Repeated pressurization and recalibration

Atmospheric pressure variations are of little importance with gauging pressures typically encountered in refrigeration and A/C service work. With a change of 2 inHg, the gauge changes by only 1 psi. It is unlikely that system pressures would cause concerns if the reading is correct within several psi.

Repeated pressurization (especially over-pressurization) of a gauge does, however, tend to change the response of the tube or diaphragm, and recalibration may be required.

The *easiest way* for a service technician to recalibrate a gauge is to connect it to a source of known, pure refrigerant, and then adjust the recalibration screw on the gauge to the appropriate pressure reading based on refrigerant temperature.

The *most accurate* way to recalibrate is to connect the gauge to a deadweight tester at a recalibration facility that has equipment traceable to NIST. This is usually cost-prohibitive for most situations, but may be warranted when total documentation is required.

Why should I zero out a manifold gauge?
As a general rule, a gauge can get off "0" due to a change in altitude or barometric pressure. It's important that you check to see that it's set back to "0" before you start charging. To reset a gauge, look for the reset screw that will be located on the front or back of the gauge. Then use a small blade screw driver to set the dial back to "0".