Factors to consider in the selection of the correct rivet for installation are: installation location, composition of the material being riveted, thickness of the material being riveted, and strength desired.

If the rivet is to be installed on an aerodynamically smooth surface, or if clearance for an assembly is needed, countersunk head rivets should be selected. In other areas where clearance or smoothness is not a factor, the protruding head type rivet may be utilized.

Material composition of the rivet shank depends upon the type of material being riveted. Aluminum alloy 2117 shank rivets can be used on most aluminum alloys. Aluminum alloy 5056 shank rivets should be used when the material being riveted is magnesium. Steel rivets should always be selected for riveting assemblies fabricated from steel.

The thickness of the material being riveted determines the overall length of the shank of the rivet. As a general rule, the shank of the rivet should extend beyond the material thickness approximately 3/64 inch to 1/8 inch before the stem is pulled. *[Figure 7-40]*

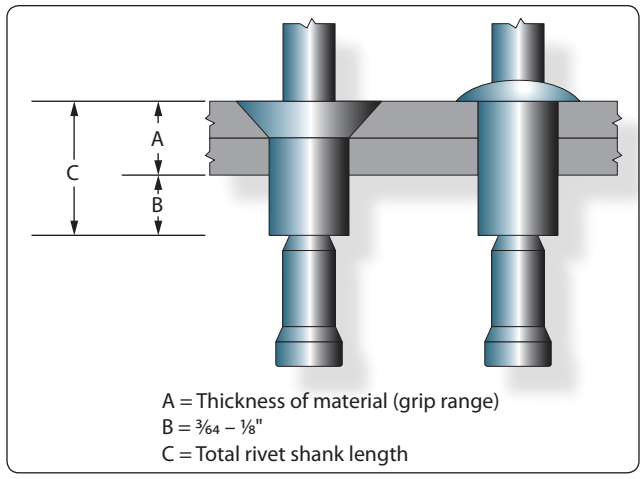

Figure 7-40. *Determining length of friction lock rivets.*

Pull-Thru Rivets

Several companies manufacture the pull-thru blind rivets. The same general basic information about their fabrication, composition, uses, selection, installation, inspection, and removal procedures apply to all of them.

Pull-thru rivets are fabricated in two parts: a rivet head with a hollow shank or sleeve and a stem that extends through the hollow shank. *Figure 7-41* illustrates a protruding head and a countersunk head pull-thru rivet.

Several events, in their proper sequence, occur when a pulling force is applied to the stem of the rivet:

1. The stem is pulled through the rivet shank.
2. The mandrel portion of the stem forces the shank to expand forming the blind head and filling the hole.

Pull-thru rivets are fabricated in two common head styles: protruding head like the MS20470 or universal head and a 100° countersunk head. Other head styles are available from some manufacturers.

Pull-thru rivets are fabricated from several materials. The most commonly used are 2117-T4 aluminum alloy, 5056 aluminum alloy, Monel. Pull-thru rivets are designed so that installation requires only one person; it is not necessary to have the work accessible from both sides.

Factors to consider in the selection of the correct rivet for installation are: installation location, composition of the material being riveted, thickness of the material being riveted, and strength desired.

The thickness of the material being riveted determines the overall length of the shank of the rivet. As a general rule, the shank of the rivet should extend beyond the material thickness approximately 3/64 inch to 1/8 inch before the stem is pulled. *[Figure 7-42]*

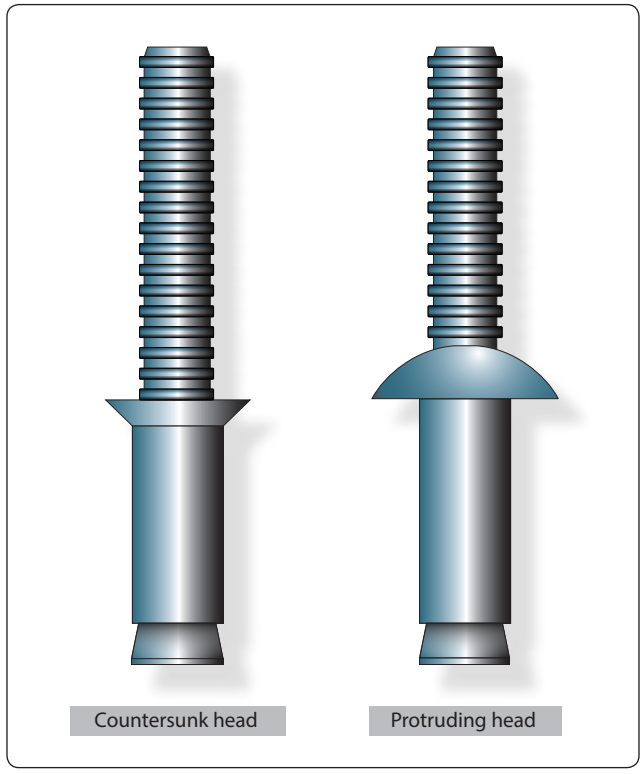

Figure 7-41. *Pull-thru rivets.*