

Chapter 3: Treating

When the machining is finished we get to the less fun part of the job – the part I like to call “deburring.” This is where we use fine-gritted sand paper to go over the sharp edges and dull them into civilized ones. Various types of fine gritted sand paper are used for this chore, which aside from making the housing friendlier to handle, ensures that O-rings will not get cut on sharp edges.

This is a manual process that requires one’s full concentration. Forgetting one small edge will most likely mean scrapping the housing shell down the line, so attention to detail at this stage is of the utmost importance. Pity the individual who does not pay attention to their work, as a bloodied knuckle in a bandage is the likely consequence



After manual deburring there are still some external sharp edges that need to be addressed, and so the shell will be put in a tumbler. The tumbler is a donut shaped machine loaded with pellets of different sizes. In the machine, the shell will be subjected to a lengthy period of vibration, which will cause the pellets to rub against it and dull out all sharp edges. This machine is horrendously noisy and any conversation between people is put to a standstill during this process.



Once out of the tumbler, the shell is off to the sandblasting where it is bombarded with a silica particle until it gets a dull and smooth finish. This process will give it a pleasant sculptural look, and it is almost as if the housing is shedding its hard metallic look for a softer organic one.

A good cleaning is then done and the shells are packed and off to be dunked into anodizing chemical. Anodizing is a process where the shell is dunked in a chemical solution so that it is protected from salt water corrosion.



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This complex and multi-stage operation requires the shells to be immersed in several vats of chemicals, which follows military specifications to ensure that this vital step in the protection of the housing is successful. Poor quality anodizing would leave the housing open to salt water corrosion, something that is unacceptable for both the manufacturer and the end user.





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Once this anodizing process is complete, the housing will come in the front assembly room for the first time to be prepared for the paint process.

