

## **Overview: EVR Balance Total System**

The Hirt VCS 100 Processor does not interact directly with the other balance system hardware. It is in place to monitor and control the pressure in the UST to within limits specified by CARB.

Under conditions where the GDF is operational and the balance system hardware is functioning normally, the inherent ORVR compatibility of the balance system (when using VST's ENVIRO-LOC nozzle) will produce a predominately negative gauge pressure in the ullage space of the UST. Under these conditions, the Hirt VCS 100 Processor will typically not need to operate.

During periods of less activity, the GDF being shut down overnight, winter fuels being present, or other conditions that promote the pressurization of the ullage space, the Hirt VCS 100 Processor will operate as needed to control the pressure in the ullage space to an accepted level. The processor continuously measures the pressure of the vapor in the storage tanks with the use of a vacuum sensor switch located in the processor. When that pressure is negative, the processor remains de-energized and completely inactive. At any time when the vapor pressure in the storage tank approaches positive pressure, the processor energizes its turbine, which extracts vapor from the storage tanks and sends that vapor into its thermal oxidizer where that vapor is destroyed. The processor continues to extract vapor until the pressure of the vapor is returned to negative, whereupon the processor turns itself off. It remains off unless or until the vapor pressure again approaches a positive condition.