**Components of Hose**

**Expansion Ring**

One of the oldest ways to attach a threaded coupling to a hose involves the use of a malleable metal band called an expansion ring. The expansion ring, which is slightly smaller than the hose, is placed inside and flush with the end of the hose. The hose is pushed into the coupling hose bowl, and then the expansion ring is expanded against the hose with a hydraulic expanding device. This compresses the hose tightly against the inner surface of the coupling. The expansion ring becomes the same diameter as the hose lining and does not obstruct the waterway.

**Collar**

This is the simplest way to attach a coupling to hose. A shank fits inside the hose and is fastened to the hose with a collar on the exterior of the hose. The collar is tightened into place with bolts compressing the hose between the collar and the serrated shank. No special hydraulic equipment is required, only a small wrench. It should be noted that with this type of attachment, the waterway through the coupling is reduced. The collar method is often used to attach couplings to large diameter hose.
Components of Hose

**Screw-In Expander**

Some types of hose, particularly booster hose, have threaded couplings attached with expanders that are screwed into place. The screw-in expander is a component of the coupling, which is made of two pieces; a shell and an expander. The coupling is attached to the hose by placing the shell over the hose end, then screwing the expander into the hose until it seats against the face of the shell. This compresses the hose tightly against the serrations inside the shell.

**Tension Ring**

This method is similar to the collar method. A shank, with serrated grooves, fits inside the hose end. A nylon sleeve with ridges that correspond to the grooves on the shank is placed on the hose directly over the shank grooves. A tension ring is then placed over the nylon sleeve and is tightened with bolts. As the bolts are tightened, the ridges on the nylon sleeve compress the hose against the grooves on the shank.

**Banding**

A coupling rarely found in the fire service is attached to the hose with tightly wound bands of narrow-gauge wire or steel bands. In this case, a coupling shank, with serrated grooves, is placed inside the hose end. The wire, or bands, are tightened on the outside of the hose compressing the hose between the banding material and the shank. The banding material is aligned with the shank grooves to prevent the coupling from detaching under pressure.