

## Fuel Tank and Lines

### Diagnostic Trouble Code (DTC) Chart

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. REFER to: [Diagnostic Methods](#) (100-00 General Information, Description and Operation).

### Diagnostic Trouble Code Chart

Module	DTC	Description	Action
<a href="#">PCM</a>	P008A:00	Low Pressure Fuel System Pressure - Too Low: No Sub Type Information	<a href="#">GO to Pinpoint Test HC</a>
<a href="#">PCM</a>	P008B:00	Low Pressure Fuel System Pressure - Too High: No Sub Type Information	<a href="#">GO to Pinpoint Test HC</a>
<a href="#">PCM</a>	P0230:00	Fuel Pump Primary Circuit: No Sub Type Information	<a href="#">GO to Pinpoint Test KC</a>
<a href="#">PCM</a>	P025A:00	Fuel Pump Module A Control Circuit/Open: No Sub Type Information	<a href="#">GO to Pinpoint Test KC</a>
<a href="#">PCM</a>	P025B:00	Fuel Pump Module A Control Circuit Range/Performance: No Sub Type Information	<a href="#">GO to Pinpoint Test KC</a>
<a href="#">PCM</a>	P0627:00	Fuel Pump A Control Circuit/Open: No Sub Type Information	<a href="#">GO to Pinpoint Test KC</a>
<a href="#">PCM</a>	P064A:00	Fuel Pump Control Module A: No Sub Type Information	<a href="#">GO to Pinpoint Test KC</a>
<a href="#">PCM</a>	P166A:00	Restraints Deployment Communication Circuit: No Sub Type Information	<a href="#">GO to Pinpoint Test KC</a>
<a href="#">PCM</a>	U0109:00	Lost Communication With Fuel Pump Control Module A: No Sub Type Information	<a href="#">GO to Pinpoint Test KC</a>

### Global Customer Symptom Code (GCSC) Chart

Diagnostics in this manual assume a certain skill level and knowledge of Ford-specific diagnostic practices. REFER to: [Diagnostic Methods](#) (100-00 General Information, Description and Operation).


### Global Customer Symptom Code Chart


Customer Symptom	Action
Start/Run/Move > Starting > Hard Start/Long Crank > Always	<a href="#">GO to Pinpoint Test HC</a>
Start/Run/Move > Starting > Hard Start/Long Crank > Hot	<a href="#">GO to Pinpoint Test HC</a>


Driving Performance > Lack/Loss of Power > Cruise/ Steady Speed > Always	<a href="#">GO to Pinpoint Test HC</a>
Driving Performance > Hesitates/Stumble > Cruise/ Steady Speed > Hot	<a href="#">GO to Pinpoint Test HC</a>


## Pinpoint Tests


### PINPOINT TEST HC : FUEL DELIVERY SYSTEM


 **WARNING:** Before working on or disconnecting any of the fuel tubes or fuel system components, relieve the fuel system pressure to prevent accidental spraying of fuel. Fuel in the fuel system remains under high pressure, even when the engine is not running. Failure to follow this instruction may result in serious personal injury.

 **WARNING:** Do not smoke, carry lighted tobacco or have an open flame of any type when working on or near any fuel-related component. Highly flammable mixtures are always present and may be ignited. Failure to follow these instructions may result in serious personal injury.

 **WARNING:** Do not carry personal electronic devices such as cell phones, pagers or audio equipment of any type when working on or near any fuel-related component. Highly flammable mixtures are always present and may be ignited. Failure to follow these instructions may result in serious personal injury.

 **WARNING:** When handling fuel, always observe fuel handling precautions and be prepared in the event of fuel spillage. Spilled fuel may be ignited by hot vehicle components or other ignition sources. Failure to follow these instructions may result in serious personal injury.

 **WARNING:** Clean all fuel residue from the engine compartment. If not removed, fuel residue may ignite when the engine is returned to operation. Failure to follow this instruction may result in serious personal injury.

 **WARNING:** Fuel may remain pressurized in some fuel lines after the Fuel System Pressure Release procedure. Wear safety gloves and a face shield when disconnecting pressure lines to avoid skin and eye contact. Failure to follow this instruction may result in serious personal injury.

**NOTE:** Replacement fuel injectors may not be the same color as the original injectors in the vehicle. Verify the replacement injector is correct for the application by part number.

Refer to Wiring Diagrams Cell 22 for schematic and connector information.

### Normal Operation and Fault Conditions

Refer to the [DTC](#) Fault Trigger Conditions.

### DTC Fault Trigger Conditions

<u>DTC</u>	Description	Fault Trigger Condition
<u>PCM</u>		Sets when <u>PCM</u> detects the low pressure fuel


P008A:00	Low Pressure Fuel System Pressure - Too Low: No Sub Type Information	system pressure falls below an expected threshold.
<u>PCM</u> P008B:00	Low Pressure Fuel System Pressure - Too High: No Sub Type Information	Sets when <u>PCM</u> detects the low pressure fuel system pressure rises above an expected threshold.


#### Possible Sources


- High ethanol content
- Fuel supply line
- Low fuel level
- MAF sensor
- Fuel pressure sensor
- Fuel filter (9155)
- Fuel injector (9F593)
- Fuel pump (9H307)


**Pinpoint Test Steps available in the on-line Workshop Manual.**


### PINPOINT TEST KC : FUEL PUMP CONTROL MODULE

 **WARNING:** Before working on or disconnecting any of the fuel tubes or fuel system components, relieve the fuel system pressure to prevent accidental spraying of fuel. Fuel in the fuel system remains under high pressure, even when the engine is not running. Failure to follow this instruction may result in serious personal injury.

 **WARNING:** Do not smoke, carry lighted tobacco or have an open flame of any type when working on or near any fuel-related component. Highly flammable mixtures are always present and may be ignited. Failure to follow these instructions may result in serious personal injury.

 **WARNING:** Do not carry personal electronic devices such as cell phones, pagers or audio equipment of any type when working on or near any fuel-related component. Highly flammable mixtures are always present and may be ignited. Failure to follow these instructions may result in serious personal injury.

 **WARNING:** When handling fuel, always observe fuel handling precautions and be prepared in the event of fuel spillage. Spilled fuel may be ignited by hot vehicle components or other ignition sources. Failure to follow these instructions may result in serious personal injury.

 **WARNING:** Clean all fuel residue from the engine compartment. If not removed, fuel residue may ignite when the engine is returned to operation. Failure to follow this instruction may result in serious personal injury.

Refer to Wiring Diagrams Cell 22 for schematic and connector information.

#### Normal Operation and Fault Conditions

Refer to the DTC Fault Trigger Conditions.

#### DTC Fault Trigger Conditions

<b>DTC</b>	<b>Description</b>	<b>Fault Trigger Condition</b>
<u>PCM</u> P0230:00	Fuel Pump Primary Circuit: No Sub Type Information	Sets when the <u>PCM</u> detects a concern from the fuel pump or fuel pump relay power (FPRPWR) circuits.
<u>PCM</u> P025A:00	Fuel Pump Module "A" Control Circuit/Open: No Sub Type Information	Sets when the <u>PCM</u> detects an open, short to voltage or short to ground from ground the fuel pump command.  When the <u>PCM</u> commands the fuel pump ON, the <u>PCM</u> is able to detect a short to voltage on the fuel pump command circuit. When the <u>PCM</u> commands the fuel pump OFF, the <u>PCM</u> is able to detect an open circuit or a short to ground from the fuel pump command circuit.
<u>PCM</u> P025B:00	Fuel Pump Module "A" Control Circuit Range/Performance: No Sub Type Information	Sets when the <u>PCM</u> detects the fuel pump control module is still reporting an invalid duty cycle or frequency from the <u>PCM</u> after a calibrated amount of time.  The fuel pump control module monitors the duty cycle and frequency of the signal it receives from the <u>PCM</u> . The fuel pump control module determines if the signal from the <u>PCM</u> on the fuel pump command circuit is a valid duty cycle and frequency. If the duty cycle or frequency is invalid, the fuel pump control module sends a 20% duty cycle signal on the fuel pump monitor circuit to report the concern to the <u>PCM</u> .  Check the harness for routing, alterations, incorrect shielding, or electrical interference from other systems.
<u>PCM</u> P0627:00	Fuel Pump "A" Control Circuit/Open: No Sub Type Information	Sets when the <u>PCM</u> detects the fuel pump control module is reporting a concern with the fuel pump module or secondary circuits after a calibrated amount of time.  The fuel pump control module monitors the fuel pump module and secondary circuits for a concern. If the fuel pump control module detects a concern with the fuel pump module or secondary circuits, the fuel pump control module sends an 80% duty cycle signal on the fuel pump monitor circuit to report the concern to the <u>PCM</u> .
<u>PCM</u> P064A:00	Fuel Pump Control Module "A": No Sub Type Information	Sets when the <u>PCM</u> detects the fuel pump control module has an internal concern.  Clear the <u>PCM</u> Diagnostic Trouble Codes (DTCs). Repeat the self-test. If the <u>DTC</u> is retrieved again, install a new fuel pump control module. Refer to the appropriate 303-04 section, Fuel Charging And Controls.
<u>PCM</u> P166A:00	Restraints Deployment Communication Circuit: No Sub Type Information	Sets when the <u>PCM</u> detects an open or short from the IES circuit.
<u>PCM</u> U0109:00	Lost Communication With Fuel Pump Control Module "A": No Sub Type Information	Sets when the <u>PCM</u> does not detect a duty cycled signal from the fuel pump monitor circuit after a calibrated amount of time.  The <u>PCM</u> monitors the fuel pump monitor circuit for the presence of a duty cycled signal. If the fuel pump monitor circuit is fixed at a low or high voltage, the <u>PCM</u> begins to increment a counter.

#### Possible Sources

- Fuel pump circuitry concern

- IES signal circuitry concern
- Fuel pump control module relay
- Fuel pump control module (9D370)
- Fuel pump (9H307)
- PCM (12A650)

**Pinpoint Test Steps available in the on-line Workshop Manual.**

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