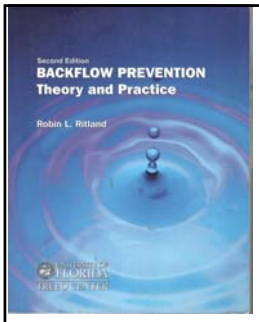


TREEO Second Edition "Backflow Prevention Theory and Practice"

Professionals are supposed to help protect life limb health and property.

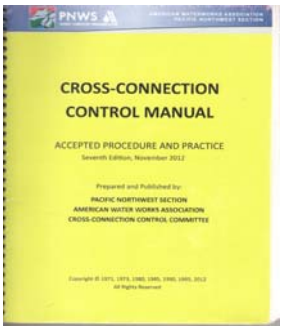
Page 119-120 Instructions regarding water heater safety. Thermal expansion detection and control because this is nasty and dangerous.

1

TREEO page 277;

Specify/educate and verify that thermal expansion devices and relief valves are installed and maintained within a closed – loop plumbing system created by backflow preventers.

2



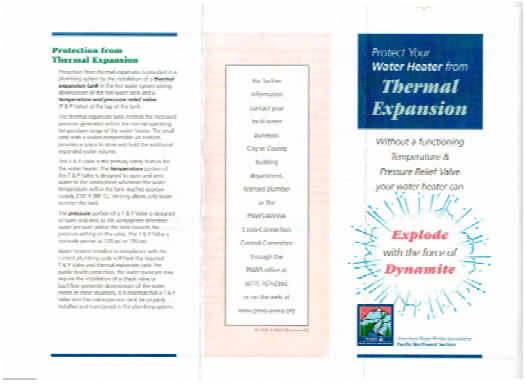
Liability Shielding and Public safety requires following instructions.

PNWS AWWA Seventh edition *"Accepted procedure and practice" 2012* *This is a* book of "instructions"

Seventh Edition is a good choice to guide your

decision making.

3



4

Reasonable and prudent SOP is to provide some amount of 1) Education 2) Specifications and 3) Verification regarding this nasty thermal expansion in a closed system.

5

Generally
Water heaters are designed to operate on an "open system" where thermal expansion bleeds back.

Specific provisions must be made to ensure safety when systems are closed.

6

Water damage and explosions are obvious and must be prevented.
Thermal expansion robs years of life from plumbing.

SOP must be adhered to in order to protect the customers and shield the Utility from liability.

7

Shielding tools to prevent liability.

Standard Operating Procedures

"Education"

Specification,

Verification

8

AUGUSTA UTILITIES DEPARTMENT

Augusta GEORGIA

ENGINEERING DIVISION

BACKFLOW PREVENTION SECTION

SPECIFICATIONS AND DETAILS FOR INSTALLATION OF BACKFLOW ASSEMBLIES

(JANUARY 2000)
Updated January 2002, January 2004, January 2006, January 2008

9

"If the T & P valve fails and a backflow preventer is on the water line the pressure can rupture customers water pipe."

"In Oklahoma seven people were killed when a water heater exploded"

Learn the instructions on the T &P valve tag. Rely on these instructions.

11

Augusta Utilities
Backflow Prevention Section
360 Bay Street Suite 180
Augusta, Ga. 30901

Phone: (706) 312-4145
Fax: (706) 312-4148

	Check No. 1	Check No. 2	Differential Pressure Relief Valve	#1 gate or ball (circle one)	#2 gate or ball (circle one)	PVB/SVB
Test Before Repairs	____Leaked ____Closed Tight DROP ACROSS PSID	____Leaked ____Closed Tight DROP ACROSS PSID	Opened at ____lbs. Differential Pressure	____Leaked ____closed tight	____Leaked ____Closed Tight	Air Inlet Opened @ ____PSID ____did not open Check Valve Held @ ____PSID
Repairs And New Materials						____Cleaned ____Replaced
Test After Repairs	____Leaked ____Closed Tight	____Leaked ____Closed Tight	Opened at ____lbs. Differential Pressure	Gate or Ball (circle one)	Gate or Ball (circle one)	Air Inlet Opened @ ____PSID ____did not open Check Valve Held @ ____PSID
	Drop Across PSID	Drop Across PSID		____Leaked ____Closed Tight (mark One)	____Leaked ____Closed Tight (mark One)	

ABOVE TESTS CONSIDED TO BE CORRECT

Backflow Device: _____PASSED _____FAILED Ga Certification #_____

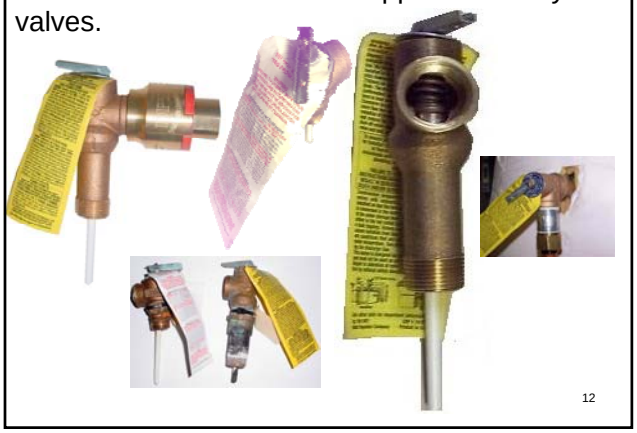
Tester's Signature _____ DATE _____

Thermal Expansion Device Installed Yes No (circle one) Location of Thermal Expansion Device _____

Method of Testing _____ TEST KIT USED _____

Comments:

Instructions are affixed to approved safety valves.



12

13

Post a sticker that reports annual service by a properly trained person. Just like fire extinguishers.

Never close the customers system on T & P safety valves that look like this.

14

Insurance companies will cancel coverage.

16

Plugging capping altering and tampering are not approved.

Code does not permit such an alteration

Closed systems will go up against things like this Don't close or maintain a closed system against a water heater like this.

Here are some reasons

March 19, 2009
Water on the floor was the reason "Workers" plugged the water heater safety.

- Explosion lifted roof
- Criminal action resulted in managers agreeing to pay $450,000 instead of going to jail.
- Civil case still pending but the factory has gone out of business.

21

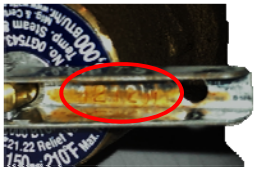
23

detection and thermal expansion detection alarm

2

The date code specifies when to remove T & P for internal inspection.

A wrench is required!

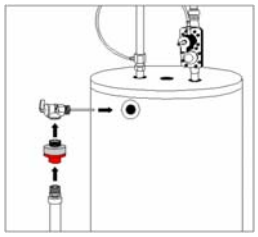


24

This old house teaches follow instructions!

2013

25



Comes apart at 10 psi back pressure.
Allows the T & P to function as designed and intended
Before water turns to steam.

Anti- tamper drain line connector.

Can not close a system on a T &P with a reduced line size.

Drain line contrivance. Not permitted!

Attaching a garden hose is not permitted.

Direct to sewer not permitted.

Wrong safety valve not permitted.

Insurance coverage canceled upon this discovery.

Properly trained person has tools spares parts and places a report card.

Contrivance resulting in damages could drag net the water supplier.

Professionals place maintenance log

Public buildings require proof.
Maintenance must be recorded/logged.

37

38

Water heating boiler Maintenance Logged

39

Pleased to take questions

Call for program development assistance
603-582-4201