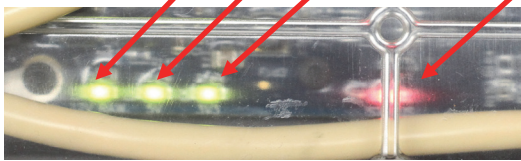
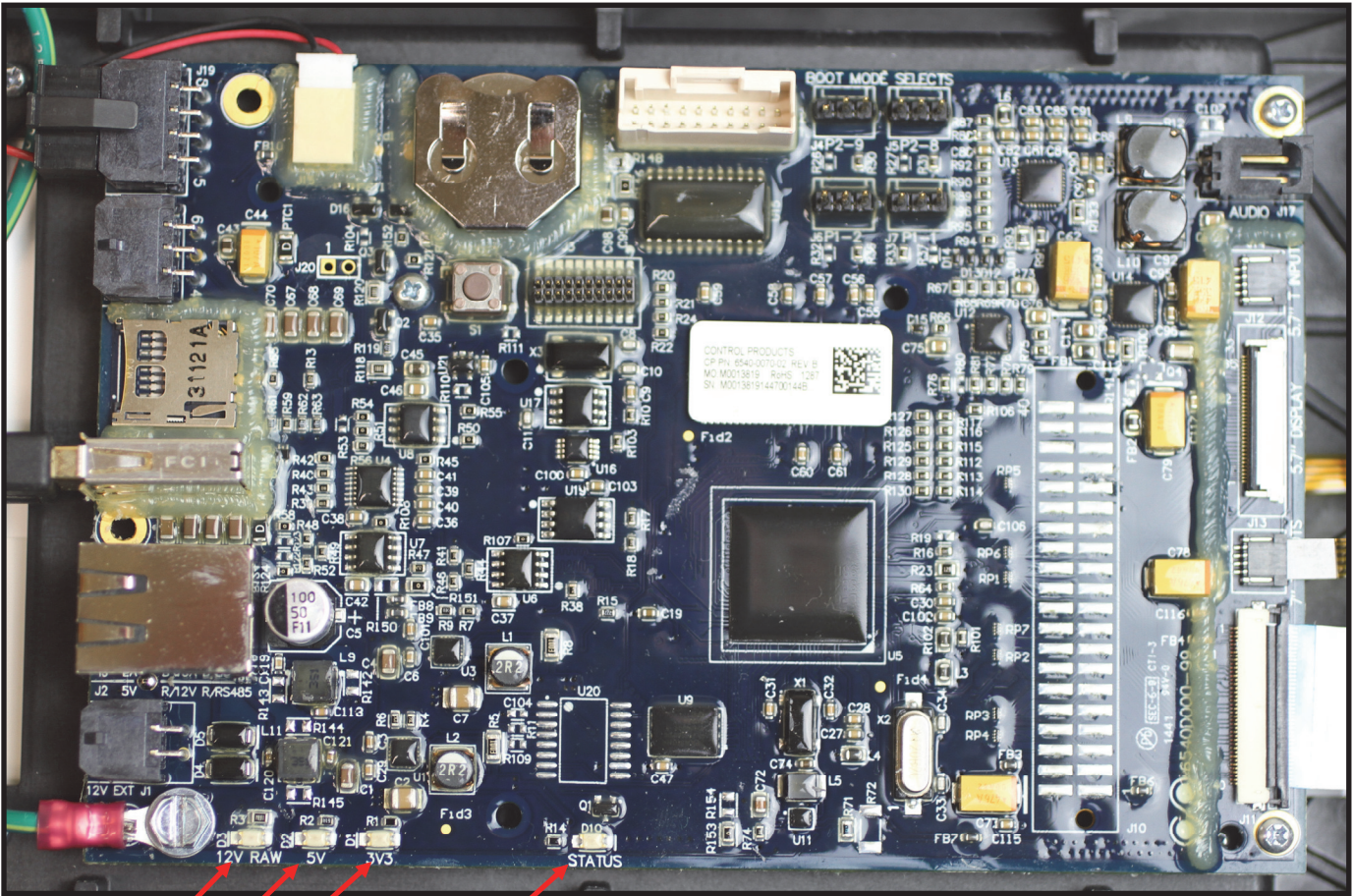


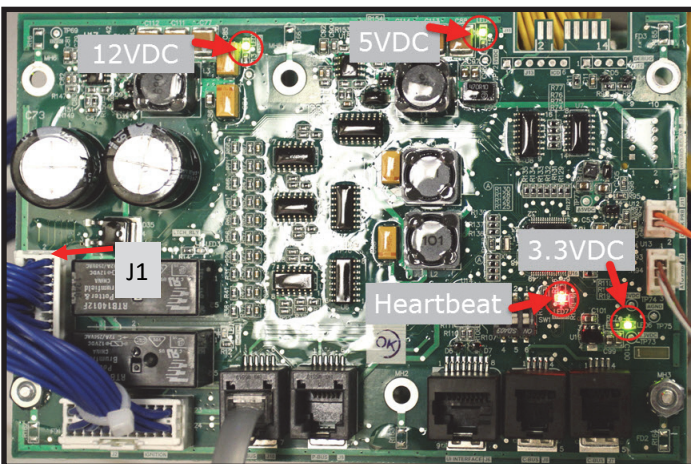
Troubleshooting FilterQuick Circuits



LED's shown through the clear cover of a 4000 controller (left) and on an uncovered board (above) can be used **to troubleshoot**:

- A flashing red status light upon startup and three green LED's (left and above) indicate the UI is getting power. Active LED's and a blank UI can indicate the UI is bad. The lights indicate it is getting power.
- The green LED's (read left to right) indicate the board is receiving 12V, 5V and 3.3 DCV from the SIB in the control box.
- No lights on the board of a blank UI means the problem is likely downstream. The UI is not getting power. Check for power at the SIB (below).

Follow These Steps to Troubleshoot a Blank UI

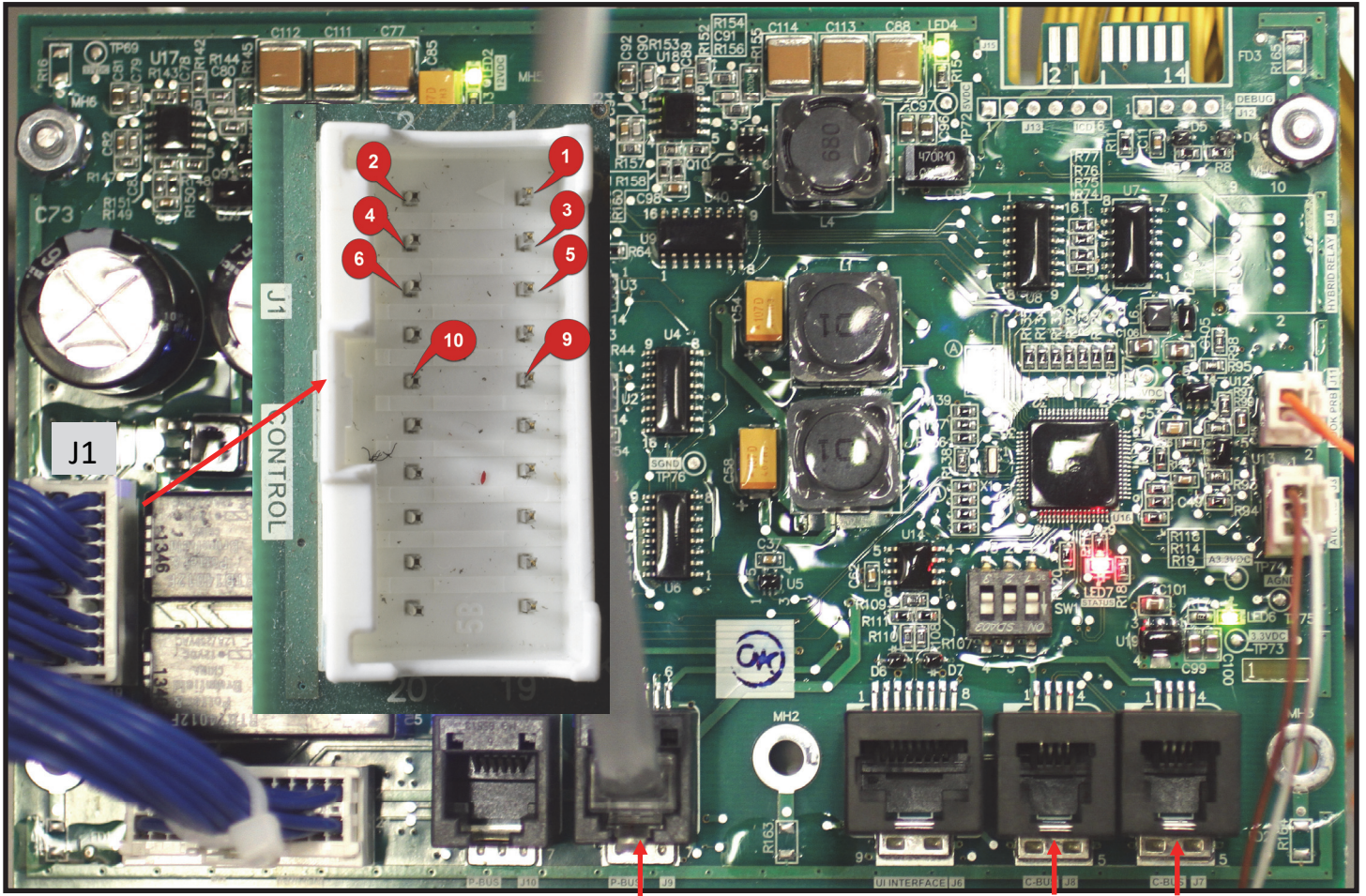


The Smart Interface Board or SIB also has LED's that are useful in troubleshooting. The LED's for the 12, 5 and 3.3 VDC the SIB creates are shown illuminated at left. The absence of these lights can indicate problems downstream from the SIB. **To troubleshoot**:

- Check for 24VAC on J1 terminal of SIB, pins 1 and 2.
- Check for 24VAC at the transformer.
- Dim LED's, including the heartbeat LED, can indicate a short in the circuit, which is pulling down power to the board and the UI.

More Troubleshooting on the Back

Follow These Steps to Troubleshoot a Blank UI With SIB LED's



J9 ties the
SIB to the
VIB

J8 ties the
SIB to the
FIB

J7 ties the
SIB to the
OQS

Remove the connectors, one at a time, from a SIB attached to a blank UI that shows no LED activity on the back.

- **Removing the J9** plug takes out shorts or other electrical issues that could be associated with the Valve Interface Board (VIB). If the UI returns to life after unplugging this cable, the problem is likely in the VIB.
- **Removing the J8** plug removes shorts and other issues that could be associated with the Filter Interface Board. If the UI returns to life after unplugging J8, the issue is likely with the FIB.
- **Removing the J7** plug removes shorts and other issues that could be associated with the Oil Quality Sensor. If the UI returns to life after unplugging, the issue is likely with the OQS.
- **Removing the J1** plug allows for checking 24VAC at pins 1 and 2 (see inset). Pin 9 in the plug, which is for the McDonald's hood relay, can cause problems for the UI. Push it from the plug to test.

[Scan the QR or click the text to see a video on checking voltage on the SIB.](#)

