

28 - DTC-Based Diagnostics / MODULE, Power Inverter (PIM) / Diagnosis and Testing

P0A8E-00-DC TO DC CONVERTER SYSTEM VOLTAGE HIGH

For a complete wiring diagram, refer to the **Wiring Information**.

When Monitored: Ignition in On Position.

Set Conditions: The Power Inverter Module detects an over voltage condition from the Auxiliary Power Module (APM) output to the 12Volt system.

Possible Causes
12 VOLT BATTERY SYSTEM
POWER INVERTER MODULE (PIM)

WARNING: On vehicles equipped with the high voltage system, you must thoroughly read and follow all High Voltage Safety procedures. In addition, before performing any diagnostic or service procedure near a high voltage component, you must perform the High Voltage Power Down. Failure to follow these instructions may result in possible serious or fatal injury .

[\(Refer to 12 - Electric Powertrain System/Electric Vehicle Control System/Standard Procedure\)](#) to perform the High Voltage Power Down procedure.

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. [\(Refer to 28 - DTC-Based Diagnostics/MODULE, Power Inverter \(PIM\) /Standard Procedure\)](#).

Diagnostic Test

1.CHECK FOR MULTIPLE DTCS

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1. Turn the Ignition on, Vehicle in ready mode.
 2. With the scan tool check for active DTCs.

Was DTC P0A8F-00 found?

Yes

Diagnose this DTC first in accordance with the service information.

No

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2.CHECK THE BATTERY

1. Using the AMG Battery Tester/Charger Station GR8–1220, test the 12 Volt Battery.

Did the 12 Volt Battery pass the load test?

Yes

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No

Follow the repair on the tester and charge or replace the 12 Volt Battery.
Perform the EVCU VERIFICATION TEST. ([Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure](#)) .

3.BATTERY POSITIVE (+) CIRCUIT HIGH RESISTANCE

1. Ignition in ON Position.
2. Measure the voltage at the B (+) Terminal at the PIM and the Battery Positive (+) Post.

Is the voltage difference above 0.25 volt?

Yes

Repair the Battery Positive (+) circuit for high resistance.
Perform the EVCU VERIFICATION TEST. ([Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure](#)) .

No

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4.FUSED B+ CIRCUIT HIGH RESISTANCE

1. Turn the ignition off.
2. Disconnect the PIM harness connector.
3. Turn the ignition on.
4. Using a 12-volt test light connected to ground, check the Fused B+ circuit in the PIM harness connector.

Is the test light illuminated and bright?

Yes

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No

Repair the Fused B+ circuit for high resistance.
Perform the EVCU VERIFICATION TEST. ([Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure](#)).

5.POWER INVERTER MODULE CASE GROUND HIGH RESISTANCE

1. Ignition in On Position.
2. Measure the voltage difference between the PIM case and the Battery Negative (-) post.

Is the voltage difference above 0.25 volt?

Yes

Repair the PIM Case ground for high resistance.
Perform the EVCU VERIFICATION TEST. ([Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure](#)).

No

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6. POWER INVERTER MODULE

1. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors.
2. Look for any chafed, pierced, pinched or partially broken wires.
3. Look for broken, bent, pushed out or corroded terminals. Verify that there is good pin to terminal contact.
4. Refer to any Technical Service Bulletins that may apply.

Were there any problems found?

Yes

Repair as necessary.

Perform the EVCU VERIFICATION TEST. ([Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure](#)).

No

The condition that caused this DTC to set is not present at this time.

Perform the EVCU VERIFICATION TEST. ([Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure](#)).

28 - DTC-Based Diagnostics / MODULE, Power Inverter (PIM) / Diagnosis and Testing

P0A8F-00-DC TO DC CONVERTER SYSTEM PERFORMANCE

For a complete wiring diagram, refer to the **Wiring Information**.

When Monitored: Ignition in ON position.

Set Conditions: The difference between the 12 Volt battery voltage and the Auxiliary Power Module (APM) output voltage is above specified value.

Possible Causes

POWER INVERTER MODULE (PIM)

WARNING: On vehicles equipped with the high voltage system, you must thoroughly read and follow all High Voltage Safety procedures. In addition, before performing any diagnostic or service procedure near a high voltage component, you must perform the High Voltage Power Down. Failure to follow these instructions may result in possible serious or fatal injury .

[\(Refer to 12 - Electric Powertrain System/Electric Vehicle Control System/Standard Procedure\)](#) to perform the High Voltage Power Down procedure.

Always perform the Pre-Diagnostic Troubleshooting procedure before proceeding. [\(Refer to 28 - DTC-Based Diagnostics/MODULE, Power Inverter \(PIM\) /Standard Procedure\)](#).

Diagnostic Test

1.CHECK IF THE DTC IS ACTIVE

1. With the scan tool, record the Environmental Data for this DTC.
2. Clear the DTC.
3. Ignition off wait at least one minute.
4. Turn the ignition on, vehicle in ready mode.
5. With the scan tool check for active DTCs.

Did the DTC reset?

Yes

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No

Check the Environmental Data, If this DTC has occurred more than 3 times. go to. [2](#)
Check the Environmental Data, If this DTC has occurred less than 3 times, then the condition that caused this DTC to set is not present at this time. Check for an intermittent condition by inspecting the related wiring harness for chafed, pierced, pinched, and partially broken wires. Also inspect the related connectors for broken, bent, pushed out, spread, corroded, or contaminated terminals.
Perform the EVCU VERIFICATION TEST. [\(Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure\)](#) .

2.POWER INVERTER MODULE

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1. Using the wiring diagram/schematic as a guide, inspect the wiring and connectors.
 2. Look for any chafed, pierced, pinched or partially broken wires.
 3. Look for broken, bent, pushed out or corroded terminals. Verify that there is good pin to terminal contact.
 4. Refer to any Technical Service Bulletins that may apply.

Were there any problems found?

Yes

Repair as necessary.

Perform the EVCU VERIFICATION TEST. ([Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure](#)).

No

Replace the Power Inverter Module (PIM).([Refer to 12 - Electric Powertrain System/Electric Vehicle Control System/MODULE, Power Inverter \(PIM\) /Removal](#)).

Perform the EVCU VERIFICATION TEST. ([Refer to 28 - DTC-Based Diagnostics/MODULE, Electric Vehicle Control Unit \(EVCU\) /Standard Procedure](#)).