INSTALLATION AND OPERATING INSTRUCTIONS

FUEL GAS CONNECTIONS

- The fuel gas supply should be connected to the EnviroVault supplied gas tubing connection.
    - A main manual shut-off valve must be installed upstream of all heater controls.
    - When using a Kimray T-12 emergency high temperature shut down switch, the T-12 must be installed upstream of the splitter connection. This will ensure that in an emergency situation, all heaters are shut down.
    - If a Kimray T-12 emergency high temp shut down switch is not incorporated into the system, it is the operatorôs responsibility to ensure that the tank does not overheat. Spare thermowell connections have been included for use with a typical temperature gauge (gauge supplied by others).
- The maximum inlet pressure to the low-pressure service 912 regulator is 250 psi (1.7 MPa). If the inlet pressure is higher than this, a high-pressure regulator must be installed upstream.

NOTE: Gas appliance regulators and manual shut off valves are required standard components for all CSA approved heaters; they are available as optional accessories for FM approved heaters.

ELECTRICAL

- All wiring has been installed in accordance with the most recent revisions of the Canadian Electrical Code (CEC) and National Electrical Code (NEC); it is the operatorôs responsibility to ensure adherence with any applicable local codes.
- It is desirable to install an indicating light on all starting systems. This will reduce the possibility of the power being left on once the heater is started, which can reduce the lifespan of the heater.

ELECTRICAL SETUP (IF ORDERED)

The electrical cables extending from the Catadyne Heaters are 240 Volt AC, 30 amp, single phase. They are explosions proof and are rated for Class 1 / Zone1 areas.

Cables are built using a non hazardous rated male cord end and 15 meters of flexible cable (SOW cable). The cable is tied into a junction box which is sealed where the cable run changes zones. Teck cable is spliced from the junction box and extends to the catadyne heater.

All electrical components provided by EnviroVault Corporation comply with CSA Class1 / Zone1 standards.

HEATER START UP AND OPERATION

All Cata-Dyne™ heaters are supplied with a Safety Shut-Off Valve (SSOV) / Thermocouple assembly to ensure the safe operation of the heater. Under no circumstances should the reset button be held or locked into the depressed position by use of a mechanical restraint.

1. Turn on the main gas supply to the system.
2. Rotate the dial completely counterclockwise to fully open the gas supply.
3. Activate power to the heater you wish to ignite.
4. After 15 minutes, depress the reset button on the top of the 100% H19 safety shut-off valve. The reset button should return to the original position and internally open the valve and allow gas to flow to the heater. If the valve does not stay open when the reset button is released, it may be necessary to wait an additional few minutes and then depress the reset button again. This will allow the electrical elements additional time to warm up.
5. When the catalytic reaction is well established, turn off the electrical power to the elements. Wait approximately 10 minutes after turning on the gas flow before turning off the electrical power.
6. Repeat steps 1 ï 5 for the other two heaters.
7. Set the thermostatic temperature controller to the desired setting after the catalytic reaction has been established for at least one hour.

OPERATIONAL NOTES

All Cata-DyneÊ heaters are supplied with a Safety Shut-Off Valve (SSOV) / Thermocouple assembly to ensure the safe operation of the heater. Under no circumstances should the reset button be held or locked into the depressed position by use of a mechanical restraint.

- The thermostat for the temperature controller has an adjustable bypass. When the thermostat is in the low fire mode (closed), the bypass is active. The WX model 72ò x24ò heater provides 60,000 BTU/hr of natural gas at full fire but only 24,000 BTU/hr at low fire.
- The thermostat reading from 1 through10 is adjusted to the sensed temperature at which the heater is selected to go into low fire mode. As thermal demand increases and the tank internal temperature drops, the thermostat will open and the heater will run again on high fire until the heat loss is recovered.

The bypass is pre-adjusted by CCI Thermal, corresponding to each size of heater and BTU/hr rating.

TROUBLE SHOOTING

- Ensure the fuel type matches what is listed on the nameplate.
- Ensure the voltage matches what is listed on the nameplate.
- Check for any physical damage. All signs of physical damage to the catalyst pad such as holes, tears or a general deterioration of the catalyst bed signal that the heater should be repaired. Excessive vibration may also cause damage to the inner catalysts structure which may cause premature failure.
- Check the gas supply pressure at the heater ï 7 in. w.c. for natural gas and 11 in. w.c. (2.72 kPa) for propane.
- Check the gas orifice for obstructions or dirt and ensure the size matches that listed on the nameplate. It may be necessary to install a filter upstream of the heater or regulator if the gas supply is dirty. If the fuel supply is constantly dirty and/or wet it is advised to use bottled propane fuel.
- Check the mounting position of the heater. The face of the heater should be in the vertical position and should not vary more than 45° from the vertical position for maximum efficiency.
- Check for saturation of the catalyst face caused by condensation or rain running down the face of the heater. If the heater has been exposed to water, it is advisable to place the unit in a warm area for a period of a few hours or longer as required. Once the moisture is removed, the heater can be re-installed and re-started.
- Check the jumper cable size to ensure that the resistance of the cable is not reducing the current to the heater. This would prevent sufficient power to the electrical element required to preheat the catalyst to active temperature. It is recommended to run the service vehicle at fast idle while starting the heater.
- Cata-DyneÊ heaters are designed to use clean fuel and to be used in non-contaminated atmospheres. Sulphur compounds in the fuel or atmosphere will poison the catalyst bed over a period of time and render the heater inoperative.
- If the heater has been exposed to sulphur compounds, it should be sent to the factory for service.
- Avoid spraying the face of the heater with high-pressure air, steam or water because this can damage the catalyst bed, if physical damage is visible, return the heater to the factory for servicing.
- Ensure that the temperature controller is correct for the model size, fuel, and pressure specifications for the heater it is fitted to. If the temperature controller is too low, the heater will not have sufficient fuel rating to operate and will stop.

For assistance, please contact EnviroVault Corporation
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