

TANK TENDER SYSTEM CHECK-OUT FOR PRESSURE LEAKS:

(when gauge does not register at correct inch level of fluid in the tank)

A leak can occur in three places within the Tank Tender System:

- 1) within the instrument panel, i.e. pump, valves, tubing connectors, gauge, etc
- 2) somewhere in the $\frac{1}{8}$ " OD nylon tubing that runs between the instrument panel and the tank penetration fitting (tpf)
- 3) within the tpf itself

Tubing Connector Operation:

To Disconnect: Depress collet in and hold in throughout disconnection; must push tube end into connector then pull tube end out; release collet.

To Connect: Push tube end in until locked (hear and feel click)

Please Note: Improper disconnection will damage connector and tube end; may cause a leak.

The following simple procedure will allow you to quickly isolate a pressure leak within the system:

- a) *Instrument Panel Check-out* - remove the $\frac{1}{8}$ "-nylon tubing from the tubing connector at the back of the valve and install one end of a 1 to 2' length of $\frac{1}{8}$ " tubing into the valve (push in firmly). Then place the free end into a bottle full of water and pressurize the system by pushing the appropriate button and pumping the pump to see if the pressure reading for the head of water in the bottle holds. If the pressure holds, then the leak is elsewhere in the system. To reconnect the tubing to the instrument panel first cut $\frac{1}{4}$ " off tubing end, then push firmly back into the tubing connector on the valve back. If pressure does not hold, check tightness of all fittings and retest.
- b) *Tubing Run From Instrument to TPF Check-Out* - remove the tubing from the tubing connector at the tpf and place in a bottle of water. Then pressurize the system as in step a above. If the pressure holds in the tubing run and instrument, then leak must be in the tpf. When reconnecting the tubing run to the tpf remember to cut $\frac{1}{4}$ " off tubing end and push back into tubing connector firmly. If pressure does not hold, replace instrument tubing run. Or locate puncture, cut out and splice run with a union.
- c) *Tank Penetration Fitting (TPF) Check-out* - if leak has been isolated to the tpf, remove from tank and check for damage to the tube or fitting. If it is just one tank that is leaking, cross check that tank with a tank that is reading accurately, i.e., disconnect both tank's tubing runs at the tpf tubing connectors, then connect the accurate tanks tubing run into the leaking tank's tpf. Now retest that tank run at the unit. If it no longer leaks, then leak is not that tpf. If it does leak, then the leak is in that tpf. The connection between tank and tpf should be airtight.

Notes:

- 1) the end of the nylon tube of the tpf should be cut off 1" above the tank bottom - if the end of the nylon tube is jammed into the tank bottom the instrument will not read accurately. The tpf should be installed over the deepest part of the tank with the tube hanging straight down to within 1" of the tank bottom. Tube should hang straight and not be curled, bent, or blocked. Tube end cut too short above tank bottom will give short readings.
- 2) if the gauge needle does not fall back to zero when all buttons are released, or sticks at some level above zero, then the gauge may be over-pressurized or have been pumped over the end capacity line. In some cases the gauge may be recalibrated (call for instructions) but in more extreme cases a new gauge may be needed. Causes of over-pressurization: a) reading taken with deck fill pipe full (extra liquid in fill pipe plus full tank, may exceed gauge capacity, b) kink or blockage in nylon tubing run between instrument and tpf (no air can pass), c) blockage in tpf tube inside tank (no air can pass). It is better to have excess capacity on the gauge than be at full capacity with a full tank. If a re-occurring problem, go to a larger size gauge.
- 3) if the gauge has been disconnected from the instrument panel, a new flat gasket might be needed at the t-fitting. If system is leaking, check this flat gasket.
- 4) if tubing has been disconnected from tubing connectors, always cut $\frac{1}{4}$ " off of the tubing end and push back into tubing connector firmly, until a click is felt or heard. If nylon tubing is not completely pushed into tubing connector will leak at this point (improper disconnection can cause leak - see instructions above)
- 5) to test pump, cover the only open exhaust port on the valve closest to the pump and pump very gently (1 stroke); if pressure holds at whatever level pumped to, then the pump is functioning accurately. (There is only one open exhaust port in valve assembly.)
- 6) if there is an existing electrical system in the tank, remove before installing tpf.
- 7) fluid lying in nylon tubing between unit and tank will cause erratic reading; taking readings with deck fill pipe full can force fluid up into nylon tubing run - Do not test with deck fill pipe full. Disconnect tubing at both ends and clear fluid out of line.

If a problem still exists, please call Lisa for help. (253) 858-8481 Fax: (253) 858-8486

HARTSYSTEMS@CENTURYTEL.NET