

# Introduction to PROPANE VAPORIZERS

**flagro** ... More Than Just Heat

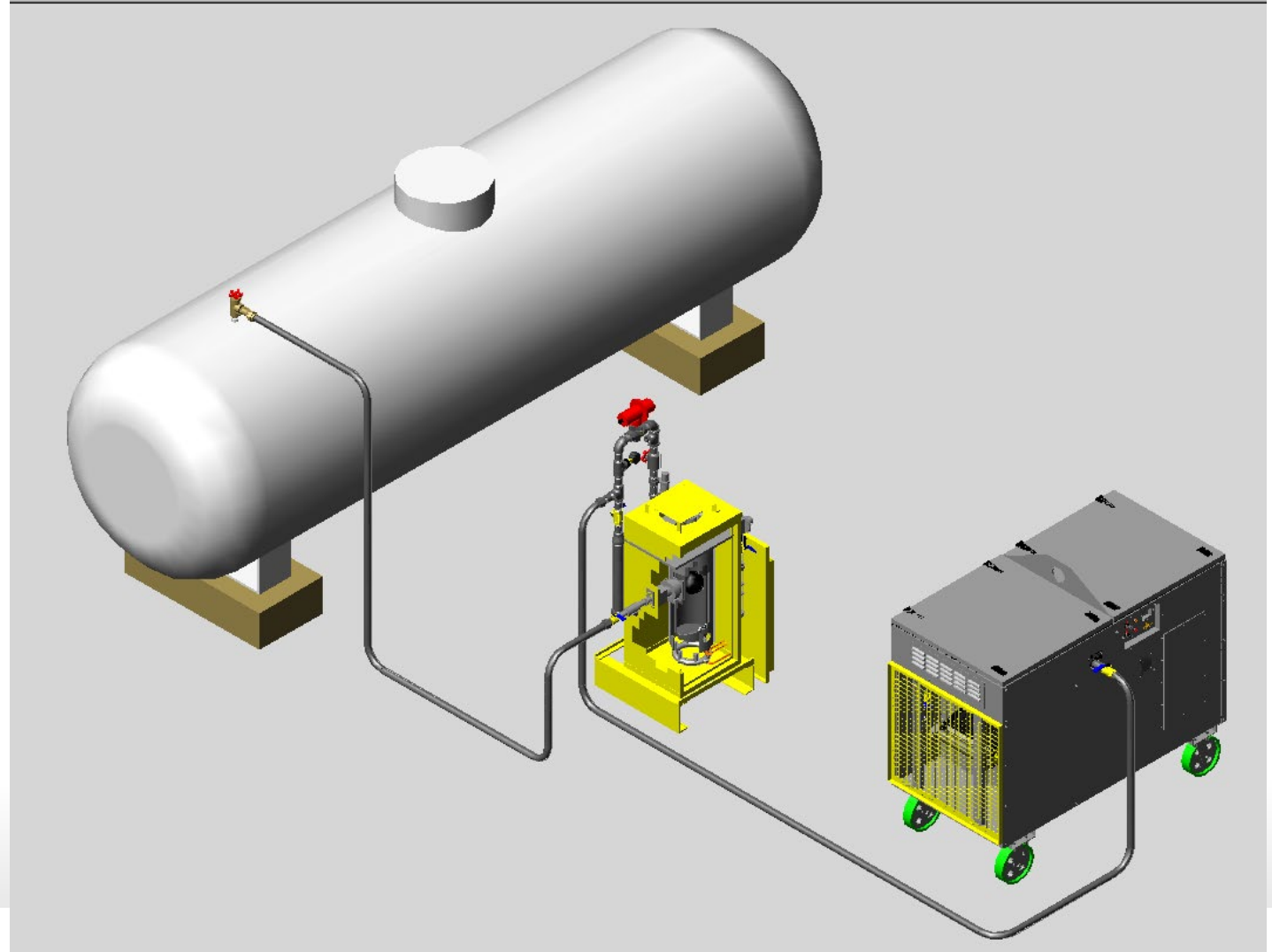


# General PROPANE Safety

- Wear safety glasses and gloves when working with propane.
- Wear long sleeve cotton shirts.
- Test for leaks using soap solution: DO NOT USE TORCH or open flame for leak testing.
- Propane is heavier than air so it will settle in low lying areas if there is no air movement.
- Propane boils at 44 degrees below zero and will FREEZE ANY EXPOSED FLESH on contact.
- If a large leak develops: SHUT OFF FUEL AT SOURCE if safe to do so.  
EVACUATE AREA: Do not attempt to repair leak until area is safe to enter.

# Typical Vaporizer Installation

NOTE: The clearance distances between devices on the drawing are not to scale. A 20-foot distance between devices is advisable.



# Vaporizer Safety

- Vaporizers provide a valuable addition to the heater rental market.
- Vaporizers are specialty devices that require a specialty skill set for installing, operating, and uninstalling.
- NEVER use a torch to investigate a propane leak!
- We recommend that the propane gas supplier perform all work with a vaporizer.
- An improperly installed or uninstalled vaporizer can lead to a STCK event.



# K-Mart Distribution Center: CLOSE CALL

- Event occurred when venting propane.
- Event occurred when attempting to stop the purge process.
- Heater was not available to burn propane off.
- Safety gear was being worn at the time.
- Employee suffered “ringing in the ears.”



Kmart store #3074 in [Miami FL](#) is one of two remaining in the United States, as of December 2023.

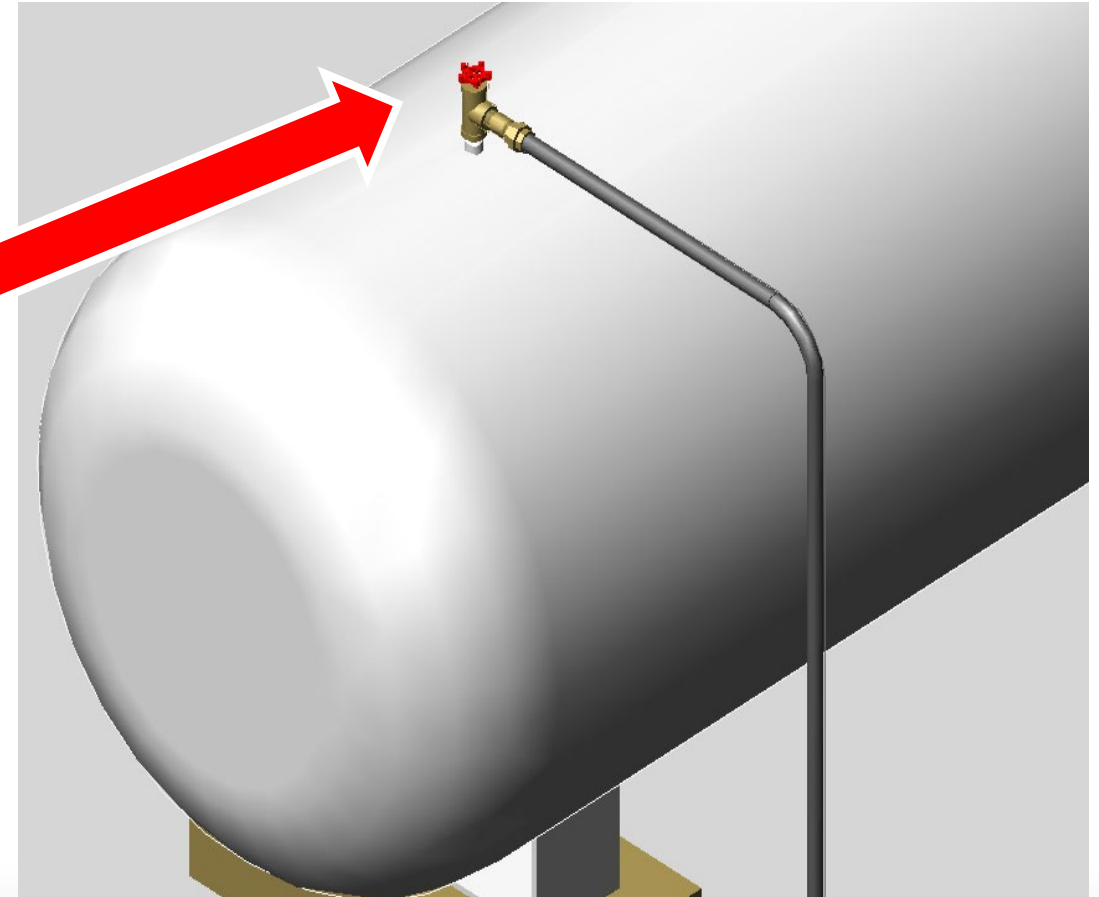


# Special Event Job: STCK EVENT!

- Event occurred when venting propane.
- Event occurred when attempting to stop the purge process.
- Heater was available to burn propane off.
- Safety gear was not worn at the time.
- Employee suffered second degree burns on face and arms.

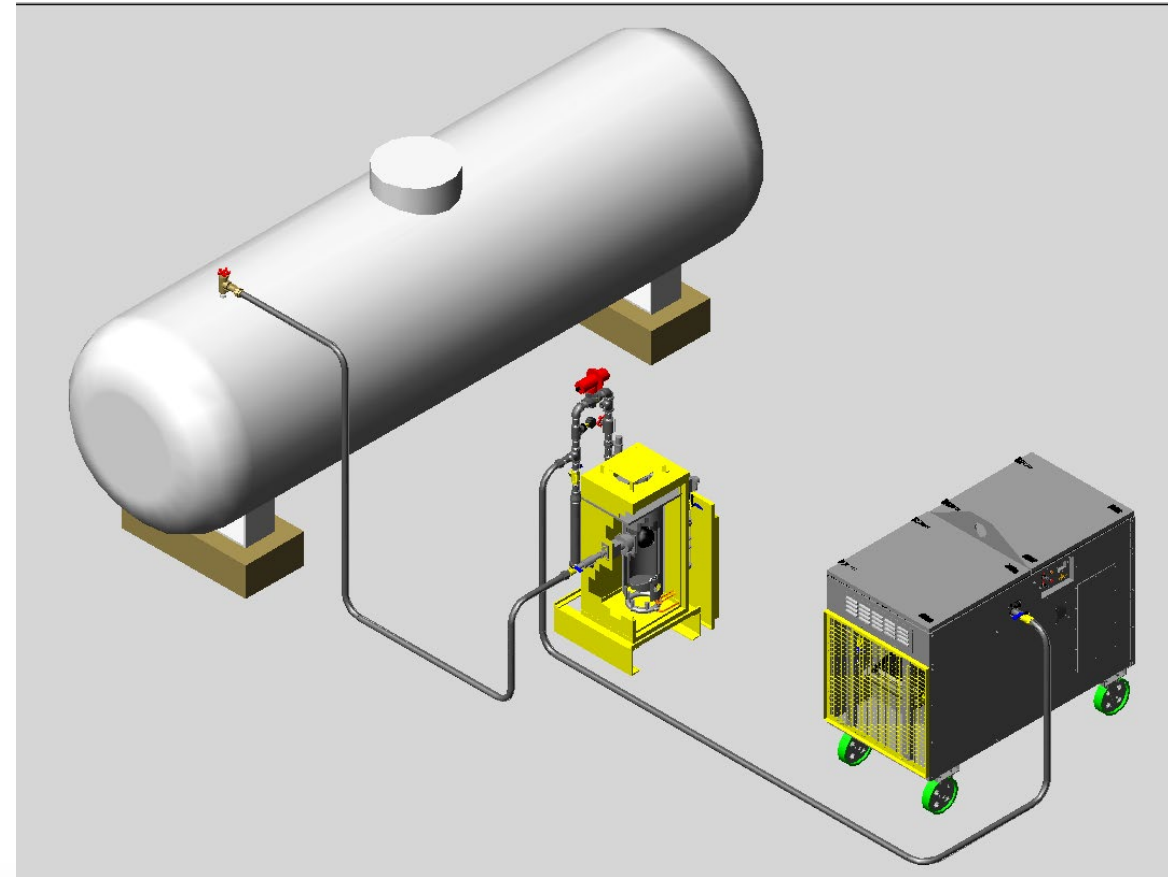
# Disconnecting an Operational Vaporizer...

1. Make sure PILOT on vaporizer is lit, and vaporizer is set to ON.  
**NOTE:** Vaporizer should be warm to the touch, otherwise the vaporizer may not drain completely.
2. Start Heater.
3. Close liquid service valve at propane tank.



# ...and FLUSHING the PROPANE LINE

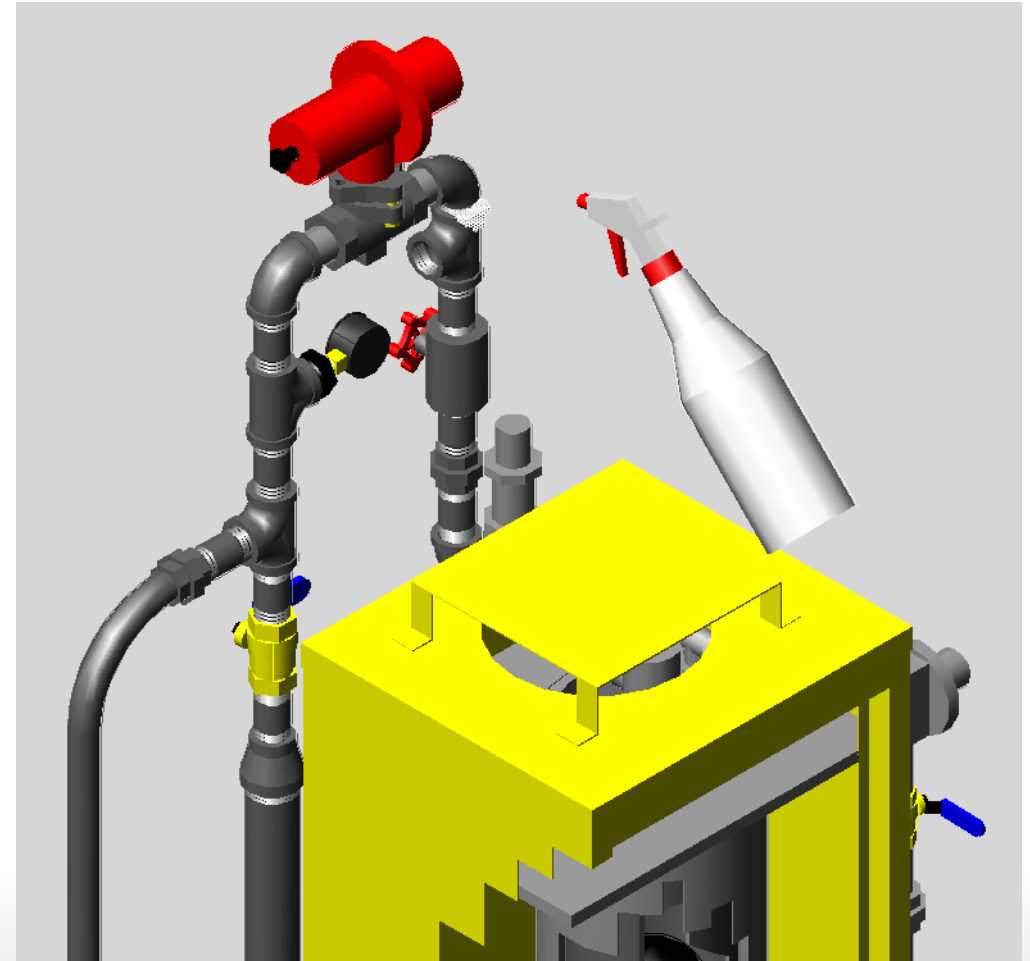
4. Allow heater to run until FLAME RELAY LIGHT ILLUMINATES – Red Alarm light ON (ensure that flame in heater is out).
5. Check that PRESSURE GAUGE on vaporizer reads ZERO.
6. Shut OFF heater.
7. Observe that pilot flame on vaporizer is EXTINGUISHED.
8. DISCONNECT THE HOSE from heater, then from vaporizer, and finally from tank.
9. Insert plastic caps in vaporizer inlets and outlets, but WHY?





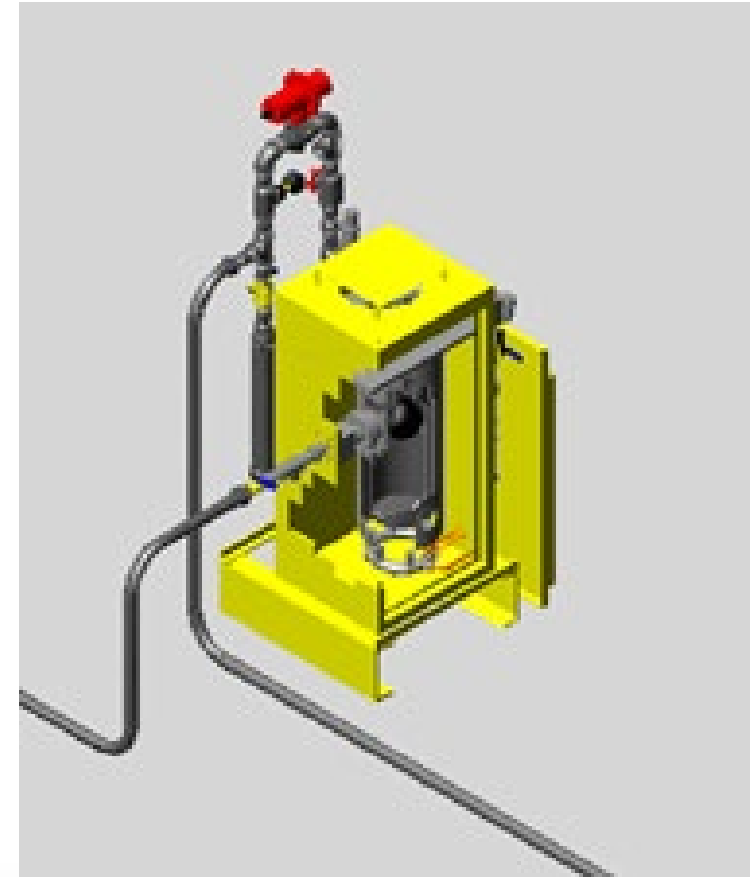
# Disconnecting NON-FUNCTIONAL Vaporizers (PART 1)

- Use a soap solution to check to make sure there are NO GAS LEAKS.
- Find out WHY vaporizer does not work.



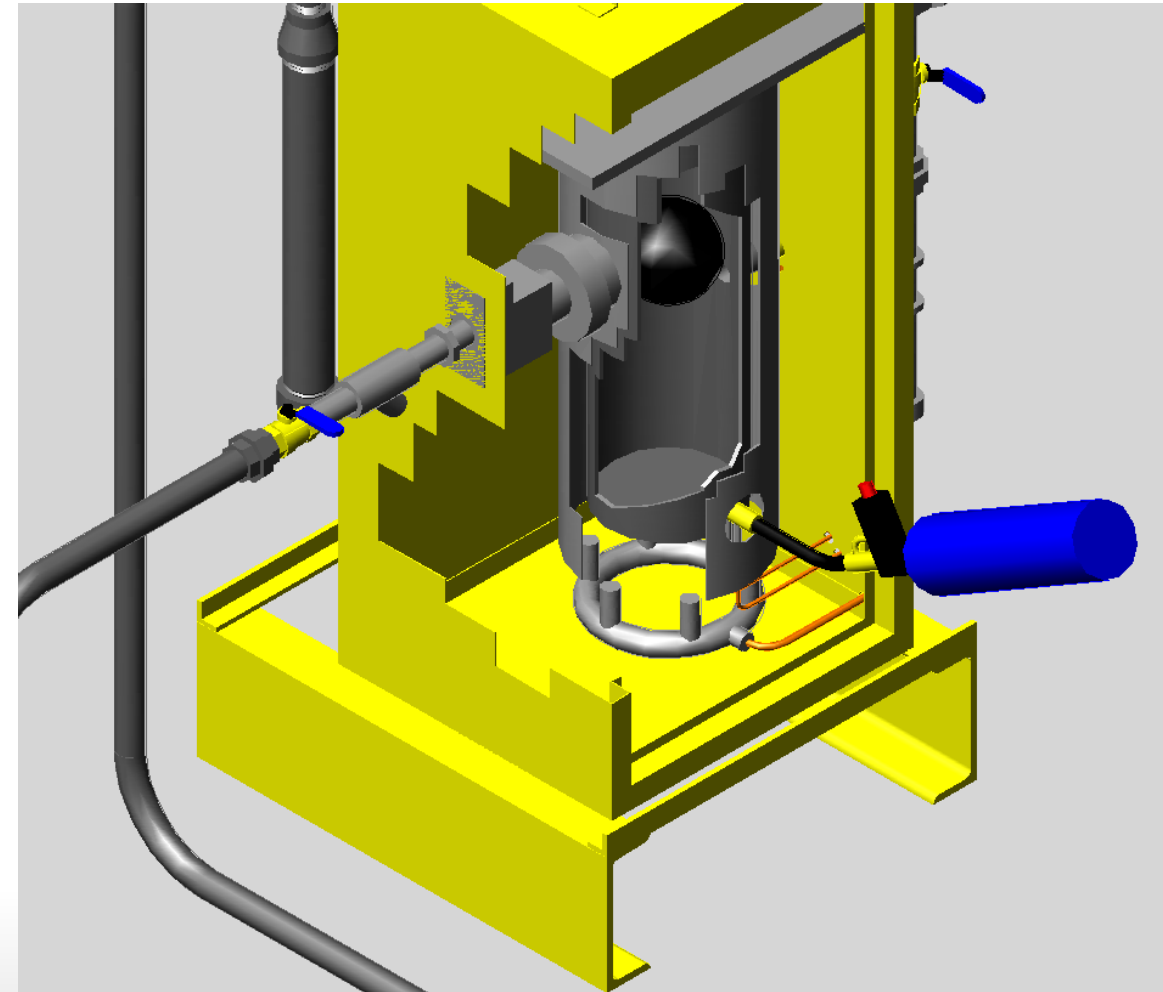
# Disconnecting NON-FUNCTIONAL Vaporizers (PART 2)

- Verify all liquid line SERVICE VALVES ARE **OPEN**.  
**NOTE:** With a cold vaporizer, as it warms up liquid will return to the propane tank and if the liquid line valves are closed the relief valve may blow.
- ATTEMPT TO LIGHT the vaporizer.
- If you are able to light the vaporizer, allow it to RUN UNTIL THE THERMOSTAT CYCLES THE BURNER OFF and then follow the Disconnecting an Operational Vaporizer procedure above.
- If vaporizer will not light, proceed to next step...



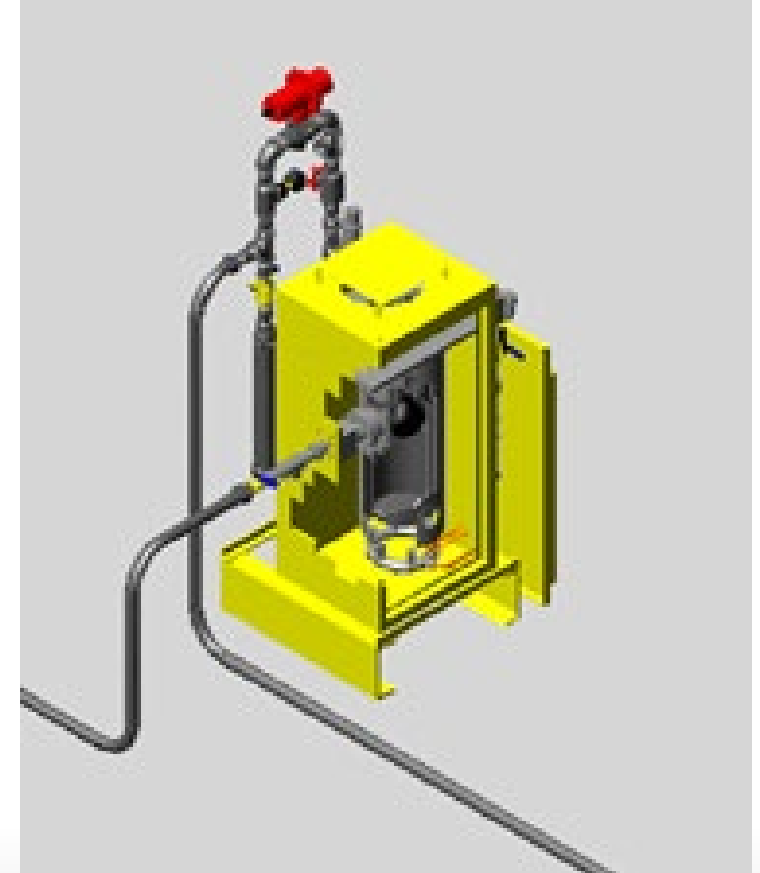
# Disconnecting NON-FUNCTIONAL Vaporizers (PART 3)

- Use that soap solution again and SUPER VERIFY there are no gas leaks.
- If you cannot get the vaporizer operational, you may use your propane torch to HEAT THE VAPORIZER STORAGE TANK (remember the effects of temperature on propane).
- Heat the storage tank for 15 minutes but DO NOT CONCENTRATE HEAT in one spot.
- REMOVE HEAT AND CLOSE THE LIQUID LINE service valve at tank.



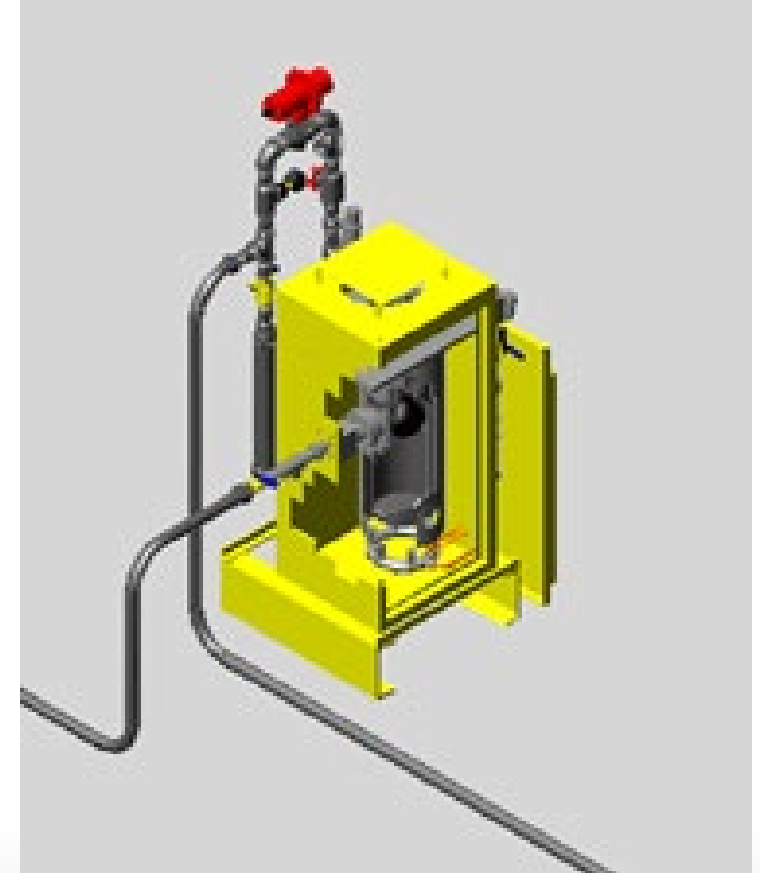
# Disconnecting NON-FUNCTIONAL Vaporizers (PART 4)

- START HEATER.
- Allow heater to run until FLAME RELAY LIGHT ILLUMINATES: Red Alarm light ON (observe that flame in heater is out).
- Check that PRESSURE GAUGE on vaporizer reads ZERO.
- Frost on vaporizer tank indicates there is still liquid propane present so REHEAT TANK AND CHECK PRESSURE GAUGE.
- REPEAT these steps as needed.



# Disconnecting NON-FUNCTIONAL Vaporizers (PART 5)

- Check pressure on PRESSURE GAUGE ON VAPORIZER, must read ZERO.
- SHUT OFF HEATER.
- Verify that PILOT ON VAPORIZER IS EXTINGUISHED.
- Disconnect hose from heater, then from vaporizer, and finally from tank.
- Insert plastic caps in vaporizer inlets and outlets (we know WHY now!).



# What if the HEATER DOES NOT WORK?

- Substitute heater with the weed burner torch and perform the above processes.

