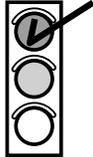


7

Contractor Guidelines For Connecting to the Solar Storage Tank

7A: Cutting Into the Incoming Cold Water Pipe and Connecting to the Solar Storage Tank

Professional
Only



! WARNING

Because variables such as state and local codes and structural differences are inherent in each individual installation, the following information should be viewed only as general guidelines for licensed plumber before starting the work. Be sure to consult your state and local codes to ensure your system is installed correctly.

7B Preparing The Existing Hot Water System For Connection

NOTE: *Be certain all faucets in the house are off.*

1. Shut off the incoming cold water **to** and outgoing heated water **from** the Existing Water Heater.

If conditions permit, turn off the Existing Water Heater or the power to the Existing Heater.

2. If the existing Water Heater is a Storage type, drain off approximately two (2) gallons of water using its Drain Valve.
3. Cut at least eight (8) inches out of the Incoming Cold Water Pipe.

- Referring to Figure 59, determine a By-Pass valve arrangement that will allow the *Solar Storage Tank* to be by-passed for repairs and for maintenance to the system when necessary.

! WARNING Location of the Solar By-Pass Valve arrangement *MUST NOT* disrupt the cold water supply to the Existing Tempering Mixing Valve.

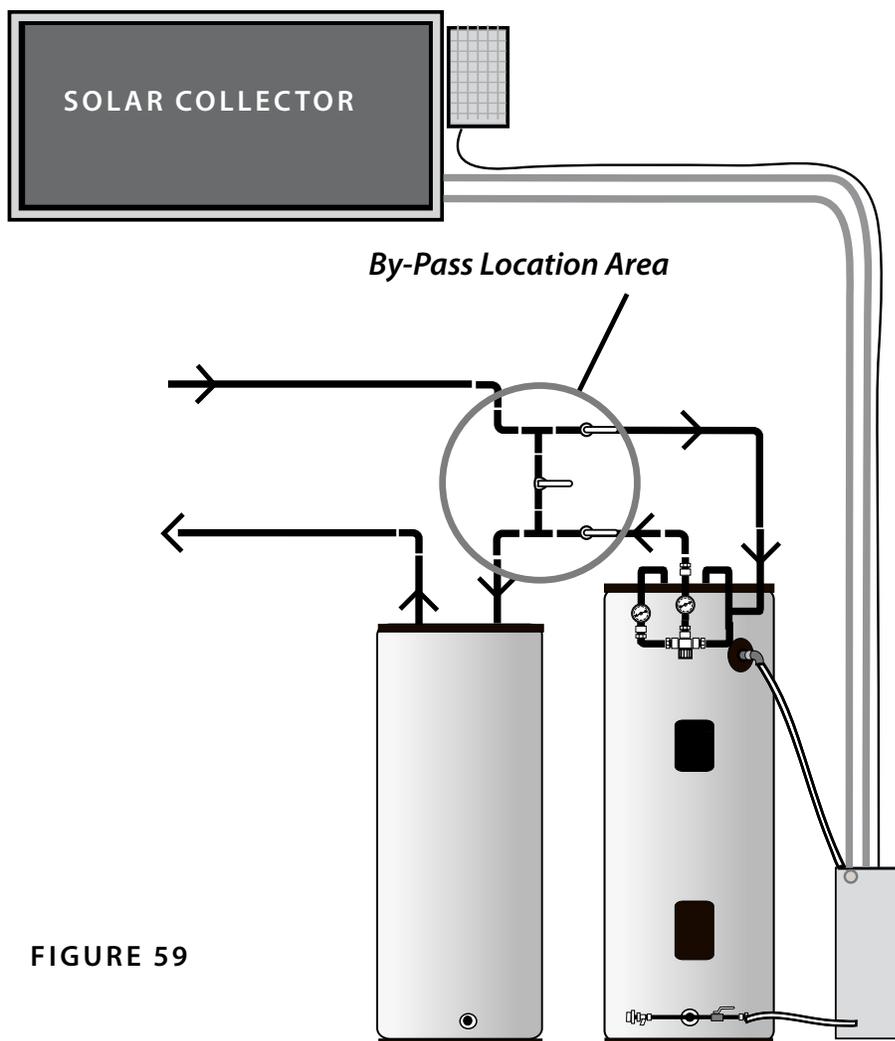


FIGURE 59

5. Run the incoming water to the Cold Water Inlet Pipe on the Solar Manifold.
6. Connect the Solar Manifold Outlet Pipe to the Cold Water Inlet of the existing Hot Water System.
7. Turn on the incoming water supply to fill the Solar Tank. Check all connections for leakage. This portion of the installation is now complete.

***TIP:** To facilitate the filling process, slowly release the Pressure Valve on the Storage Tank to bleed air from the system. When complete, water will start to leak from the Valve. Release the Valve Handle.*

⚠ CAUTION Turn on all faucets in the system and open all By-Pass Valves to purge the air out of the system.

8. Return all Valves to their original positions

***TIP:** Insulation is not included with the system but Sunward recommends insulating all exposed piping and Flex Hose to prevent heat loss.*

7C: System Start-Up

NOTE: Sunlight is needed to power the system for start-up. The Heat Exchanger is supplied pre-charged with one gallon of Glycol installed.

! WARNING Always use gloves when working with heated Glycol and Collector Panels that have been exposed to the Sun

! WARNING No other fluid shall be used that would change the original classification of this system. Unauthorized alterations to this system could result in a hazardous health condition.

1. Ensure that the motor is off. If the motor pump is running, turn it off via the switch on the Linear Current Booster.
2. Place a small container under the Vent Tube. When the sun is shining, connect the Photovoltaic Module Cable and the Thermistor Wire to the corresponding connector on the Heat Exchanger.
3. Remove the Pressure Relief Valve (**Figure 60**) and the Brass Cap on the Fill Tube from the Heat Exchanger.
4. Turn on the Pump Motor via the switch on the Linear Booster. Some Glycol may be visible and you may hear a faint bubbling sound. After the Pump has been running for few minutes, the air bubbling noise should stop.

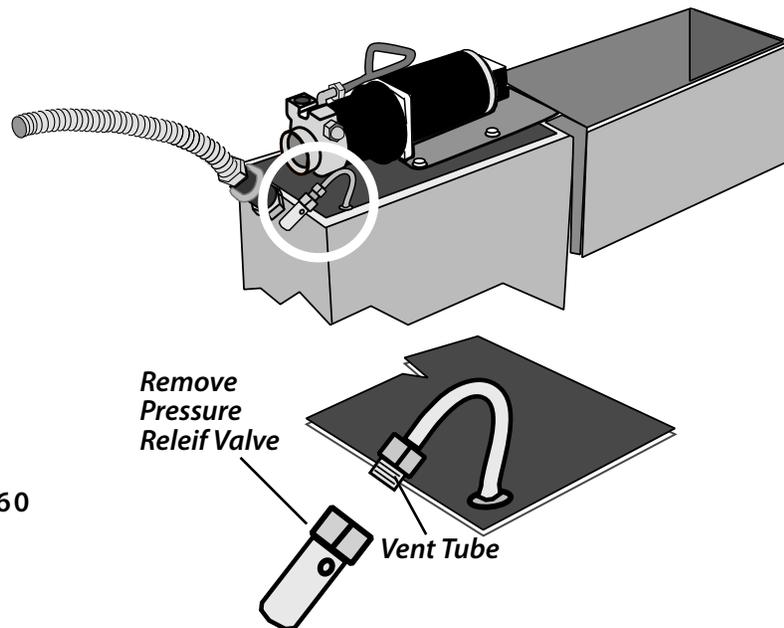


FIGURE 60

- Using a small funnel, slowly fill the Heat Exchanger with the supplied Glycol until the fluid comes out of the Vent Tube.

NOTE: The reservoir will take approximately 1.5 quarts of additional Glycol for every 100 feet of Micro-Tubing.

- Using the supplied wooden Dipstick, measure the Glycol level. When the Pump is running, it should measure between 8" and 12" from the bottom of the Dipstick.
- Re-install the Brass Cap on the Fill Tube and the Pressure Relief Valve.
- Check the system for leaks at all Micro-Tubing connections. If a leak is noted, tighten the Nut another 1/4 turn.

NOTE: The system is designed to self-pressurize. After the system heats up for the first time, the system may purge a small amount of Glycol from the Pressure Relief Valve

CAUTION DO NOT OVER TIGHTEN the compression fittings.

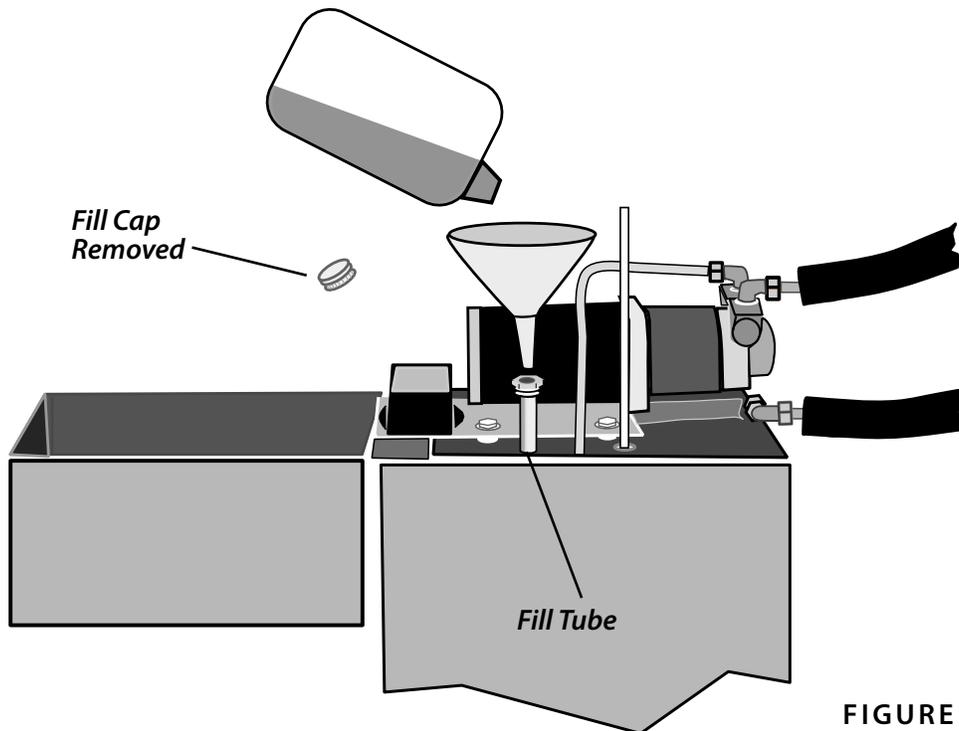


FIGURE 61