Clark-Reliance PRISMATIC Gages

After gage is placed in service and becomes thoroughly heated, expansion of metal parts causes bolting pressure to ease somewhat. Close water gage valves and go over nuts and tighten them to correct foot pounds of torque. For cleaning and/or replacing the prismatic glass, remove insert from gage valves and follow this procedure:

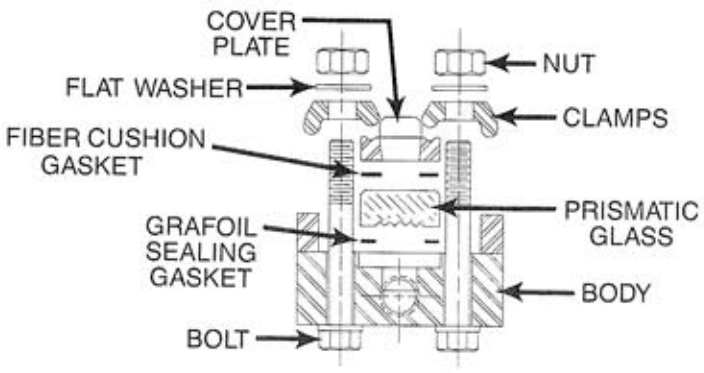

Figure 21
S Type Prismatic Gage

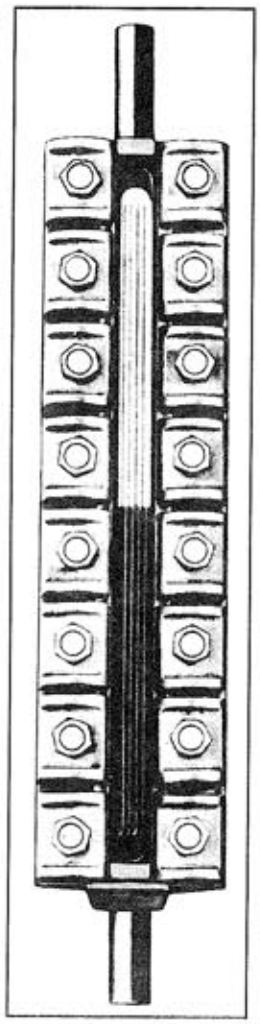

Figure 22

1. The gasket seat surface should be thoroughly cleaned after old glass and gaskets have been removed. Surface should be smooth and free from scratches. Any irregularities in the surface can cause the glass to shatter as insert is being tightened.

2. The inner gasket and the glass should be placed centrally on the gage body, then being careful that they remain located, the outer or cushion gasket and cover plate or adaptor are placed in position.

3. Next put the clamps, washers and nuts on the studs. Take care to see that the nuts turn on the studs freely. This enables the assembler to determine with less error when he has the studs drawn up evenly.

4. Finally, the nuts are tightened up. This should be done as follows: Turn down all the nuts *finger tight* first; then starting from the center pair of nuts, tighten in alternate pairs toward either end. Each nut should be tightened only about 1/3rd torque value at a time. Go over the nuts enough times to draw them all up to 40 ft-lbs (54 Newton-Meters).

5. Now mount the gage in the water gage valves in the usual way. Bring up to operating temperature slowly by opening blow down valve and cracking steam connection valve slightly, injecting a small amount of steam to heat the insert. Close steam valve and torque nuts to correct value. Close blow down valve and open steam and water valves.

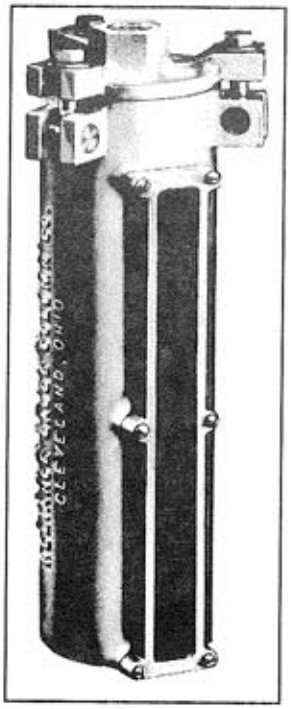

Figure 23
GL-53 Illuminator

Illumination for PRISMATIC Gages

The contrasting black and white reading of water and steam is obtained simply by light rays thrown directly on the face of the glass. Those rays meeting prisms in the steam space are reflected back to the observer. Those rays meeting prisms filled with water cannot be reflected, thus this portion appears black. It should be obvious therefore that the illumination for this glass come directly from in front, and at right angle to the face of the glass. This is important – usually poor visibility is directly caused by poor lighting arrangement. See illustrations below for suggested location of illuminators.

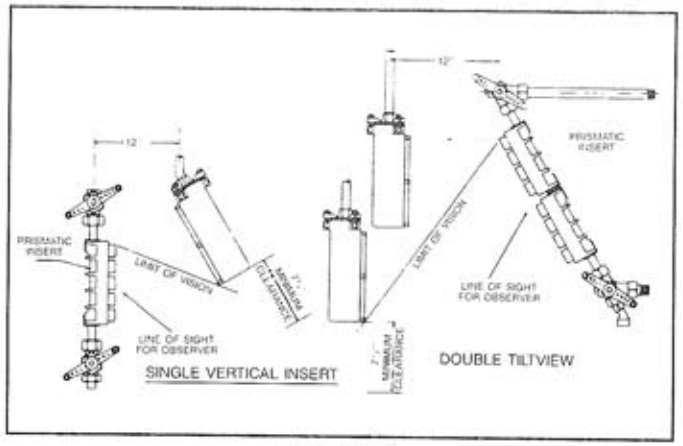

Figure 24

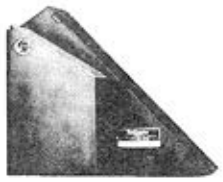

Figure 25
Periscope type illumination for the Prismatic Gage, as illustrated above, is a further step in lighting for direct observation. The image of the gage is transmitted from a mirror in the hood to the observor's mirror at the operating floor level. A direct unobstructed vertical space is essential for installation. Clean mirrors and at least 60 watt lamps are needed for continued satisfactory vision.