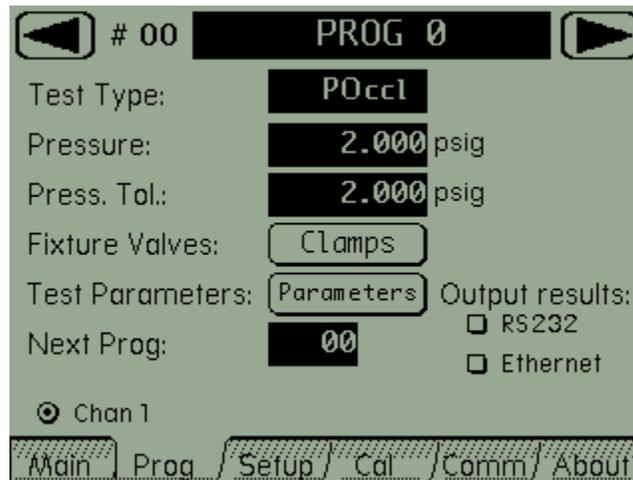




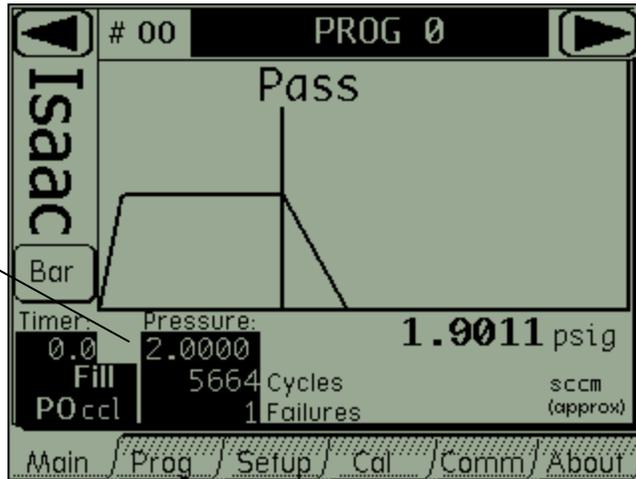
Occlusion testing by back pressure

The theory of operation is to apply a dynamic pressure (flowing to atmosphere) through the part that needs to be tested. An occlusion will cause the pressure to be increased. To set up a test you will need samples of good and bad parts. It would be best to have varying grades of bad parts that can be used.

1. Select an unused program in the Isaac. Set the test type to Pressure Occlusion.
2. Attach a good part to the test port with the distal end open to atmosphere.
3. From the program tab select the pressure field to open the valves and read a live pressure.



4. The pressure displayed on the screen is the back pressure or resistance from the part being tested. The goal of the test is to create a tolerance window around the test pressure. A part that is occluded will provide more back pressure and raise the pressure. Once the pressure is stable press the enter button to store the pressure.
5. Set the pressure tolerance to be equal to the test pressure. This will be adjusted later, for now we want to see how the parts react and what their results are. In the parameters screen set a fill time that allows the part to get to a steady flowing pressure. Set the settle timer to 0.0 and a test time to 1.0 seconds. The reject level to something greater than the test pressure for now. Later on we can adjust that.



6. Run tests on more good parts to make sure that they have a dynamic pressure similar to the one that was used in steps 3 and 4. For this testing look at the test pressure result only (*) ignore the test result for now.
7. Run tests on bad parts and record the values from the occluded parts to determine the differences. Bad parts should have higher test pressures than the good parts tested earlier.
8. Once a good sampling of parts has been run you can determine a tolerance to use to catch the occluded parts. Take the average of bad parts and subtract the test pressure from that number and the result can be put in the tolerance window #6 from the figure in step 3.
9. Re-run both good and bad parts to verify both states are found.
10. The reject level can be used to determine a finer occlusion value if needed. The min pressure drop is the reject level in the parameters screen.

