

Technical Bulletin 11670430

Economizer Purge Kit: 11663715 – Installation & Operation

Purpose

This bulletin outlines the procedure for installing purge kit (Chart PN: 11663715) onto an existing bulk tank in oxygen service as well as the recommended operation of the purge kit.

Installer Qualifications

The installer is expected to be knowledgeable of the nature of Oxygen with which he is working with, as well as all applicable safety requirements.

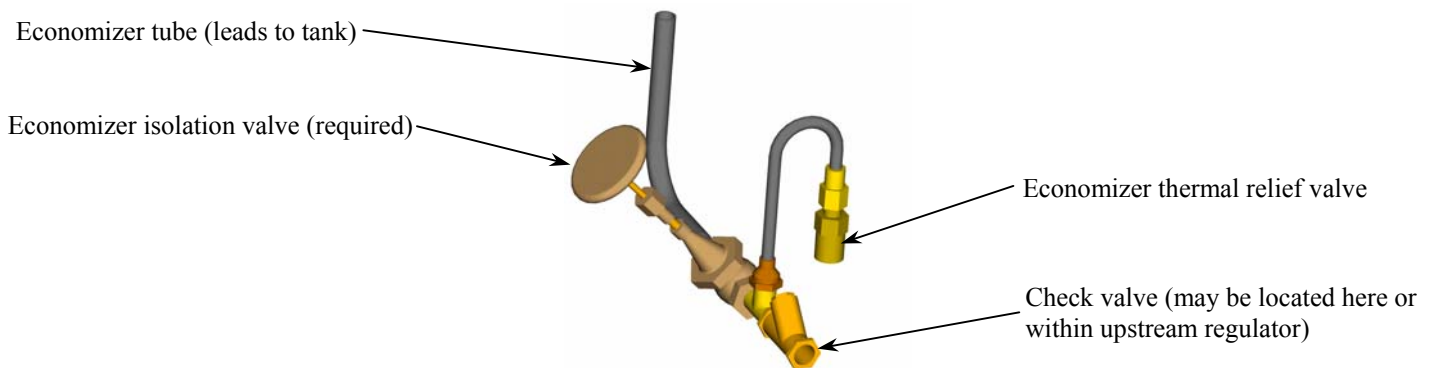
Installation

This purge kit is designed for bulk tanks, which utilize an economizer circuit. It does not apply to liquid hydrogen tanks, liquefied natural gas tanks or liquid carbon dioxide tanks. This bulletin applies to tanks that:

- 1.) Utilize an economizer thermal relief valve
- 2.) Have a method for isolating (from main tank pressure) the economizer thermal relief valve.

If either of these conditions are not met, contact Chart technical service department for further analysis of the circuit. A typical economizer circuit is shown in photo #1.

Photo #1 – Typical economizer circuit w/thermal relief valve – before purge kit



Removal of thermal relief valve:

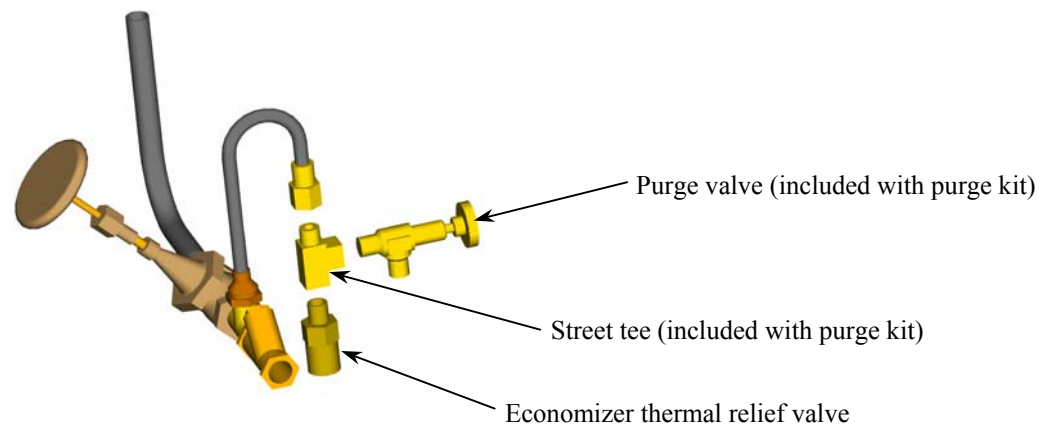
To remove the thermal relief valve, first isolate the economizer circuit. This will prevent any pressure loss from the main vessel into the economizer circuit. If any of the pressure building circuit or economizer circuit is cold due to recent usage, close the pressure build outlet valve and allow the system to return to ambient temperature. This will avoid any rapid pressure increase due to expansion of cold gas/liquid. Once the circuit has stabilized, close the pressure build inlet valve and the economizer isolation valve. Then loosen the economizer thermal relief valve. Use extreme caution, as this is an oxygen system. As the relief valve is loosened, the remaining pressure in the economizer/pressure building will be relieved (notable “Hissing” sound). Wait until all pressure in the circuit has been relieved and then remove the thermal relief valve from the circuit. Check and

remove any sealant residue or debris from all of the affected pipe threads on the relief valve and economizer circuit.

Installation of purge kit:

Assemble the street tee and purge valve in the orientation shown in photo #2. Be sure to use an appropriate lubricant/sealant that is suitable for oxygen service. Tighten street tee and purge valve until secure to prevent any leaks. Orient valve discharge away from tank or process piping. Prepare the existing thermal relief valve in the same way as the street tee and valve (using the appropriate oxygen compatible sealant/lubricant) and thread the thermal relief valve back into the economizer circuit until secure to prevent leaks.

Photo #2 – Purge kit installation



Operation of purge valve system:

Once the street tee, purge valve and thermal relief valve have been assembled together, the economizer circuit should look similar to what is shown in photo #3. After a thorough leak check has been done, the economizer circuit is ready to receive main vessel pressure again. Make sure that the purge valve is shut all of the way. Slowly open the pressure building inlet and outlet valves as well as the economizer isolation valve. Make sure that there are no leaks throughout the system. To operate, slightly open the purge valve to allow flow through the system and out the valve. After 5-10 seconds, close the purge valve. This process should be done approximately once per week to ensure that the economizer system is properly purged.

Photo #3 – Completed purge kit installation

