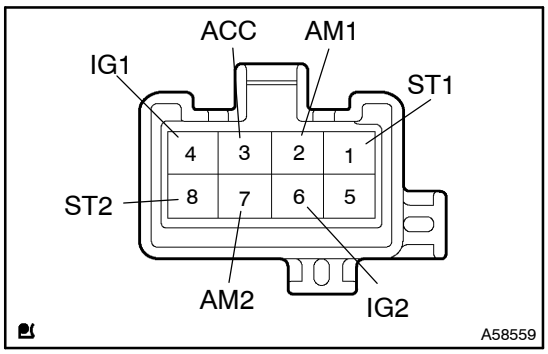


(a) Remove the AM2 fuse from the engine room J/B.
(b) Check the continuity of the AM2 fuse.
Result: Continuity

NG → **CHECK FOR SHORT IN ALL HARNESS AND COMPONENTS CONNECTED AM2 FUSE**

OK

6 CHECK IGNITION OR STARTER SWITCH ASSY



(a) Check continuity between the connector terminals shown in the chart below.

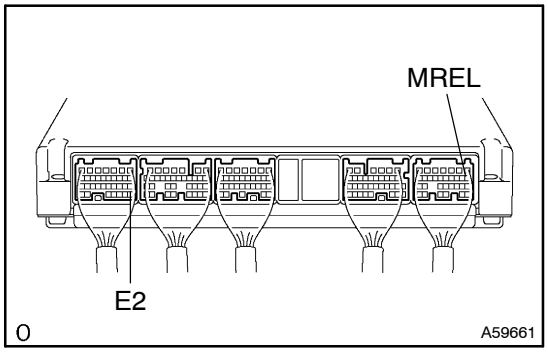
Switch	Terminal No.	Resistance
LOCK	All Terminal to Terminal	1MΩ or more
ACC	2⇔3	1Ω or less
ON	2⇔3⇔4 6⇔7	1Ω or less
START	1⇔2⇔4 6⇔7⇔8	1Ω or less

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

OK

REPAIR OR REPLACE WIRE HARNESS OR CONNECTOR

7 INSPECT ECM(CHECK MREL VOLTAGE)

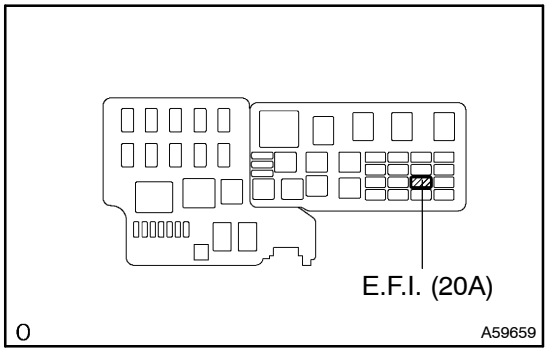


(a) Turn the ignition switch ON.
(b) Measure the voltage between terminal MREL of the ECM connector and E2 of the ECM connector.
Voltage: 9 – 14 V

NG → **REPLACE ENGINE ROOM RELAY BLOCK**

OK

8 CHECK FUSE(E.F.I. FUSE)

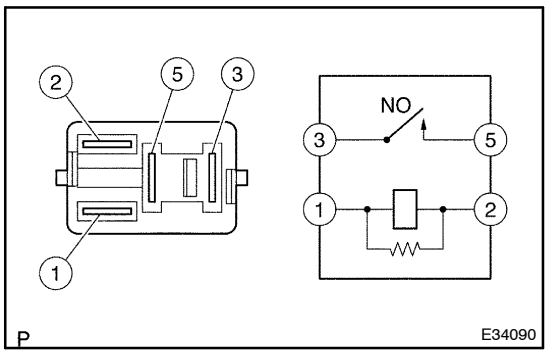


(a) Remove the E.F.I. fuse from the engine room J/B.
(b) Check the continuity of the E.F.I. fuse.
Result: Continuity

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

OK

9 CHECK E.F.I ECU RELAY



(a) Remove the E.F.I. ECU relay from the engine room J/B.
(b) Check continuity between the terminals shown below.
Resistance:

Terminal No.	Resistance
1 – 2	1 Ω or less
3 – 5	1 MΩ or more

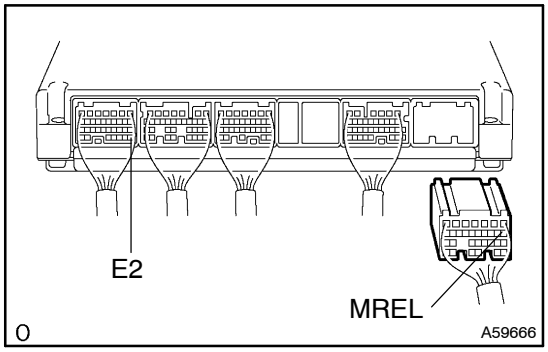
(c) Check continuity between the terminals 3 and 5 of the connector when the battery voltage is applied to the terminals between 1 and 2.
Resistance:

Terminal No.	Resistance
3 – 5	1 Ω or more

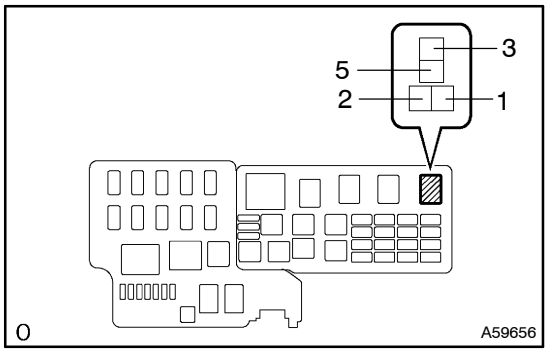
NG → **REPLACE E.F.I ECU RELAY**

OK

10	CHECK WIRE HARNESS OR CONNECTOR(TERMINAL MREL–BODY GROUND AND TERMINAL +B–E.F.I. ECU RELAY)



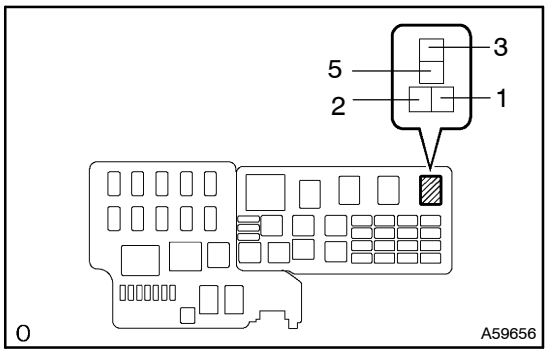
(a) Disconnect the ECM E6 connector.
(b) Check continuity between the terminal MREL of the ECM connector and body ground.
RESISTANCE: 1 Ω or less
(c) Remove the E.F.I. ECU relay.
(d) Check for short between the terminals MREL and E2 of the ECM connector.
RESISTANCE: 1 MΩ or more
(e) Check continuity between terminals 3 of E.F.I. ECU relay and +B engine ECM connector.
RESISTANCE: 1 Ω or less



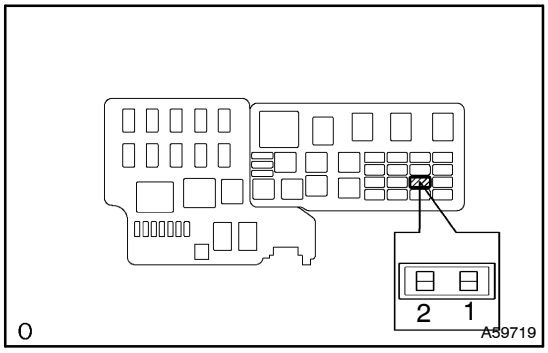
NG → **REPAIR OR REPLACE WIRE HARNESS OR CONNECTOR**

OK

11	CHECK WIRE HARNESS OR CONNECTOR(E.F.I. FUSE–BATTERY AND E.F.I. FUSE–E.F.I. ECU RELAY)



(a) Remove the E.F.I. ECU relay.
(b) Remove the E.F.I. fuse.
(c) Check continuity between terminals 2 of the E.F.I. fuse and 5 of the E.F.I. ECU relay.
RESISTANCE: 1 Ω or less
(d) Check continuity between terminals 1 of the E.F.I. fuse and positive (+) of the battery.
RESISTANCE: 1 Ω or less



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

OK

REPLACE ENGINE ROOM RELAY BLOCK