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## Service Reference

### Topic: Leak Checking Low Profile TECTRON Cells

*Please read carefully before performing work.*

#### Required Materials

- DI water source

#### Required Tools

- Screw driver
- Small crescent wrench

If your TECTRON Cell model number begins with the letters TLP, or TGLP, then you are using a Low Profile Cell. These instructions are meant to assist you to determine if any of the Cells may be causing the loss of anolyte. As a precursor, please follow the instructions in Bulletin 990003 first.

**Think and act in a safe manner.** Always disconnect power and use a lockout before you work on the E-coat system, or any of the related subsystems. Observe any confined space conditions. Use the appropriate safety equipment & clothing for the task.

Please read all the instruction listed below to familiarize yourself with the project before attempting to perform any of the work.

1. Turn off all the individual anolyte valves to each Cell.
2. Turn off the anolyte supply pump and open up the by-pass valve to full open.
3. Drain the anolyte and flush to remove any discoloration.
4. Refill the anolyte tank with DI water and restart the anolyte pump.
5. Take the 20 l bucket to the first Cell to be checked and place it near the Return Manifold for this Cell. Remove the Return Tubing from the Return Manifold and place into the bucket.
6. Slowly open up the anolyte supply valve for this Cell and observe the color of the anolyte. If it is paint-colored, then there is either a leak in the Cell, or another Cell has the leak and allowed paint into the anolyte, which was then re-circulated to other Cells.
7. If the Cell does not have a leak (from a cut, tear, puncture hole, etc.) then the color of the anolyte should begin to clear up and you should be able to see through the Return Tubing. This improvement in the opacity of the anolyte should occur before the bucket is filled up. If there is no improvement, then mark this Cell for further investigation. Discard of any contaminated anolyte in an appropriate manner.
8. If the Cell did not have a leak, then replace the Return Tubing back into the appropriate hole in the Return Manifold and move to the next Cell.
9. It may be necessary to refill the anolyte tank with more DI water.

10. For any Cells that were so marked, it is now time to confirm and quantify any suspect Cells, otherwise you are finished.
11. Ask for Bulletin 990133 for assistance in disassembly of the Low Profile Cell. Use a screwdriver and crescent wrench to remove the clamps around the Cell. Rinse the outside of the Cell as it is removed from the paint bath. Do not allow the bottom Cap of the Cell to hit the ground as the weight of the Cell may crack it.
12. See Bulletin 990133 in order to disassemble the Cell.
13. Place the Membrane Shell in the bucket and fill the Shell full with DI water. Wait 5 minutes and top off again with DI water.
14. Remove any excess DI water from the bucket and start a 1-hour timer. At one hour, remove the Shell and pour the water in the bucket into the graduated cylinder and record on a sheet of paper. If the result is more than 200 ml, then inspect the Shell for tears, holes, or other defects.
15. Small holes, cuts, or tears can be fixed with a Membrane Patch Kit. Ask for PN 540013 for T/TLP Cells and PN 540019 for TG/TGLP Cells.

*Consideration.* Membrane Guards can be ordered to provide more protection if your Cells do not have them now (I.E. Cell model number begins with the letters T or TLP).

**For more information** see the original manual that came with the equipment or else call UFS at the phone number shown above.