

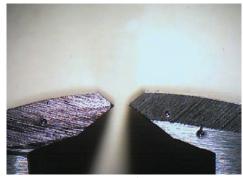
## **Pinch Clamp Installation Tools - Page 1:**

In recent years...there has been an influx of low price tools coming to market and although the low price may seem attractive...using the wrong tool for Pinch-Clamp installation could be a costly proposition.

Below, shown left, are tool jaws manufactured specifically for Pinch-Clamp installation...in contrast... below shown right, are low cost (cutting) jaws.



Forming Jaws correct for Pinch-Clamps...



Low cost Cutting Jaws for other purposes.

**Question:** How much difference could this (jaw profile) really make?

**Answer:** Sharp edges do not allow the material to flow and stretch as the clamp is being installed. Yes...this might result in a tighter clamp...but this alone is not the goal. Sharp edges leave heavy tool or score marks in the band material. These marks are "stress-risers" and can contribute to premature clamp failure by way of SCC (Stress Corrosion Cracking)...or localized, general corrosion and pitting. Combined with a higher than intended normal stress and this is a recipe for failure. Engineering 101 always teaches that sharp corners are bad...plain and simple.

While you may have thought that sharp jaws (automatically) equate to tighter clamps...let's look at the finished product. Below are identical clamp installations...one made with Forming Jaws...and the other with Cutting Jaws. Take note of the Ear profiles...especially the height.



Made with Forming Jaws...



Made with Cutting Jaws.





## **Pinch Clamp Installation Tools - Page 2:**

The angles of Cutting Jaws raise the Ear Form up and away from the basic clamp diameter. Being taller...the Ear made with Cutting Jaws is more flexible and cannot carry as much band load. Also note some additional score marks left by the cutting tool. See the additional photos below:





Made with Cutting Jaws - Tall, flexible, and scored Ear form.





Made with Forming Jaws - Great Ear Form...smooth, low profile, and no stress

One last thing to consider...did you notice how tool jaws generate a distinct Ear profile...and leave behind either unique tool marks, or smooth rounded surfaces. Well...these are features that insurance company technicians commonly look for when reviewing any warrantee claim.

Murray recommends using...only forming type tools for Pinch Ear type clamps. Be sure to examine the jaw tip profiles before making your purchase...as some products have been "marketed" as being intended for Pinch Ear applications...but by simple visual examination they are clearly less expensive cutting edges.

R. Fay Chief Engineer

