

CHAPTER 5 - WATER HEATER MAINTENANCE

5.1. Maintenance Schedule

5.1.1 Annual service by qualified service technician should include the following:

- ☐ Any procedure required by local codes.
- ☐ Verify system pressure. Air venting procedure may require adding water to bring system up to pressure, typically 12 psig.
- ☐ Manually operate T&P relief valve at least once a year. This will release some hot water.



Before operating T&P relief valve, make sure no one is in front of or around T&P relief valve discharge piping. Hot discharge water can cause substantial property damage or serious injury.

- ☐ Move operating lever to open position for a few seconds and then move it back, allowing it to snap closed. After T&P relief valve is operated, if it continues to release water, close cold water inlet to water heater immediately. Follow draining instructions, to relieve pressure from the tank and replace T&P relief valve. If T&P relief valve weeps periodically, it may be due to thermal expansion see *Section 2.5 on page 4*. Do not plug T&P relief valve or discharge piping.



Plugging T&P relief valve or discharge piping can cause excessive pressure in water heater, resulting in substantial property damage, serious injury, or death.

- ☐ Follow instructions on circulator to oil it, if required.
- ☐ Check mixing valve, valves, pipes and fittings for leaks.
- ☐ Check function of field-installed controls and valves. See component manufacturer's instructions.
- ☐ Review homeowner's maintenance responsibilities and their frequencies, including any not listed in the following section.

5.1.2 Homeowner monthly maintenance to include:

- ☐ Check for leaks.
 - Visually check valves, pipes and fittings for leaks. Call qualified service technician to repair any leaks.

5.2. Filling Water Heater

See *Sections 4.1 and 4.2 on page 19*.

5.3. Draining Water Heater

Drain water heater if it will be shut off and exposed to freezing temperatures. Freezing water will expand and damage water heater.

- If boiler water contains sufficient antifreeze, then only the domestic water needs to be drained.
- If boiler water does not contain sufficient antifreeze, then the boiler water and domestic water must be drained.



Close domestic water isolation valves and drain the tank before draining primary circuit to prevent damage to primary circuit.

If antifreeze is used in boiler water, check concentration. Boiler water (including additives) must be practically non-toxic, having toxicity rating or class of 1, as listed in Clinical Toxicology of Commercial Products. A maximum 50/50 mixture of inhibited propylene glycol is recommended. Follow antifreeze manufacturer's instruction.



Do not use automotive, ethylene glycol or petroleum-based antifreeze. Do not use any undiluted antifreeze. This can cause substantial property damage, serious injury, or death.



Water from opened drain valves, unions and other connections may be extremely hot. To avoid substantial property damage, serious injury, or death:

- Tighten all drain hose connections.
- Direct hot water away from all persons.

5.3.1 Draining (Domestic Water) Tank.

NOTICE

Prior to draining the tank, ensure the following is completed:

- *The snap-set wiring connection at the water heater is disconnected.*
- *The DHW system supply isolation valve is closed.*

Reference domestic piping diagram, see Fig. 5 on page 7.

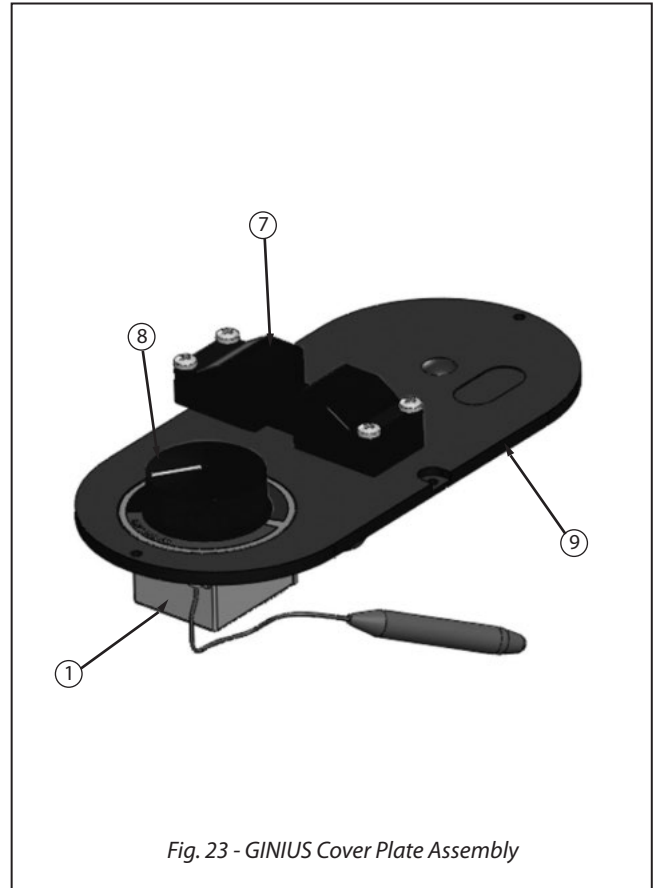
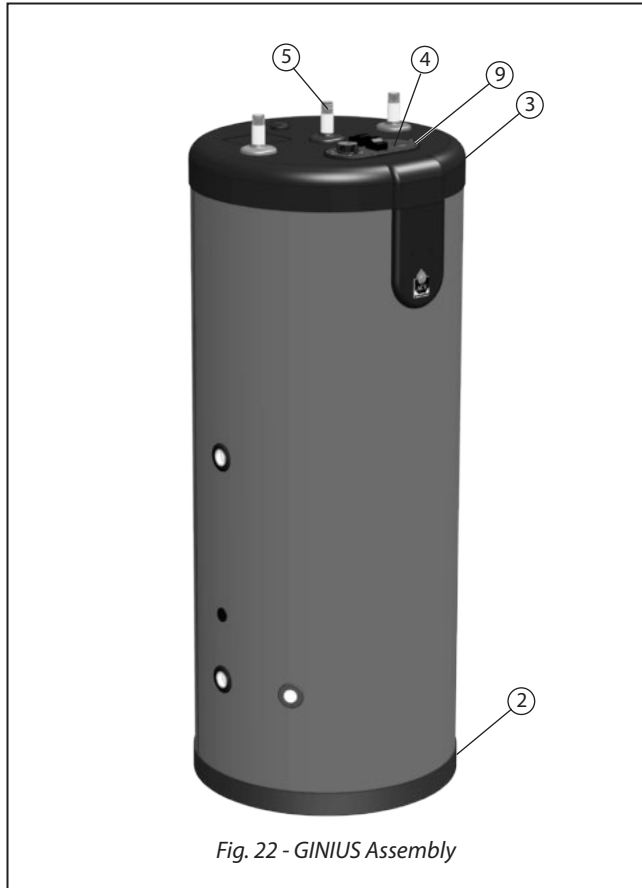
1. Close the domestic water isolation valves.
2. Open the domestic water drain valve to start emptying the domestic tank.
3. Open a hot water faucet at the highest point above the water heater to increase draining speed.
4. When draining is complete, close the hot water faucet and the domestic drain valve.

5.3.2 Draining Primary (Boiler Water) circuit



Close domestic water isolation valves and drain the domestic tank before draining primary circuit to prevent damage to primary circuit.

1. Disconnect snap set wiring connection at water heater.
2. Close boiler water isolation valves between boiler and water heater.
3. Connect hose to boiler water drain valve at water heater. Open and drain water to a safe place.
4. To speed up the draining procedure, open manual air vent on the boiler, if any.
5. When draining is complete, close drain valve and close manual air vent (on the boiler, if any).



Item	Part #	Model	Description
1	P3KITTH01	All	Aquastat 160°F - residential
2	P3KITBTM02	All	Bottom cap
3	P3KITTOP02	All	Top cap
4	P3DW01	GINIUS 35	Dry well
	P3DW02	GINIUS 45	
	P3DW03	GINIUS 55	
	P3DW07	GINIUS 65	
5	P3WKITDT02	GINIUS 35	Dip Tube
	P3WKITDT03	GINIUS 45	
	P3WKITDT04	GINIUS 55	
	P3WKITDT06	GINIUS 65	
6	P3WKITDT01	GINIUS 35-45	Dip tube, recirculation (optional)
	P3WKITDT02	GINIUS 55-65	
7	P3KITWRS01	All	Snap-set wire harness
8	P3KNB02	All	Knob
9	P3CVR04	All	Cover plate