

When the ignition switch is turned ON, battery positive voltage is applied to terminal IGSW of the ECM and the EFI main relay (Marking: EFI) control circuit in the ECM sends a signal to terminal MREL of the ECM switching on the EFI main relay.

If the ignition switch is turned off, the ECM continues to switch on the EFI main relay for a maximum of 2 seconds for the initial setting of the IAC valve.

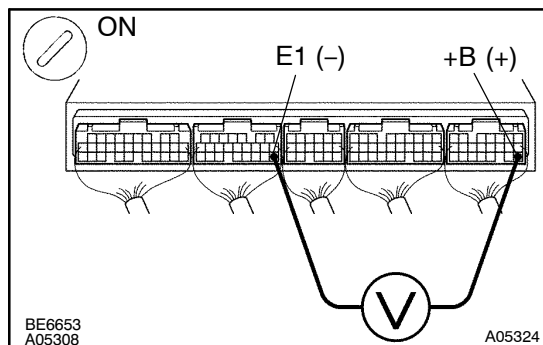
The diagram illustrates the Ignition and Fuel Injection (EFI) system for a 1997-1998 Ford F-150. The system is powered by a battery connected to a fusible link block. The power then flows to the Engine Room Junction Box (J/B). From the Engine Room J/B, the Ignition (IG) circuit passes through an IG Switch and a Cowl Side Junction Box (J/B) LH to the ECM. The Fuel Injection (FI) circuit passes through an EFI Relay and two IG2 relays to the ECM. The ECM is connected to the battery via a B+ terminal and to ground via an E1 terminal. The diagram also shows the location of the battery, fusible link block, and various relays and switches.

Legend:

- 1E 10: Engine Room J/B
- 1N 1: Battery
- 1: Fusible Link Block
- 2: EFI Relay
- 3: IG Switch
- 4: EFI Relay
- 5: IG Switch
- 6: Cowl Side J/B LH
- 7: IG2
- 8: IG2
- 9: ECM
- 10: ECM
- 11: ECM
- 12: Cowl Side J/B LH
- 13: Cowl Side J/B LH
- 14: Cowl Side J/B LH
- 15: Cowl Side J/B LH
- 16: ECM
- 17: ECM
- 18: ECM
- 19: ECM
- 20: ECM
- 21: Cowl Side J/B LH
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- 97: Cowl Side J/B LH
- 98: Cowl Side J/B LH
- 99: Cowl Side J/B LH
- 100: Cowl Side J/B LH

INSPECTION PROCEDURE

1	Check voltage between terminals +B and E1 of ECM connectors.
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**PREPARATION:**

- (a) Remove the glove compartment door.
- (b) Turn the ignition switch ON.

CHECK:

Measure voltage between terminals +B and E1 of the ECM connectors.

OK:

Voltage: 9 ~ 14 V

OK

Proceed to next circuit inspection shown on Problem symptoms table (See page DI-27).

NG

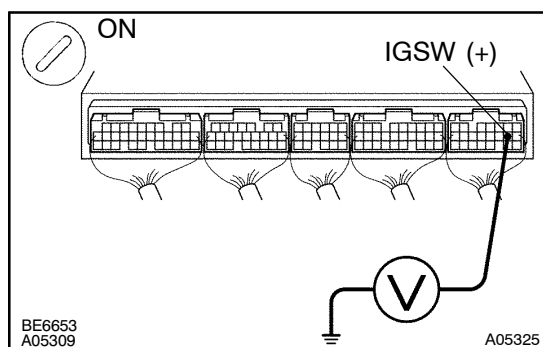
2	Check for open in harness and connector between terminal E1 of ECM and body ground (See page IN-33).
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Repair or replace harness or connector.

OK

3	Check voltage between terminal IGSW of ECM connector and body ground.
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**PREPARATION:**

Turn the ignition switch ON.

CHECK:

Measure voltage between terminal IGSW of the ECM connector and body ground.

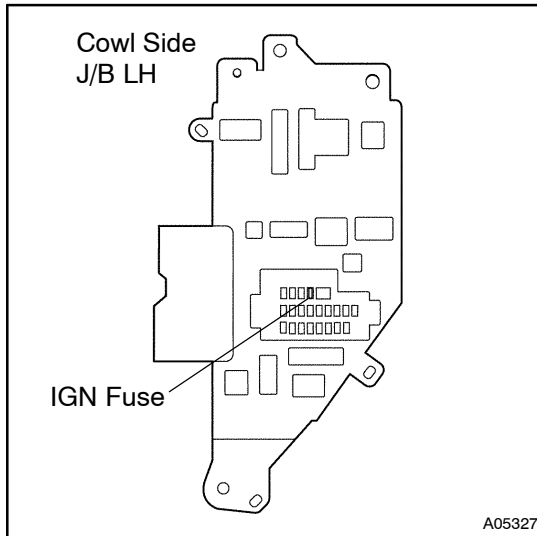
OK:

Voltage: 9 ~ 14 V

OK

Go to step 6.

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4 Check IGN fuse.**PREPARATION:**

Remove the IGN fuse from the cowl side J/B LH.

CHECK:

Check continuity of the IGN fuse.

OK:

Continuity

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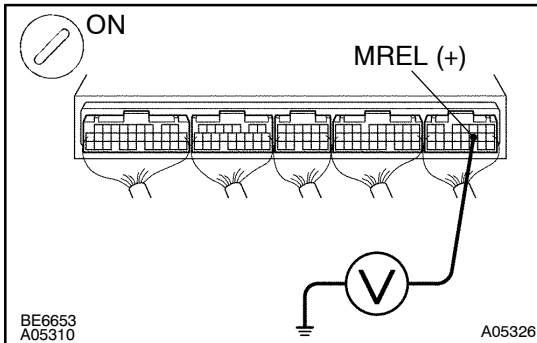
Check for short in all harness and components connected to IGN fuse.

OK**5 Check ignition switch (See page [BE-26](#)).****NG**

Replace ignition switch.

OK

Check and repair harness and connector between battery and ignition switch, and ignition switch and ECM.

6 Check voltage between terminal MREL of ECM connector and body ground.**PREPARATION:**

Turn the ignition switch ON.

CHECK:

Measure voltage between terminal MREL of the ECM connector and body ground.

OK:

Voltage: 9 ~ 14 V

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Check and replace ECM (See page [IN-33](#)).

OK**7 Check EFI fuse of engine room J/B (See page [DI-150](#)).****NG**

Check for short in all harness and components connected to EFI fuse.

OK**8 Check EFI main relay (Marking: EFI) (See page [SF-45](#)).****NG**

Replace EFI main relay.

OK

9	Check for open and short in harness and connector between terminal MREL of ECM and body ground (See page IN-33).
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Repair and replace harness or connector.

OK

Check and repair harness or connector between EFI fuse and battery.