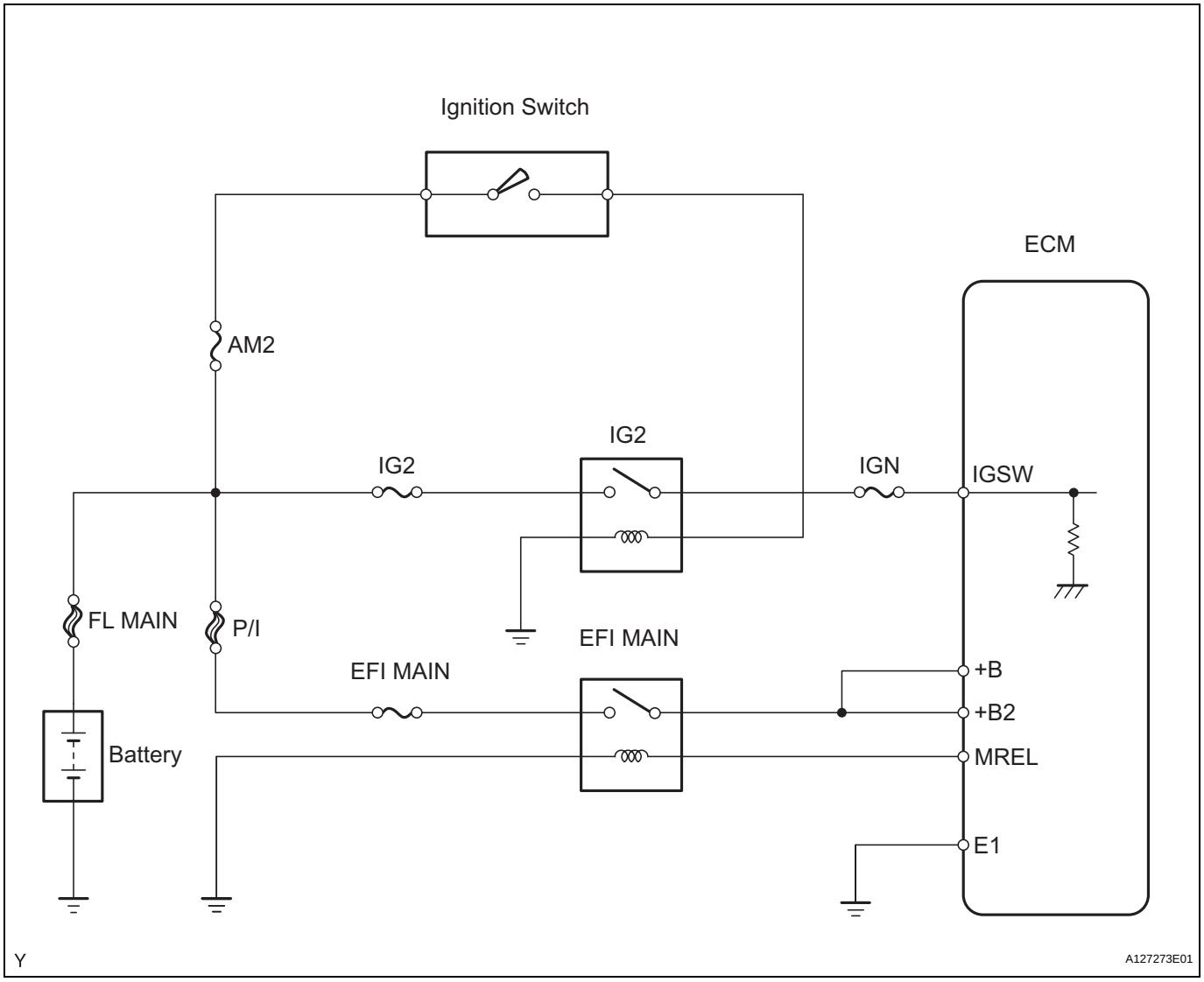
ECM Power Source Circuit

DESCRIPTION

When the ignition switch is turned ON, the battery voltage is applied to the IGSW of the ECM. The output signal from the MREL terminal of the ECM causes a current to flow to the coil, closing the contacts of the integration relay (EFI MAIN relay) and supplying power to either terminal +B or +B2 of the ECM.

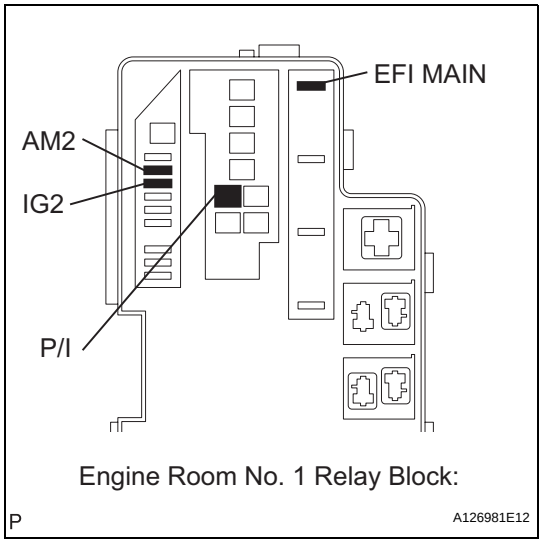
WIRING DIAGRAM



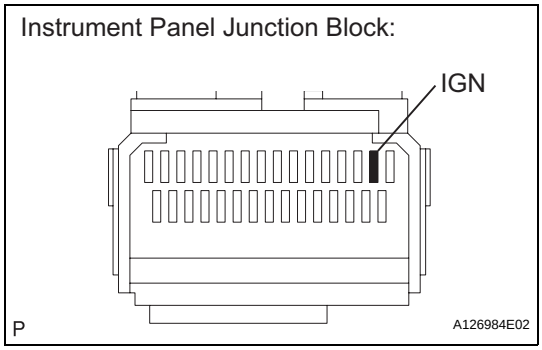
ES

INSPECTION PROCEDURE

1	INSPECT FUSES (P/I, AM2, IG2, EFI MAIN, IGN)



(a) Remove the P/I fuse, AM2 fuse, IG2 fuse and EFI MAIN fuse from the engine room No. 1 relay block.

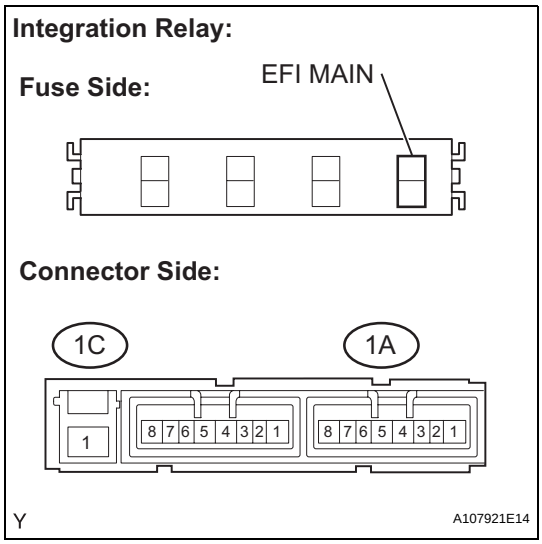


(b) Remove the IGN fuse from the instrument panel junction block.
(c) Measure the resistance of the fuses.
Standard resistance:
Below 1Ω
(d) Reinstall the fuses.

NG → **CHECK FOR SHORT IN ALL HARNESSES AND CONNECTORS CONNECTED TO FUSE AND REPLACE FUSE**

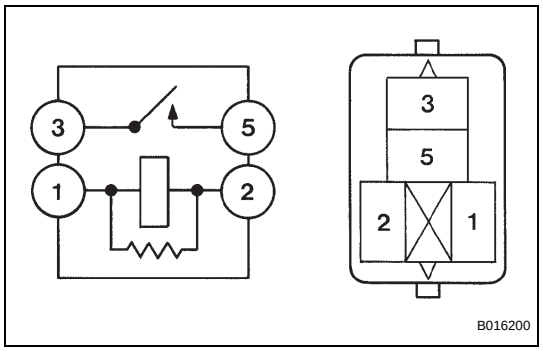
OK

2	INSPECT RELAY (IG2, EFI MAIN)



(a) Remove the integration relay and IG2 relay from the engine room No. 1 relay block.
(b) Measure the resistance between the terminal of the integration relay.
Standard resistance

Tester Connections	Specified Conditions
1C-1 - 1A-4	10 kΩ or higher
	Below 1 Ω (When battery voltage is applied to terminals 1A-2 and 1A-3)



(c) Measure the resistance between the terminal of the IG2 relay.

Standard resistance

Tester Connections	Specified Conditions
3 - 5	10 kΩ or higher
	Below 1 Ω (When battery voltage is applied to terminals 1 and 2)

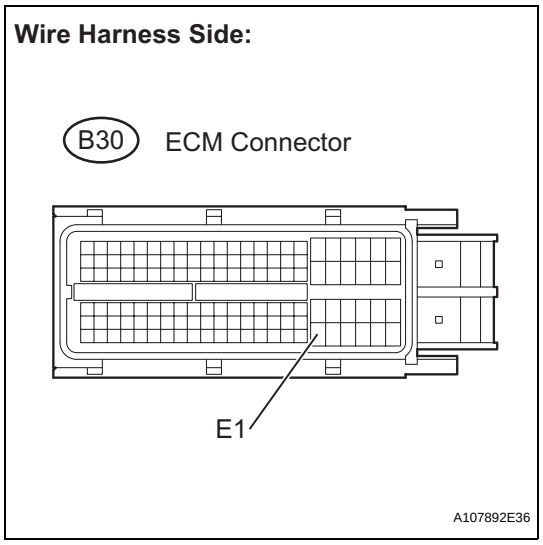
(d) Reinstall the relay.

NG → **REPLACE RELAY**

OK

ES

3 CHECK HARNESS AND CONNECTOR (ECM - BODY GROUND)



(a) Disconnect the B30 ECM connector.
(b) Measure the resistance.

Standard resistance

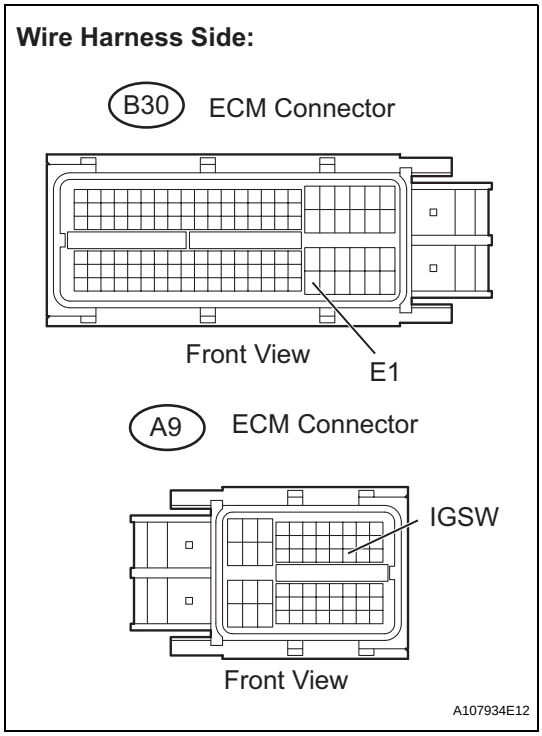
Tester Connection	Specified Condition
B30-104 (E1) - Body ground	Below 1 Ω

(c) Reconnect the ECM connector.

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

OK

4	INSPECT ECM (IGSW VOLTAGE)



(a) Disconnect the B30 and A9 ECM connectors.
(b) Turn the ignition switch ON.
(c) Measure the voltage between the terminals of the B30 and A9 ECM connectors.

Standard voltage

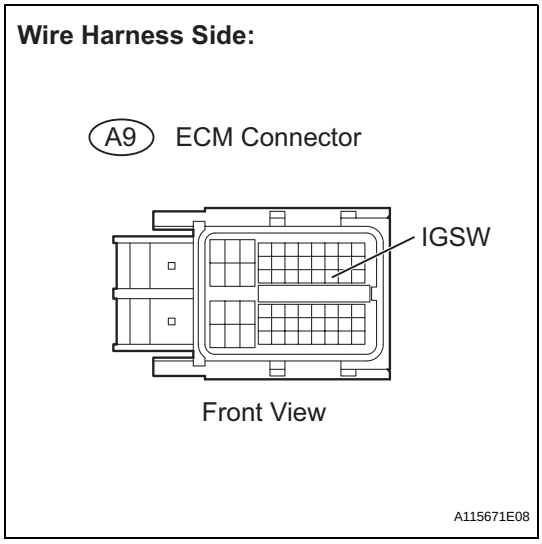
Tester Connections	Specified Conditions
A9-28 (IGSW) - B30-104 (E1)	9 to 14 V

(d) Reconnect the ECM connector.

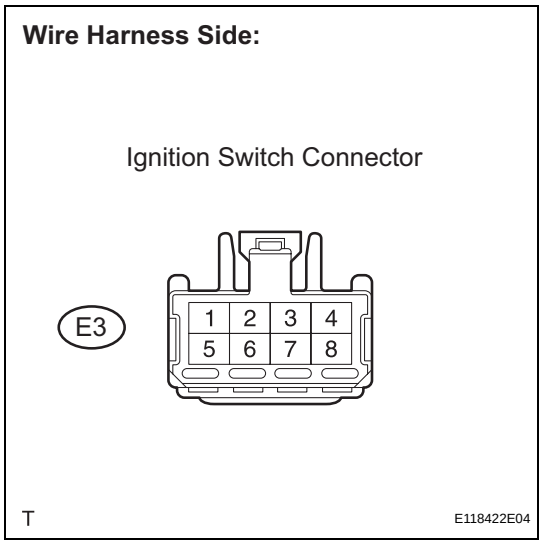
OK → **REPLACE ECM**

NG

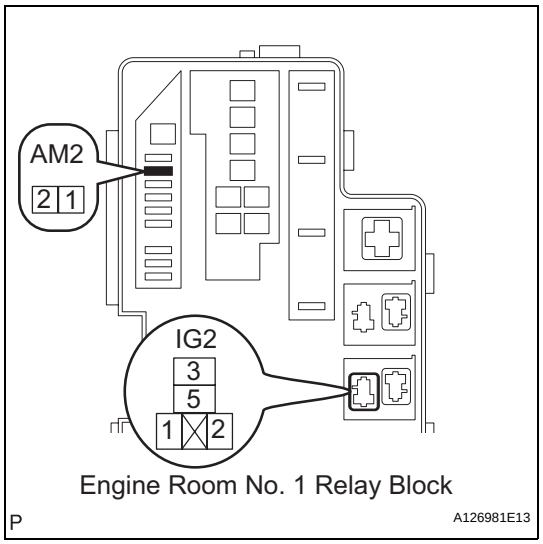
5	CHECK HARNESS AND CONNECTOR (RELAY BLOCK - ECM, IGNITION SWITCH, BATTERY)



(a) Disconnect the A9 ECM connector.



(b) Disconnect the E3 ignition switch connector.
(c) Disconnect the battery positive terminal.



(d) Remove the AM2 fuse and IG2 relay.
(e) Measure the resistance between the terminals.

Standard resistance (Check for open)

Tester Connections	Specified Conditions
A9-28 (IGSW) - Engine room No. 1 relay block IG2 relay terminal 5	Below 1 Ω
Engine room No. 1 relay block IG2 relay terminal 2 - Body ground	Below 1 Ω
Positive (+) battery cable - Engine room relay block No. 1 AM2 fuse terminal 1	Below 1 Ω
Positive (+) battery cable - Engine room relay block No. 1 IG2 relay terminal 3	Below 1 Ω
E3-7 (AM2) - Engine room No. 1 relay block AM2 fuse terminal 2	Below 1 Ω
E3-6 (IG2) - Engine room No. 1 relay block IG2 relay terminal 1	Below 1 Ω

Standard resistance (Check for short)

Tester Connections	Specified Conditions
A9-28 (IGSW) or Engine room No. 1 relay block IG2 relay terminal 5 - Body ground	10 kΩ or higher
Positive (+) battery cable or Engine room No. 1 relay block AM2 fuse terminal 1 - Body ground	10 kΩ or higher
Positive (+) battery cable or Engine room No. 1 relay block IG2 relay terminal 3 - Body ground	10 kΩ or higher
E3-7 (AM2) or Engine room No. 1 relay block AM2 fuse terminal 2 - Body ground	10 kΩ or higher
E3-6 (IG2) or Engine room No. 1 relay block IG2 relay terminal 1 - Body ground	10 kΩ or higher

(f) Reinstall the relay and fuse.
(g) Reconnect the connectors.

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

OK

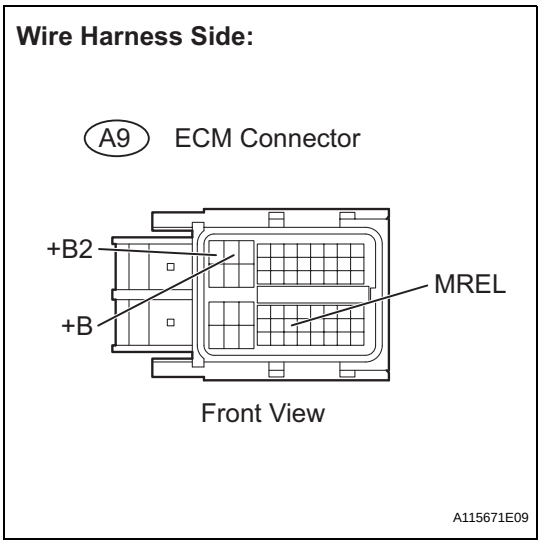
6	INSPECT IGNITION SWITCH (See page ES-261)

NG → REPLACE IGNITION SWITCH

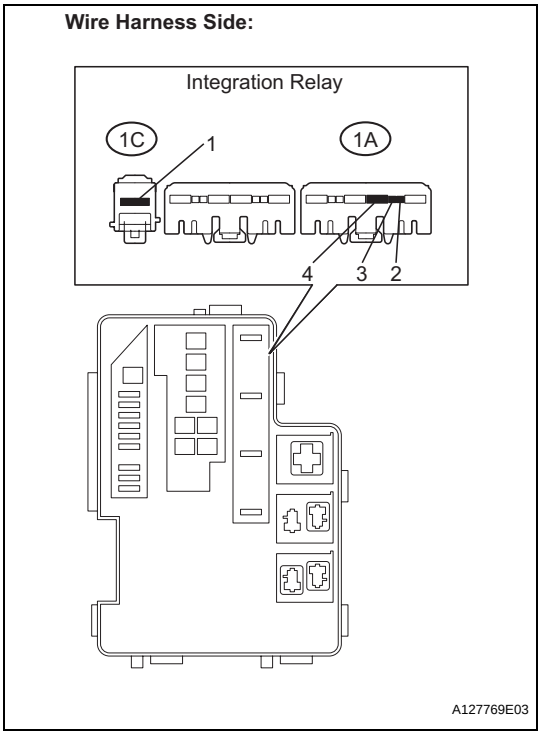
OK

7	CHECK HARNESS AND CONNECTOR (INTEGRATION RELAY - ECM, BATTERY, BODY GROUND)

ES



(a) Disconnect the A9 ECM connector.



(b) Remove the integration relay from the engine room No. 1 relay block.
(c) Disconnect the integration relay connector.
(d) Remove the P/I fuse from the engine room No. 1 relay block.
(e) Check the resistance between the terminals.

Standard resistance (Check for open)

Tester Connections	Specified Conditions
A9-2 (+B) - 1A-4	Below 1 Ω
A9-1 (+B2) - 1A-4	Below 1 Ω
A9-44 (MREL) - 1A-2	Below 1 Ω
Engine room relay block No. 1 P/I fuse terminal 2 - 1C-1	Below 1 Ω
1A-3 - Body ground	Below 1 Ω

Standard resistance (Check for short)

Tester Connections	Specified Conditions
A9-2 (+B) or 1A-4 - Body ground	10 kΩ or higher
A9-1 (+B2) or 1A-4 - Body ground	10 kΩ or higher
A9-44 (MREL) or 1A-2 - Body ground	10 kΩ or higher
Engine room No. 1 relay block P/I fuse terminal 2 or 1C-1 - Body ground	10 kΩ or higher

(f) Reconnect the connectors.

(g) Reinstall the integration relay and P/I fuse.

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

OK

REPAIR OR REPLACE ENGINE ROOM NO. 1 RELAY BLOCK