Technical Service Bulletin 040109

Cooling System Instructions: DCX Paragon

This service bulletin provides supplemental instructions for the proper operation of the cooling system in DCX Paragon transmitters.

- **OIL FLOW TRIP SETTING** - 12 GPM
- **OIL FLOW ADJUSTMENT** - Always keep valve at the output of the oil pump fully open.
- **SECONDARY (GLYCOL) FLOW TRIP SETTING** - 12 GPM. This setting is not critical as long as the oil temperature does not rise above the trip point, which is fixed.
- **SECONDARY FLOW ADJUSTMENT** - The regulating vale at the glycol input to the cabinet should be left fully open. The valve at the glycol input to the heat exchanger should be adjusted for 11-12 GPM flow through the secondary loop.
- **ANODE FLOW TRIP SETTING** - 1.0 GPM
- **ANODE FLOW ADUSTMENT** - There is no adjustment for the anode loop. In tubes with rubber hoses connecting to the anode, there is a large pressure drop requiring maximum attainable pressure to achieve greater than 1.0 GPM. By “valving down” the glycol flow to the heat exchanger and fully opening the inlet to the cabinet, greater than 1.0 GPM should be attainable. Newer tubes with rigid pipes on the anode have far less pressure drop in this circuit allowing for more flow with less pressure through the anode circuit. This, in turn, allows for more flow and likewise more pressure drop through the secondary loop of the heat exchanger.

All other valves to the HPA cabinets should be left fully open as well as all the ball (90 deg.) valves on all return pipes in the system. Turning off the regulating (supply) valve to the system load and lowering the flow in the reject load to less than 10 GPM will allow for the most pressure and flow through the HPA cabinets. Load flow trips should be set at 6.0 GPM.

Outdoor heat exchanger thermostats should have their fan thresholds staggered from 120 - 140 degrees F. The hotter the climate, the higher they should be set within the range i.e. 130 - 140 as opposed to 120 - 130. The higher the liquid temperature, the more efficient the liquid to air heat transfer, and the fans will run less frequently. If at any time the oil exceeds its maximum temperature (over temp alarm) with everything set as explained, be sure that flow is maximized through the liquid to liquid heat exchanger and that all available fans on the outdoor heat exchanger are operating.

At Comark Broadcast and Multimedia, we are constantly striving to improve the satisfaction of both our new and existing customers. Please do not hesitate to contact Comark Customer Service with any questions you may have concerning the contents of this service bulletin.

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