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DEUTZ TIER 4 ENGINES

The Deutz 2.9L Tier 4 engines utilize a common rail fuel injection system. Gone is the familiar lift pump and injector pump arrangement. These engines use an electric fuel pump to deliver fuel through the filter to the high pressure fuel pump. The pump is mounted near the fuel tank near the replaceable cartridge fuel filter.

When the machine is powered up, the fuel pump runs to build pressure in the circuit. Once pressure is detected by the ECU sensor, it allows the engine to crank.

If you encounter a no crank/no fuel situation, check the following:

1. Check that the circuit breaker CB3 is not tripped. This breaker is for the fuel pump only. Check the connections at the spades on the breaker; look for loose terminals and burnt or loose connections. Replace any wire terminals or the breaker itself if required. Do not assume the fuel pump itself is at fault. Check the fuel lines from the pump to the engine for any kinks, pinches or restrictions that can cause the fuel pump to work harder than normal.
2. With the base and platform e-stops ON, key switch ON, check for power and ground at the fuel pump terminals located on the fuel pump or at the connector plug - if equipped. Make sure the terminals are clean and free of rust and debris that may cause a short. Clean or replace as needed.
3. If power and ground are present at the fuel pump, check that the fuel pump is running. If not running, replace the fuel pump.
4. If there is no power at the fuel pump, check the relay 56ACR located in the base control panel. The engine ECU supplies ground for the relay on wire 56A. If no ground is present, check the ECU harness and connectors. No ground at 56A may indicate an ECU problem.
5. At the relay 56ACR, check wire 54 for power to the coil. With ground on 56A and power on 54 at the relay, you should read power at 56B wire direct to the fuel pump through a harness connector. Check power from the relay through the connector to the fuel pump.

Using this test procedure should help determine the cause of the problem – it is not always the fuel pump that is at fault.

If you have any questions, please contact Skyjack Product Support at 1-800-275-9522 or email service@skyjack.com