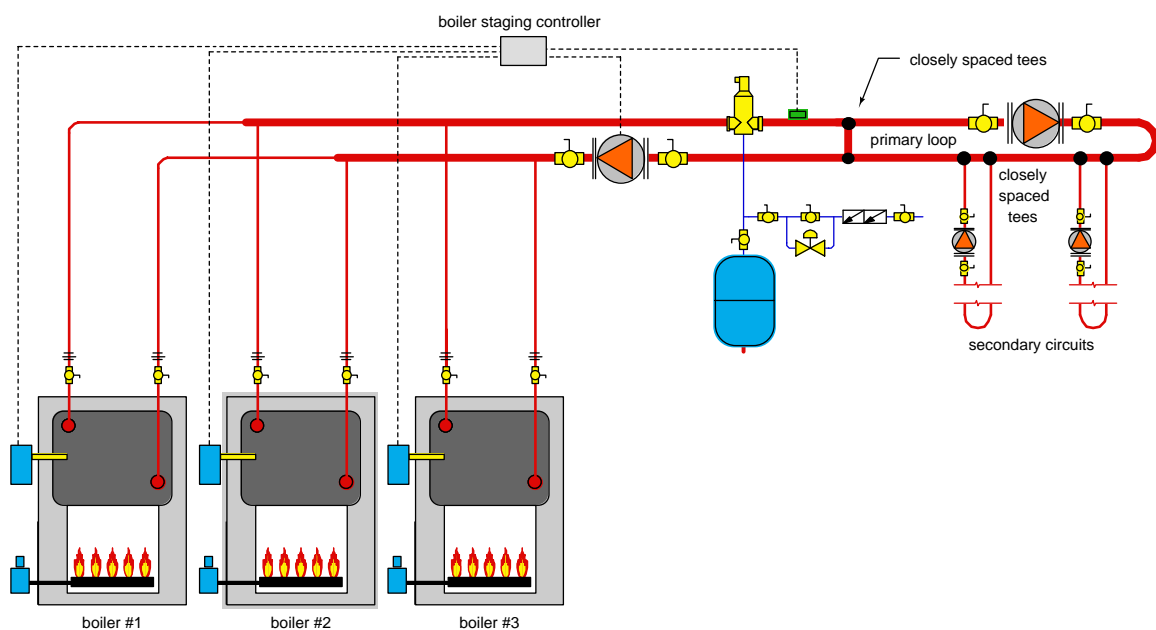


## Supplying Multiple Loads

### The Glitch

**Overview:** A multiple boiler system has been configured to supply multiple loads using primary/secondary piping.

**Exercise:** There are several piping errors in this proposed installation. Can you spot at least 5 of them?



### The Fix

1. Every boiler in a multiple boiler system should have its own circulator that only operates when that boiler is operating. The original schematic allows flow through all boilers regardless of which are firing.
2. It may seem simple to be sure the unions are installed between the boiler and the isolating valves, but I've seen it otherwise.
3. Always install the supply sensor for the staging controller on the distribution system side of the hydraulic separation point, in this case the upper set of closely spaced tees.

4. Every secondary circuit should be equipped with purging valves to allow efficient filling and flushing.
5. Always locate secondary circulators so they pump into their associated circuit. With this arrangement, the primary loop becomes the pressure reference point and the pressure within the secondary circuit increases when the circulator is on.

