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## 1996 FORD Probe OEM Service and Repair Workshop Manual

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<b>Yes</b>	GO to <a href="#">AV9</a>
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<b>No</b>	<p>INSTALL new high voltage cables.</p> <p>REFER to: <a href="#">High Voltage Battery Cables - Electric</a> (414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).</p> <p>CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.</p>
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**AV9 CHECK THE ELECTRIC MOTOR CIRCUITS FOR A SHORT TO GROUND**

- Measure and record:

Positive Lead	Measurement / Action	Negative Lead
C1201-1	$\Omega$	Ground
C1201-2	$\Omega$	Ground
C1201-3	$\Omega$	Ground

**Are the resistances greater than 10K ohms?**

<b>Yes</b>	GO to <a href="#">AV10</a>
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<b>No</b>	<p>INSTALL new high voltage cables.</p> <p>REFER to: <a href="#">High Voltage Battery Cables - Electric</a> (414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).</p> <p>CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.</p>
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**AV10 CHECK THE ELECTRIC MOTOR CIRCUITS FOR SHORTED TOGETHER**

REFER to: [Electric Powertrain Control - Component Location](#)(303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN), Description and Operation).

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SOBDMC (secondary on-board diagnostic control module C) P0DFC:00	Generator Position Sensor Not Learned: No Sub Type Information	This DTC (diagnostic trouble code) sets if the TRID block is not programmed or programmed incorrectly.

### Possible Sources

- TRID block programming

### AW1 CHECK FOR INVERTER SYSTEM CONTROLLER (ISC) DIAGNOSTIC TROUBLE CODES (DTCS)

- Ignition ON.
- Carry out the Inverter System Controller (ISC) self-test.

**Is DTC (diagnostic trouble code) P06B8 present?**

<b>Yes</b>	<a href="#">GO to Pinpoint Test N</a>
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<b>No</b>	GO to <a href="#">AW2</a>
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### AW2 VERIFY THE INVERTER SYSTEM CONTROLLER (ISC) CALIBRATION LEVEL

- Verify the Inverter System Controller (ISC) is at the latest calibration level.

**Is the Inverter System Controller (ISC) at the latest calibration level?**

<b>Yes</b>	GO to <a href="#">AW3</a>
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<b>No</b>	UPDATE the Inverter System Controller (ISC) to the latest calibration level.
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### AW3 VERIFY THE INVERTER SYSTEM CONTROLLER (ISC) TRID BLOCK HAS BEEN PROGRAMMED CORRECTLY

Control Module C) in the scan tool.

### Normal Operation and Fault Conditions

REFER to: [Electric Powertrain Control - Component Location](#)(303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN), Description and Operation).

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SOBDMC (secondary on-board diagnostic control module C) P0E71:00	Generator Torque Delivered Performance: No Sub Type Information	This DTC (diagnostic trouble code) sets if the generator system is temporarily disabled and is a notification of other faults in the system.

### Possible Sources

- Other related diagnostic trouble codes (DTCs) within the Inverter System Controller (ISC)
- Wiring, terminals or connectors

### AX1 CHECK FOR INVERTER SYSTEM CONTROLLER (ISC) DIAGNOSTIC TROUBLE CODES (DTCS)

- Using a diagnostic scan tool, carry out the Inverter System Controller (ISC) self-test.

**Is P0E71:00 the only DTC (diagnostic trouble code) present?**

<b>Yes</b>	GO to <a href="#">AX2</a>
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<b>No</b>	DIAGNOSE all other Inverter System Controller (ISC) diagnostic trouble codes (DTCs), REFER to the DTC (diagnostic trouble code) chart in this section.
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### AX2 CHECK THE INVERTER SYSTEM CONTROLLER (ISC) CALIBRATION LEVEL

- Ignition OFF.
- Depower the high voltage battery.  
REFER to: [High Voltage System De-energizing - Full Hybrid Electric Vehicle \(FHEV\)](#)(414-03A High Voltage Battery, Mounting and Cables, General Procedures).
- Visually inspect all the high voltage cables.
- Make sure all the high voltage connectors are correctly and securely connected.
- Examine all the high voltage cables and connectors for damaged, burned or overheated insulation and loose or broken connections.

**Is a concern present?**

<b>Yes</b>	REPAIR as necessary. CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.
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<b>No</b>	GO to <a href="#">AY2</a>
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**AY2 VERIFY THE HIGH VOLTAGE TRACTION BATTERY STATE OF CHARGE**

- Ignition ON.
- Access the SOBDMC (secondary on-board diagnostic control module C) and monitor the HVBAT\_V (High Voltage Battery Voltage) (V) PID (parameter identification)

**Is the voltage greater than 200 volts for HEV (hybrid electric vehicle) and 250 volts for PHEV (plug-in hybrid electric vehicle) ?**

<b>Yes</b>	GO to <a href="#">AY3</a>
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<b>No</b>	CHARGE the high voltage traction battery. REFER to: <a href="#">High Voltage Battery Charging - Full Hybrid Electric Vehicle (FHEV)</a> (414-03A High Voltage Battery, Mounting and Cables, General Procedures). CLEAR the Inverter System Controller (ISC) diagnostic trouble codes (DTCs). REPEAT the self-test.
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**AY3 CHECK FOR BECM (BATTERY ENERGY CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCs)**

- Using a diagnosis scan tool, carry out the BECM (battery energy control module) self-test.

Positive Lead	Measurement / Action	Negative Lead
C4236D-3	$\Omega$	C1458C-1
C4236D-4	$\Omega$	C1458C-4

**Are the resistances less than 5 ohms?**

<b>Yes</b>	GO to <a href="#">AY6</a>
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<b>No</b>	<p>INSTALL a new high voltage cable from the Inverter System Controller (ISC) to the traction battery.</p> <p>REFER to: <a href="#">High Voltage Battery Cables - Electric</a> (414-03A High Voltage Battery, Mounting and Cables, Removal and Installation).</p> <p>CLEAR the Inverter System Controller (ISC) diagnostic trouble codes (DTCs). REPEAT the self-test.</p>
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#### **AY6 CHECK THE BECM (BATTERY ENERGY CONTROL MODULE) FOR VOLTAGE MISMATCH**

- Ignition ON.
- Clear the Inverter System Controller (ISC) diagnostic trouble codes (DTCs).
- Ignition OFF.
- Ignition ON.
- Wait for 5 seconds.
- Access the BECM (battery energy control module) and monitor the HVBAT\_V (High Voltage Battery Voltage) (V) PID (parameter identification)
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- Access the BECM (battery energy control module) and monitor the CONVOLTPOS (Contactor Voltage Positive) (V) PID (parameter identification)
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**Are the PID (parameter identification) voltages within 20 volts of each other?**

<b>Yes</b>	GO to <a href="#">AY7</a>
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## Normal Operation and Fault Conditions

REFER to: [Electric Powertrain Control - Component Location](#)(303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN), Description and Operation).

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SOBDMC (secondary on-board diagnostic control module C) P1A0A:02	Immediate Shutdown Signal A: General Signal Failure	This DTC (diagnostic trouble code) sets when the Inverter System Controller (ISC) is commanded to shut down from the BECM (battery energy control module) or the RCM (restraints control module)

### Possible Sources

- High voltage battery diagnostic trouble codes (DTCs)
- RCM (restraints control module) diagnostic trouble codes (DTCs)

## AZ1 VERIFY THE INVERTER SYSTEM CONTROLLER (ISC) SHUTDOWN REQUEST

- Confirm the vehicle was not in an accident.

### Was the vehicle involved in a collision?

<b>Yes</b>	REPAIR any damage to the vehicle. CLEAR the diagnostic trouble codes (DTCs) and REPEAT the self-test.
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<b>No</b>	GO to <a href="#">AZ2</a>
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## AZ2 CHECK THE BECM (BATTERY ENERGY CONTROL MODULE) DIAGNOSTIC TROUBLE CODES (DTCs)

- Using a diagnostic scan tool, run the BECM (battery energy control module) self-tests.

### Are there any BECM (battery energy control module) diagnostic trouble codes (DTCs)?

<b>Yes</b>	DIAGNOSE and REPAIR any BECM (battery energy control module) diagnostic trouble codes (DTCs). REFER to: <a href="#">High Voltage Battery, Mounting and Cables - Electric</a> (414-03A High Voltage Battery, Mounting and Cables, Diagnosis and Testing).
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- BCM (body control module) issue

## BA1 CHECK THE BATTERY AND CHARGING SYSTEM

- Check the 12 volt battery and charging system voltages.  
REFER to: [Charging System - 2.7L EcoBoost \(238kW/324PS\)/3.5L EcoBoost \(BM\) - System Operation and Component Description](#)(414-00 Charging System - General Information, Description and Operation).

**Are the battery and charging system voltages within specification?**

<b>Yes</b>	GO to <a href="#">BA2</a>
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<b>No</b>	<p>REPAIR as necessary. REFER to: <a href="#">Charging System - 2.7L EcoBoost (238kW/324PS)/3.5L EcoBoost (BM) - System Operation and Component Description</a> (414-00 Charging System - General Information, Description and Operation). CLEAR the Inverter System Controller (ISC) diagnostic trouble codes (DTCs). REPEAT the self-test.</p>
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## BA2 CHECK THE ISP-R VPWR CIRCUIT FOR AN OPEN

- Ignition OFF.
- Disconnect BCMC (body control module C) C1035B .
- Disconnect Inverter System Controller (ISC) C1458A .
- Measure and record:

Positive Lead	Measurement / Action	Negative Lead
C1035B-8	$\Omega$	C1458A-K2

**Is the resistance less than 5 ohms?**

<b>Yes</b>	GO to <a href="#">BA3</a>
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<b>No</b>	REPAIR the open circuit.
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## Is DTC (diagnostic trouble code) P2533:62 present?

<b>Yes</b>	REFER to: <a href="#">Powertrain Control Module (PCM) Input and Output Controls</a> (303-14E Electronic Engine Controls - 3.5L V6 PowerBoost (CN), Diagnosis and Testing). Pinpoint Test Z.
<b>No</b>	The system is operating correctly at this time. The concern may have been caused by module connections. ADDRESS the root cause of any connector or pin issues.

## PINPOINT TEST BB : U0100

### NOTE

The Inverter System Controller (ISC) is referred to as the SOBDMC (Secondary On-Board Diagnostic Control Module C) in the scan tool.

### Normal Operation and Fault Conditions

REFER to: [Electric Powertrain Control - Component Location](#)(303-14F Electric Powertrain Control - 3.5L V6 PowerBoost (CN), Description and Operation).

### DTC Fault Trigger Conditions

DTC (diagnostic trouble code)	Description	Fault Trigger Condition
SOBDMC (secondary on-board diagnostic control module C) U0100:00	Lost Communication With ECM/PCM 'A': No Sub Type Information	This DTC (diagnostic trouble code) sets when gear position information is missing from the PCM (powertrain control module) .

### Possible Sources

- Communications network concern
- PCM (powertrain control module)

## BB1 CARRY OUT A VEHICLE INSPECTION AND VERIFY THE SELF-TEST PROCEDURE

### NOTE

- When using FDRS (Ford Diagnosis and Repair System) , the scan tool attempts to communicate with the PCM (powertrain control module) first. After establishing communication with the PCM (powertrain control module) , the scan tool then attempts to communicate with all modules on the vehicle. If an FDRS (Ford Diagnosis and Repair System) session cannot be established, FDRS (Ford Diagnosis and Repair System) may state no communication can be established with the PCM (powertrain control module) :
  - Choose No when the scan tool prompts whether or not to retry communication.
  - Enter a PCM (powertrain control module) part number, tear tag or calibration number to identify the vehicle and start a session. The PCM (powertrain control module) part number and 4-character tear tag are located on the PCM (powertrain control module) .
- Ignition ON.

**Do all modules indicate pass?**

<b>Yes</b>	GO to <a href="#">BB3</a>
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<b>No</b>	GO to <a href="#">BB4</a>
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**BB3 CHECK FOR A PCM (POWERTRAIN CONTROL MODULE) CONCERN**

- Using a diagnostic scan tool, carry out the PCM (powertrain control module) self-test.
- Check for any other PCM (powertrain control module) related symptoms.

**Is a concern present?**

<b>Yes</b>	DIAGNOSE all other PCM (powertrain control module) diagnostic trouble codes (DTCs). REFER to: <a href="#">Electronic Engine Controls</a> (303-14C Electronic Engine Controls - 3.5L EcoBoost (BM), Diagnosis and Testing).
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<b>No</b>	The system is operating correctly at this time. The concern may have been caused by module connections. Address the root cause of any connector or pin issues.
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**BB4 INVERTER SYSTEM CONTROLLER (ISC) SELF-TEST**

- Confirm the Inverter System Controller (ISC) was the only module to fail.

**Was the Inverter System Controller (ISC) the only module to fail?**