

# THANKS FOR PURCHASING A SHAGBUILT d10 DIRECT DRIVE ROTARY MACHINE!

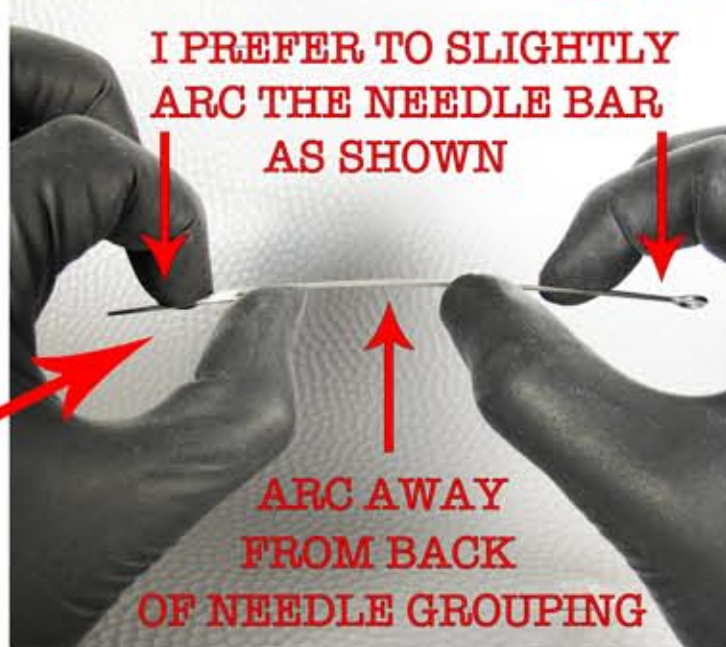
Direct drive machines are a bit different, and may take a few tries to get set up properly at first, but once you get it down, it's pretty easy. So, I wrote this guide and included diagrams to help you get started using your new machine. Keep in mind, this is a general guideline and you may want to tweak things a bit to suit your personal preferences. Good Luck!

**FIG. 1**

Arc the needle bar away from the **BACK** side of the needle bar. This helps reduce the amount that the O-ring can pull the needle bar off center of the tube. I bend the needle groupings as well as the entire bar as it will aid in reducing any spitting by keeping the needles flat against the tube tip.



**FIG. 1**



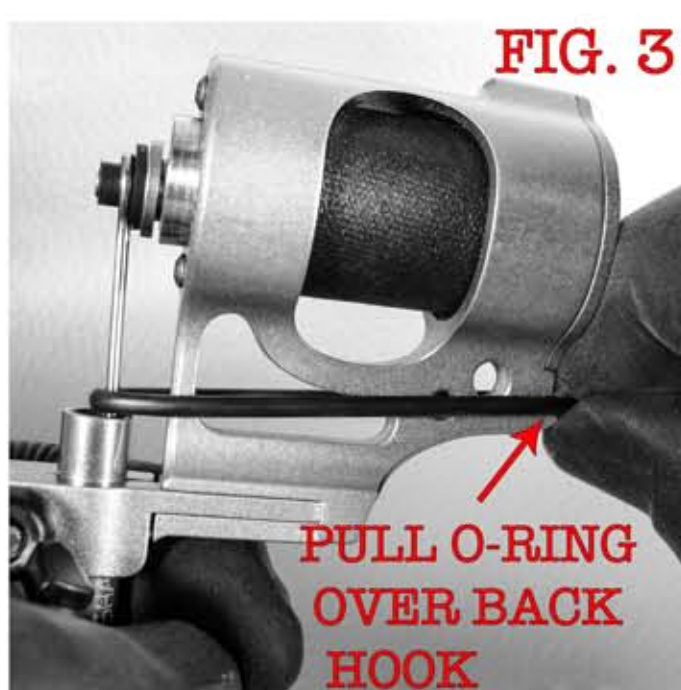
**FIG. 2**



**FIG. 2 & FIG. 3**

The O-ring provided with your machine is re-usable and you may have to stretch it a bit the first time. To ease with loading and unloading the needle bar, you can hand the O-ring over the front of the tube vice as shown in Fig. 2

**FIG. 3**



Once the needle bar is loaded, you can pull the O-ring around the back end(hook) of the machine as shown in Fig. 3

**FIG. 4**

To set your throw(stroke), make sure the cam is in the uppermost or 12 o'clock position. Then simply move the tube up or down before tightening the thumbscrew. The d10 has a very large amount of stroke, so you may not want all of it hanging out on the downstroke.

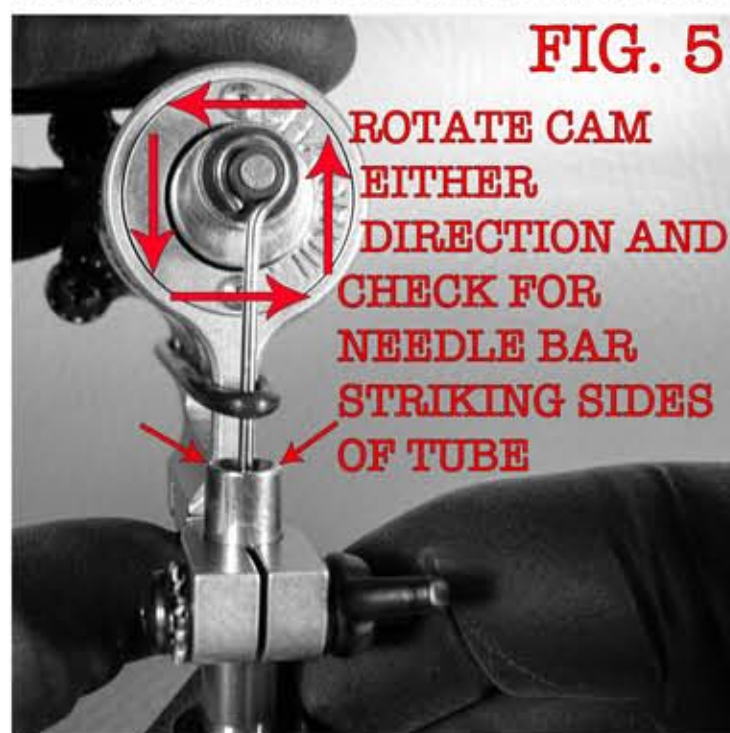
Personally, I back mine up in the tube a bit when I line, and add a bit more when I shade or color. This is totally personal preference, so adjust it until it feels comfortable to you. Rotaries are a bit different than coil machines, and I have found that I like a bit more stroke on these than I do with my coil machines.

**FIG. 4**



**FIG. 5**

Lastly, you will want to rotate the cam and check that the needle bar isn't striking the sides of the tube.



If the needle bar strikes one side or the other of the tube, you can bend the needle bar sideways a bit to re-center it.

The arc of the needle bar, or lack thereof, can also contribute to this effect. If it isn't bent enough, it may place the needle bar too far back from the center of the tube which will shorten the width that the needle can travel from side to side.

If the needle bar does strike the tube, it is not necessarily a bad thing, but it may make the machine run louder and contribute to any spitting issues.

There are many different sidewall thicknesses that the tube manufacturers use. I designed this machine with this in mind and have tested it with tubes that I found to be thickest without problem.

## VOLTAGE

With the d10, as well as most rotary machines, voltage controls SPEED and the not hardness of hit. Working speed will vary by many factors including, type of style of tattooing desired, area of the body to be tattooed, and needle groupings. I personally use these machines between 5.5 and 7 volts most of the time, but will speed it up to line, or with large mags when I want to cover more area faster. Again, this is all personal taste, so play around with the voltage until you find your sweet spot.

I think that's about it, if you have any questions, please feel free to contact me at [shag@shagbuilt.com](mailto:shag@shagbuilt.com) and I will get you taken care of.

Thanks again for supporting a fellow tattooer and helping to take tattooing back!