

IV. BOILER WATER PIPING (continued)

4. Piping and fittings required to install LWCO are **field supplied**.
5. When constructing a piping tree to install LWCO select fittings (tees, elbows etc) and nipples to have the same size (NPT) as boiler supply connection. At minimum, 1-1/4" tee with 3/4" branch outlet is required to connect the probe LWCO to the supply piping. See Figure 8 for location and piping of the LWCO. **DO NOT REDUCE THE SIZE OF NEAR BOILER SUPPLY FITTINGS AND NIPPLES.**
6. Installation of manual shutoff valve located above the LWCO and the boiler is recommended to allow servicing. Thus LWCO probe can be removed for inspection without draining the heating system. An annual inspection of the probe is recommended.
7. The presence of water covering properly installed LWCO probe will cause the normally open contact of the LWCO to close, thus providing continuity of the 24 VAC service to the boiler gas valve. When water level drops below probe, LWCO contact opens up breaking 24V supply to gas valve and preventing the boiler to fire.
8. 2012 compliant Series 2 gas hot water boilers have a "plug-in" provision in factory wiring that will accept optional 24VAC probe LWCO harness connector. The optional LWCO kit (P/N 104083-01) includes 24VAC probe LWCO, Harness and Instructions addressing piping, wiring and testing after installation. See Figure 13 for wiring of the LWCO.

C. OPTIONAL AUXILIARY LIMIT INSTALLATION

1. Some jurisdictions may require the use of an Auxiliary Limit control with a hot water boiler as a redundant safety control.
2. The recommended location for an Auxiliary Limit on gas hot water boilers is in the supply piping. See Figure 9 for recommended location.
3. Piping and fittings required to install an Auxiliary Limit are **field supplied**.
4. When constructing a piping tree to install an Auxiliary Limit select fittings (tees, elbows etc) and nipples to have the same size (NPT) as boiler supply connection. At minimum, 1-1/4" tee with 1/2" branch outlet is required to install the limit well into the supply piping. See Figure 9. **DO NOT REDUCE THE SIZE OF NEAR BOILER SUPPLY FITTINGS AND NIPPLES.**
5. When boiler water temperature reaches or exceeds Auxiliary Limit setting, the limit normally closed contact will open, thus interrupting the 24 VAC service to the boiler gas valve. When boiler water temperature drops below limit differential, limit contact closes restoring 24V supply to gas valve and allowing the boiler to fire.
6. Gas hot water boilers equipped with Intelligent Hydronic Control have a "plug-in" provision in factory wiring that will accept optional 24VAC Auxiliary Limit harness connector. The optional Auxiliary Limit kit (P/N 103696-01) includes 24VAC Auxiliary Limit, Well, Harness and Instructions addressing wiring and testing after installation.

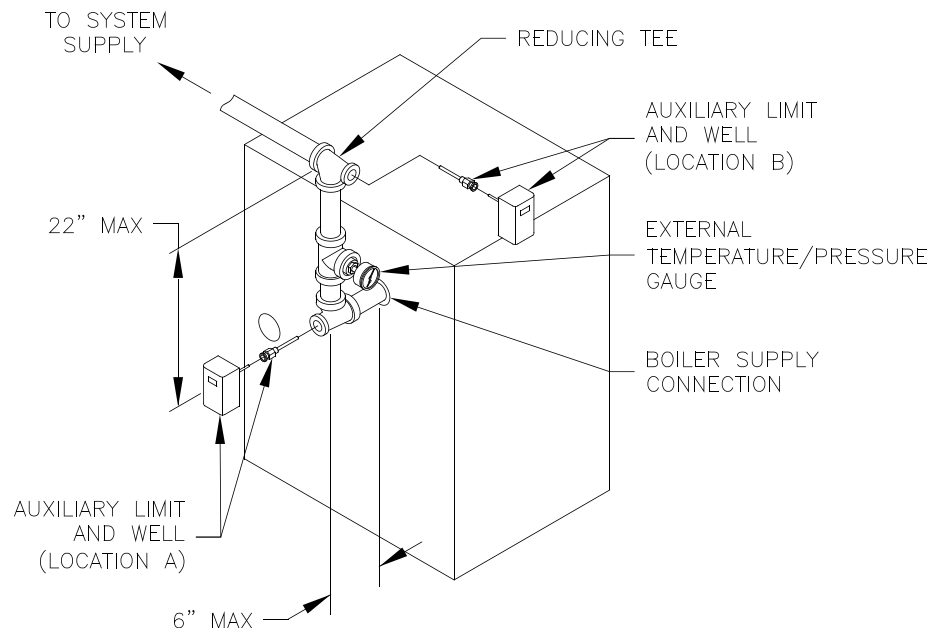


Figure 9: Recommended Auxiliary Limit Location