

PRODUCT INFORMATION**ASHCROFT® WARNING LABEL**

For many years, Ashcroft® gauges have been provided with a warning label which presently reads as follows: "Warning: A failure resulting in injury or damage may be caused by pressure beyond top of scale, excessive vibration or pressure pulsation, excessive instrument temperature, corrosion of the pressure containing parts, or other misuse. Refer to ASNE B40.100 or consult customer service."

The prime purpose of this label is to guide users in proper and safe selection and use of pressure gauges. It has recently been stated that one of the most important consideration in product liability cases is the existence and content of warning labels.

Occasionally, gauge purchasers will question the definition of "excessive vibration," "excessive instrument temperature," or other parameters listed on the label. The following comments might be helpful in responding to these questions:

Pressure Beyond Top of Scale - The meaning of this phrase is obvious. On Ashcroft gauges, where the scale may not indicate pressure (i.e., tons on ram, force, etc.), a notation on the dial indicating the maximum pressure is included, in order to guide the user.

Excessive Vibration - It is extremely difficult to be specific in this area - for instance, a vibratory condition which might have little or no effect on a liquid filled Duragauge® gauge could cause a commercial gauge to fail very rapidly. A very general consideration would be that if the acceleration caused by vibration is more than 1g, consideration should be given to the class of gauge being used relative to the severity of the vibratory condition. To put this number in perspective, we recently completed a vibration test on 2½" 1009 and 1008 gauges, where the acceleration was 3g's. After approximately 80 million vibratory cycles, no loss of accuracy was noted. When the acceleration level was increased to approximately 7g's and the gauges were cycled for the same 80 million cycles, zero shifts up to 4% were noted.

Pressure Pulsation - The range, frequency, amplitude and other characteristics of the pulsation could vary considerably, as well as the ability of a given gauge to withstand the pulsation. Our design objective is to have all Ashcroft® gauges last at least one million cycles when tested from 20 to 80% of full scale in accordance with ASME B40.100.

Excessive Instrument Temperature - Our catalogs recommend a maximum ambient (instrument) temperature of 150°F. The process leading into the gauge, however, may be at a much higher temperature - the important consideration is the temperature inside the gauge case. Specifically, what we are concerned about is long term drift, and if the temperature gets high enough, failure of the joints inside the Bourdon tube system, especially when they are soft soldered.

Corrosion of the Pressure Containing Parts - This parameter is relatively straight forward. If the customer does not have the internal resources to properly select the Bourdon tube material, Ashcroft will make such a recommendation if all of the characteristic for the process fluid are provided.