Mercury is a naturally occurring, odorless, silvery liquid with a metallic luster. It expands and contracts evenly with temperature and pressure changes, which makes it an ideal medium for use in vacuum gauges (manometers) such as those used on dairy farms.

The Problem

Commonly, mercury manometers have a U-shaped glass or plastic tube containing about 12 ounces of elemental mercury. The mercury level rises or falls in response to pressure changes in the milking systems. The mercury in these manometers can become tainted with milk, water, dirt, or cleaning solutions. The plastic mercury-containing tube can become discolored and cloudy. Since these problems make manometers difficult to read accurately, maintenance may be required.

During servicing, manometers are emptied and filled with new mercury and elemental mercury remains as a waste, which must be managed carefully. Mercury spills are extremely difficult to clean up. Usually a hazardous waste service is needed to adequately clean up the spill, which can cost thousands of dollars. Land tainted with mercury can significantly lower a farm’s property value.

The Solution

Mercury-containing manometers should be replaced with accurate and reliable non-mercury gauges. An acceptable alternative is a digital gauge. Digital gauges require a power source. It is suggested that the gauges be powered by the same source as the vacuum pump or auto-washer so they can be turned on and off with the system.

Digital manometers can make it easier to run a milking system at a constant, efficient pressure level, reducing milking time, and subsequently reducing energy consumption. Also there are no health, storage, or liability issues.

We recommend you speak with your dairy equipment dealer to discuss your replacement options.