



**WITH THE HOLIDAYS ALMOST** upon us (what?!), we thought we'd dedicate this installment of "High Maintenance" to volume and how that affects your maintenance schedule, especially at boom times when cafés are busier than ever.

Coffee equipment is much like any other piece of gear in your life. The more use it sees, the more often you have to maintain it, and the higher the potential for breakdown there is. Think of as you would a car: Most auto manufacturers recommend regular oil changes every three months or 3,000 miles. While one person may drive 3,000 miles in six weeks, another might take six months to get to 3,000 miles. For the person who drives the most often in this scenario, they'll need twice as many oil changes than the other person, because they're putting that much more wear and tear on the car.

The same holds true with coffee equipment. We talk a lot about quarterly maintenance when it comes to espresso machines. There are some basic items you should be replacing at three-month intervals, such as baskets, gaskets, group screens, etc. We created a detailed calendar for café owners to reference in order to keep all of their equipment—not just their espresso machines—in top condition ("Check Up: Preventive Maintenance," June + July 2012). That schedule—which we're excited will be posted again on *Barista Magazine's* blog in December for those of you who missed it the first time—covers some of the items you use daily, but what about your grinder burrs? Your

water filters? Steam valves? These are all parts that are also affected by your shop's volume.

When you first purchase equipment, you should do your best to predict what your volume will be and buy equipment that is sized according to your potential needs. Trying to grind a hundred pounds a week through a Mazzer Mini or a Rancilio Rocky, for example, is going to drive you crazy! Conversely, having a huge Robur on your counter when you only pull 10 shots an hour is certainly overkill in the other direction, and either one will affect your maintenance costs pretty heavily over the course of the year. Grinder burrs all have some estimate of poundage that they can handle before needing to be replaced. Ideally, you want to aim for between six months to a year for changes, but in some really busy cafés might end up changing burrs quarterly, even on the biggest grinders.

Water filters are the same way. Most have a rating on the label that gives an idea of how many gallons of water they should be able to filter. The size of the filter, the fineness of the filtration (usually measured in microns), and how dirty your pipes or water are all affect the actual number of gallons a filter system can handle. We always try to size a system to get about six months between filter changes. As you can imagine, the size of this system will also be affected by your volume. The busier you are, the more water goes through the system, and the more often they'll need to get changed.

As we head into the demanding holiday season, and as you consider what other times of year are partic-

ularly stressful on your equipment, it's a great idea to address these maintenance items before you get super slammed. Keeping ahead of the game is always a great idea, and will hopefully ensure that you are running in tip-top shape for all of those extra customers headed into your shop.

Now, on to some of your questions.

***How do I get all my group handles to line up the same angle?***

So you just got your machine serviced, everything is feeling and looking good. The portafilters are all sitting at 6–7 o'clock, and those new squishy gaskets feel great! Then two or three days go by, and you realize your portafilters are sitting at 4, 5, and 6

skipped breakfast, and had way too much caffeine, etc.—technicians and baristas share this struggle. Just be cognizant of using the group heads and portafilters evenly, change the gaskets regularly, and adopt a “no HULKING out on bar” policy. That should help everything wear evenly and keep the portafilters sitting at roughly the same angle.

—Double J

***How do I stop my steam wand dripping?***

This is a good question, and it's an often overlooked part of a basic preventive maintenance. Steam wands experience a lot of wear and tear over the course of a few months. The wand is connected to a valve that is full of springs and seals that wear out with use.

**The quality of burrs varies quite a bit across manufacturers, who put a lot of thought into the material, cut, and shape of the burrs in their equipment.**

o'clock—what the hell?

This happens because of uneven use of the group heads and portafilters. Even in the most diligent cafés, baristas can have a hard time rotating through all the group heads evenly. We often notice that the group head closest to the grinders is the one that people tend to favor the most. This causes the gaskets, bayonet rings, and portafilter flanges to wear unevenly (see “High Maintenance,” October + November 2016). You'll also notice that if you move one portafilter from group to group, it will sit at a different angle in each one.

Lastly, some baristas will really Hulk out on the portafilters, and we understand. It's busy, you got up early,

Depending on how busy you are, you should be having your steam-valves rebuilt at least twice a year. The rebuilding process can be a bit invasive, but a good steam valve rebuild will make your steam experience so much easier. The process involves removing the valve and completely disassembling it, thoroughly cleaning all the metal components, replacing the springs and seals and O-rings, lubricating everything with a food-safe lubricant, and reassembling. When done properly, your wand and valve will feel smooth as silk, and you should have a much easier time steaming. Bonus! And no more drippy wands!

—Alex



**How come my espresso shots come out in different volumes?**

The main culprit is likely a clog somewhere in the group head. It can be something internal like a flow restrictor, flowmeter, brew valve, or a piece of tubing. It could also be something that the barista touches everyday, like the dispersion screen, brew basket, portafilter, or dispersion block. The first thing I would recommend is to do a really thorough cleaning of the whole espresso machine. Soak and clean the portafilter, brew basket, and dispersion screen, then visually inspect everything for clogs.

Once you've determined that everything is clean and free of clogs, do a flow-rate test. With the dispersion screen out, place a measuring cup (preferably marked with milliliters) under the group head. Then, just as you would when pulling a shot, start the timer and hit the brew button. The goal is to get the same volume of water in about the same amount of time from each group head. If you're getting different results on each group, then it's time to call a technician.

As far as preventive maintenance is concerned, make sure your machine is being cleaned properly. I usually recommend that you replace, or at least inspect, your flow restrictors every year (if the machine has them), and of course, replacing your water filters regularly will help prevent clogs from scale buildup or sediment getting into the boilers.

—Double J

**My grinder is producing coffee that is wildly inconsistent in terms of particle size. What can I do to help fix this?**

This is mainly related to burrs. The quality of burrs varies quite a bit across manufacturers, who put a lot of thought into the material, cut, and shape of the burrs in their equipment. Flat burrs, conical burrs, ceramic burrs, steel burrs, roller mills—the possibilities are almost endless, and each one has its pros and cons. The one thing they all have in common though, is this: None of them lasts forever.

As burrs get dull, they have a harder time cutting and slicing the beans properly, and end up pulverizing them like peppercorns in a mortar and pestle instead. They also tend to have a harder time pushing the grounds out of the grinder, so some will be held in the grind chamber and pulverized even more. Eventually, your grinder will jam up, but rest assured it will affect the cup quality long before that happens. The simple solution is to replace them occasionally (some manufacturers will even sharpen them for you once or twice). The schedule is dependent on—drum roll please—you guessed it! Your volume!

—Alex

*Email your questions and concerns about your coffee and espresso equipment to [highmaintenance@baristamagazine.com](mailto:highmaintenance@baristamagazine.com).*

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