



GLYCOL TEST, FLUSH AND FILL PROCEDURE (15600 & 15181)

3.6 TESTING, FLUSHING, AND FILLING GLYCOL SYSTEM

A. When refrigeration connections have been completed, test glycol system for leaks at a minimum of 75 PSIG, but not to exceed 100 PSIG, with all valves in systems open and pumps isolated from system piping. Hold pressure for 24 hours. If leaks are found, isolate leaks, repair leaks, and then repeat test. Do not mix glycol mixtures from different manufacturers.

B. Flush and fill glycol system in accordance with the requirements of Section 15181.

1. Ensure equipment isolation valves are closed and bypass loop valves are open.
2. Clean hydronic piping system with a 1% to 2% solution of trisodium phosphate in water or another approved cleaning solution. Circulate cleaning solution through hydronic piping system for 8 to 12 hours.
3. Flush hydronic piping system by circulating clean water through the system for a minimum of 72 hours. Drain the system and refill with clean water. Circulate the water for 24 hours.
4. After 24-hour circulation cycle, Water Treatment Contractor will sample the water in the system to verify that the system is free of particulates, mil scale, weld scale, solder flux, rust, metal filings, oil, grease, chlorides, sulfates, silicates, and other foreign matter that could degrade the inhibited glycol-based heat transfer fluid.
5. If the water in the system is not acceptable to Mechanical Construction Manager, repeat steps 1 through 4 above until water quality is acceptable to Mechanical Construction Manager.

C. Provide concentrated propylene glycol for topping off the mixture to the design concentration shown on the refrigeration schedules and OEM submittals.

D. Confirm glycol concentration with refractometer. Dilute system mixture with distilled water

E. Glycol must be pre-mixed 35% propylene glycol mix.

F. The glycol feeder system should be used for makeup purposes only and not for the initial complete system fill.