

B2101 IGNITION RUN/START INPUT CIRCUIT LOW

1). When Monitored:

While the CAN bus is RUN or signal not available and the IOD status is "IN". The module checks the (F201) Fused Ignition Switch Output (Run-Start) circuit voltage input range.

2). Set Condition:

With the ignition on, if voltage on the (F201) Fused Ignition Switch Output (Run-Start) circuit is equal to or below 6.50 ± 0.25 volts. Within 60 seconds of turning the ignition off, if the (F201) Fused Ignition Switch Output (Run-Start) circuit is 2.4 to 5.0 volts.

Possible Causes
1. (F20) IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT OPEN
2. (F201) FUSED IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT SHORTED TO GROUND OPEN FUSE (27)
3. (F201) FUSED IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT OPEN
4. OCCUPANT RESTRAINT CONTROLLER (ORC)

Diagnostic Test

1). VERIFY THAT DTC B2101 IGNITION RUN/START INPUT CIRCUIT LOW IS ACTIVE IN THE ORC.

NOTE: Ensure the battery is fully charged.

NOTE: When reconnecting Airbag system components, the ignition must be turned off and the battery must be disconnected.

Turn the ignition on.

With the scan tool, read Occupant Restraint Controller (ORC) DTCs.

Does the scan tool display active: B210-IGNITION RUN/START INPUT CIRCUIT LOW?

Yes >> Go To 2

No >> Go To 7

2). INSPECT AIRBAG RUN-START FUSE

Turn the ignition off.

Remove the Airbag Run-Start Fuse from the rear Power Distribution Center and inspect the fuse.

NOTE: Check connectors - Clean and repair as necessary.

Is the Run/Start fuse open?

Yes >> Go To 3

No >> Go To 5

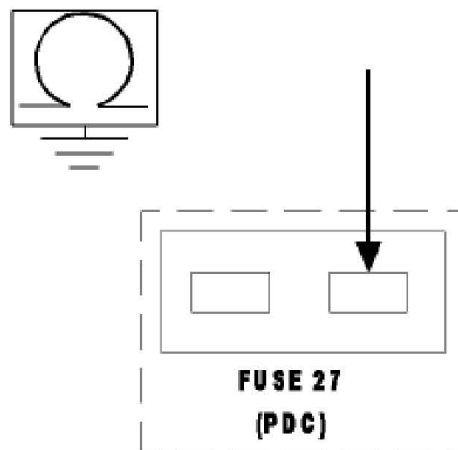
3). CHECK (F201) FUSED IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT RESISTANCE

Measure the resistance of the (F201) Fused Ignition Switch Output (Run-Start) circuit between ground and the Airbag Run-Start fuse terminal (output side).

Is the resistance below 100.0 ohms?

Yes >> Go To 4

No >> Using the wiring diagram/schematic as a guide, inspect the related wiring and connectors. Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals.
Replace Airbag Run-Start Fuse.
Perform ORC VERIFICATION TEST - VER 1.



4). CHECK (F201) FUSED IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT RESISTANCE WITH ORC CONNECTORS DISCONNECTED

WARNING: If the Occupant Restraint Controller is dropped at any time, it must be replaced. Failure to take the proper precautions can result in accidental airbag deployment and personal injury or death.

WARNING: To avoid personal injury or death, turn the ignition off, disconnect the battery and wait two minutes before proceeding.
Disconnect the both ORC connectors.

NOTE: Check connectors - Clean and repair as necessary.
Connect the Load Tool ORC 8443-24 Adaptor to the ORC C2 connector.
Measure the resistance of the (F201) Fused Ignition Switch Output (Run-Start) circuit between 8443-24 adaptor and ground).

Is the resistance below 100.0 ohms?

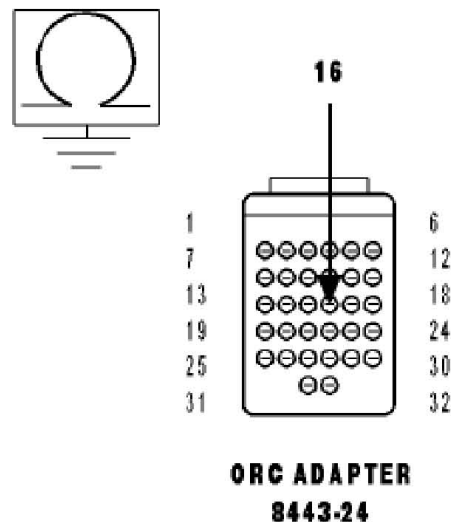
Yes >> Repair the (F201) Ignition Switch Output (Run-Start) circuit shorted to ground.

Perform ORC VERIFICATION TEST - VER 1.

No >> Replace the ORC in accordance with the Service Information.

Replace the Airbag Run-Start Fuse.

Perform ORC VERIFICATION TEST . - VER 1



5). CHECK (F201) IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT FOR AN OPEN

Turn the ignition on.

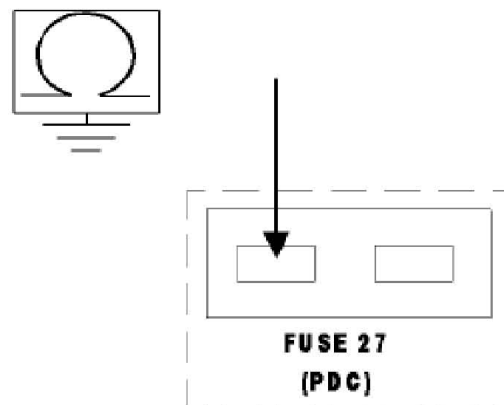
Measure the voltage of the (F201) Ignition Switch Output (Run-Start) circuit at the Airbag Run-Start fuse terminal (supply side).

Is the voltage above 6.50 ± 0.25 volts?

Yes >> Go To 6

No >> Repair the open (F201) Ignition Switch Output (Run-Start) circuit.

Perform ORC VERIFICATION TEST - VER 1.



6). CHECK (F201) FUSED IGNITION SWITCH OUTPUT (RUN-START) CIRCUIT FOR AN OPEN

WARNING: To avoid personal injury or death, turn the ignition off, disconnect the battery and wait two minutes before proceeding.

Reinstall the Airbag Run-Start Fuse.

Disconnect the both ORC connectors.

NOTE: Check connectors - Clean and repair as necessary.

Install the Airbag Load tool ORC 8443-24 adaptor to the ORC C2 connector.

WARNING: To avoid personal injury or death, turn the ignition on, then reconnect the battery.

Measure the voltage of the (F201) Fused Ignition Switch Output (Run-Start) Circuit between the 8443-24 connector and ground.

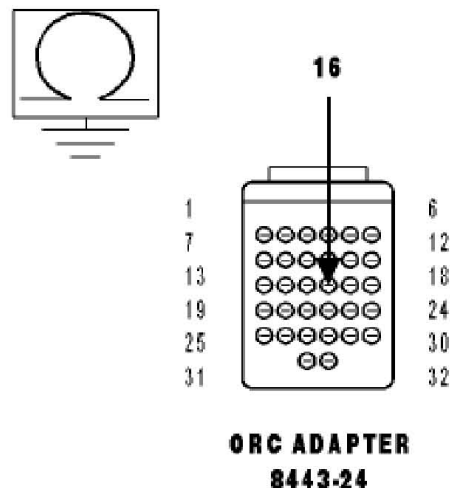
Is the voltage above 6.50 ± 0.25 volts?

Yes >> Replace the ORC in accordance with the Service Information.

Perform ORC VERIFICATION TEST - VER 1.

No >> Repair the open (F201) Fused Ignition Switch Output (Run-Start) circuit.

Perform ORC VERIFICATION TEST - VER 1.



7). TEST FOR INTERMITTENT CONDITION

With the scan tool, record and erase all DTCs from all Airbag modules.

If any ACTIVE codes are present they must be resolved before diagnosing any stored codes.

WARNING: To avoid personal injury or death, turn the ignition off, disconnect the battery and wait two minutes before proceeding.

Using the wiring diagram/schematic as a guide, inspect the wiring and connectors.

Look for chaffed, pierced, pinched, or partially broken wires and broken, bent, pushed out, spread, corroded, or contaminated terminals.

The following additional checks may assist you in identifying a possible intermittent problem.

Reconnect any disconnected components and harness connector.

WARNING: To avoid personal injury or death, turn the ignition on, then reconnect the battery.

With the scan tool, monitor active codes as you work through the following steps.

WARNING: To avoid personal injury or death, maintain a safe distance from all airbags while performing the following steps.

Wiggle the wiring harness and connectors of the related airbag circuit or component.

If codes are related to the Driver Airbag circuits, rotate the steering wheel from stop to stop.

If only stored codes return, continue the test until the problem area has been isolated.

In the previous steps you have attempted to recreate the conditions responsible for setting the active DTC in question.

Does the scan tool display any ACTIVE DTCs?

Yes >> Select appropriate symptom from Symptom List.

No >> No problem found Erase all codes before returning vehicle to customer.