PURGER SHUT-DOWN

To shut down the NEAP purger when purging is not needed, simply close the foul gas line valve (A) and liquid line valve (B). Leave the suction line valve (C) open to pump-out liquid from the purger and to prevent pressure from building inside the purger while it is not in operation.

It is not necessary to shut-down the purger during normal compressor off-cycles. The temperature/check valve closes to prevent refrigerant from escaping during warm up between cycles.

PURGER PUMP-OUT PROCEDURE FOR SERVICE

Important: Observe all standard refrigeration safety practices. Safety eye goggles should be worn whenever installing or servicing refrigeration system components. See also the Caution section on page 8.

1. **Close the liquid line valve (B) and foul gas line valve (A).**
2. **Leave the suction line valve (C) open to allow the purger to pump-out any remaining liquid.**
3. **The purger will slowly defrost as liquid evaporates. Continue pumping out until the purger is no longer frosted, indicating that all liquid has exited the purger.**
4. **Close the suction line valve (C) and the purge gas shut-off valve (E). The purger is now isolated. Remove the purge gas tubing from the water reservoir to prevent the possibility of reverse flow of water into the purger.**
5. **Safely bleed any remaining pressure from the purger using accepted procedures.**
6. **With all refrigerant removed (pumped out to zero pressure), slowly open the oil drain (D) on the bottom of the purger vessel to verify zero pressure. Once zero pressure is verified, the purger can be disconnected from the system or opened as needed for service.**
7. **If the purger is removed from the system, cap the suction, foul gas, and liquid lines to the system using blanking flanges.**

OIL DRAIN

The NEAP has a valve and connection (D) on the bottom of the purger vessel for draining oil. Excess oil in the purger can reduce its capacity by lowering the evaporating or condensing rate. Typically, oil is not a problem unless the liquid line is connected to a vessel or line where oil can drain into the purger.

Before draining any oil, safely pump-out the purger as indicated in the Purger Pump-Out Procedure section and allow the purger to warm to ambient temperature. Use accepted oil draining precautions to prevent injury or property damage. Once all oil has been drained from the purger, close the oil drain valve (D) and return it to normal operation, as indicated in the Installation and Start-Up section.

TROUBLESHOOTING

NO NONCONDENSIBLE GAS BEING RELEASED FROM THE PURGER

Reason 1: **The purge gas shut-off valve (E) is closed.**
Check: **Verify that the valve is open.**

Reason 2: **There are no noncondensible gases present in the system.**
Check: **Measure the temperature of the liquid leaving the condenser and measure the condensing pressure. Compare the condensing pressure to the saturation pressure for the measured temperature. If the pressures are the same, there are very little, if any, noncondensible gases in the system.**

Reason 3: **The purger evaporator temperature is not at +40°F (+4.4°C) or below. The temperature/ check valve (9) will be closed.**
Check: **Verify that suction pressure at the purger is below 58.6 psig (4 bar).**

Reason 4: **Inadequate liquid supply.**
Check: **Make sure all liquid line shut-off valves leading to the purger are open and the strainer in the thermostatic expansion valve (1) is not clogged.**

Reason 5: **The strainer/orifice (5b) is clogged.**
Check: **No frost on the strainer/orifice indicates a clogged strainer.**

Reason 6: **No foul gas pressure at the purger.**
Check: **The pressure gauge on the purger should read condensing pressure. If more than approximately 10 psi (.68 bar) below condensing pressure, there is a restriction in the foul gas line or the foul gas line shut-off valve (A) is closed. Check to make sure the strainer (4) is not clogged.**

Reason 7 : **The temperature/check valve (9) is clogged.**
Check: **Look for an obstruction inside the temperature/check valve and remove it. Clean and inspect the check valve assembly (19), and replace if needed.**

Reason 8: **Liquid, not vapor, in the foul gas line.**
Check: **Look for frost after the strainer/orifice (5a) or liquid above the 50% level in the sight glass (7). Verify that the purge point is located at the top of a pipe or vessel where no liquid is present. Relocate if needed.**

Reason 9: **The 225 psid check valve (10) is leaking.**
Check: **If the pressure difference is below 225 psid and the outlet of the check valve is frosted, replace the seat/poppet assembly and spring if necessary.**

AMMONIA GAS BEING RELEASED FROM THE PURGER IN NOTICEABLE QUANTITIES

Reason 1: **The float ball plunger or seat is leaking.**
Check: **Verify the condition of the plunger seating surface. It should be clean and without scratches. Replace if needed. Verify the condition of the seat (13) and replace if needed.**

Reason 2: **The temperature/check valve is inoperative.**
Check: **The power element may have lost its charge. Look for cracks or holes in the power element and related tubing. Replace the element if needed. Also, check for dirt in the check valve assembly or on the temperature valve seat.**