

Learning how to properly polish punches is one of the surest and most inexpensive ways to maintain tablet quality and reduce operating costs. Maintaining the quality of your punches helps eliminate tablet defects such as picking, sticking, capping, and lamination while significantly reducing costs by increasing tool life, in many cases by up to 80 percent.

### PROPER POLISHING

Tablet tooling is a considerable investment for your company. Quality tooling and a proper maintenance program are integral to producing high-quality tablets efficiently. Over time, tooling loses its luster and can develop nicks, scratches, and/or a wear pattern commonly called J-hook. These imperfections can cause quality issues such as tablet capping, laminating, sticking, picking, and unnecessary down time in production.

It's not just polishing, but refurbishing, that permits tools being put back into service and extending tool life while maintaining tablet quality.

Although there are numerous ways to polish and refurbish punches, the best method is to use a large unsewn cotton buff wheel. A 400 grit stone can be used for restoring land and removing nicks from the punch cup if the wear condition is severe. Restoring land is one of the most important procedures in tool refurbishing. Once a procedure is adapted to routinely refurbish land, you will immediately recognize an increase in tooling life and appreciate the cost savings compared to other common methods such as automated polishing.





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“ Polishing can smooth out nicks and bring shine back to punch cups. A clean, smooth surface will release product better, produce better finished tablets, and reduce problems during production.”

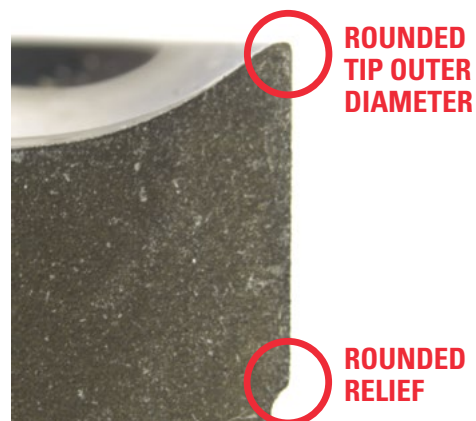
## J-HOOK

A common punch tip wear pattern called J-hook routinely causes lamination and capping. If tools are not properly refurbished when J-hook forms, they must be discarded and replaced. This is unfortunate as the procedure to remove J-hook takes seconds per punch and polishes the cup to a mirror luster at the same time.

Automated polishing is another common method of polishing tools, although you often won't receive the results you need compared with polishing using the unsewn cotton wheel. In fact, you can cause damage to your tooling if you aren't conservative with your use of an automated polisher. Overuse can result in tool binding, excessive cam wear, and tablet discoloration. Using an automated polisher also will not restore land to the punch nor will it help the tool perform as new and it does not correct issues such as capping and laminating. An experienced technician can polish tools as quickly as and more thoroughly than an automated polisher, in the same amount of time on a polishing station.



**BRAND NEW PUNCH**



**NEW PUNCH IN AUTOMATED POLISHER**

Each organization should develop a standard operating procedure to determine when to polish tools. Tools in more intense production situations may need refurbishing more often.

If there are no concerns with tablet finish, capping, laminating, or sticking during a batch run, the suggested practice is to visually inspect. Refurbish if necessary, then oil and properly store the tooling if they will not be immediately put back in service. Do not refurbish tools if it is not clearly understood polishing is a form of controlled wear, as unneeded refurbishing can adversely affect the life of punches.

Proper training is the key to successful tool refurbishing. An experienced, well-trained technician can reduce cost by quickly putting tools that would normally be discarded back in service.

Although refurbishing tooling on-site saves downtime, shipping, and costs, it must be understood that not all tool wear conditions are repairable. It is best to check with your tooling manufacturer if you experience tool damage that your trained polishing expert is unsure of repairing.

The benefits are clear—if you want to receive better performance from your tools, consider refurbishing tools on site. With proper training, you will be able to extend tool life and produce a higher-quality tablet. You'll also save money by reworking tools rather than purchasing new.



### BUFFING VS. AUTOMATED POLISHING

	<b>Buffing</b>	<b>Automated Polishing</b>
Refurbishes punch cup	Yes	No
Polishes entire punch	Yes	Yes
Eliminates capping due to tip wear	Yes	No
Requires training	Yes	No
Extends punch life	Yes	No