

AAAAND WE'RE BACK! Our first "High Maintenance" column was written for Barista Magazine's October + November 2016 issue, so we've made it a whole trip around the sun! We're stoked that we've been able to keep this column going for so long now. We couldn't have done any of this without the amazing support we receive from Sarah and Ken of Barista Magazine—we love you guys! Thanks to all of you fine folks who read the column, send in questions, and offer words of encouragement: We appreciate you! We are also very excited to announce that our service company, Black Rabbit Service, in Portland, Ore., has opened our new training lab. If you're ever passing through our city and want to tour our service shop, host a coffee event, or sign up for a class, get in touch. Information is available on our website, www.blackrabbitservice. com. Now enough of the mushy stuff and shameless self-promotion—let's rock.

Fall is our favorite time of year! People are hyped on regional competitions; pumpkin-spice lattes are back; and things are starting to feel routine again after a fun and hectic summer. It's the perfect time to check in with your local techs about making sure your equipment is tip-top going in to holiday season. When's the last time you changed the burrs on that bulk grinder? Are your water filters fresh and flowin'? Steam valves ready for all those PSLs and Peppermint Mochas? Maybe you don't know what you need, but we're sure you have some questions. So let's get in to it!

When should we change the burrs on a grinder? Is there a visual assessment we should be doing?

There are definitely some tell-tale signs for when you should change your burrs. The first thing you will start to notice is that you need to make grind size adjustments more often. The dose will become more inconsistent if you're using a model with a timer. If you are noticing these symptoms, and if you are comfortable taking the grinder apart (always check with a tech, or your shop's manager or owner first), unplug the grinder and have a look inside the burr chamber. Once you have the burrs exposed, make sure to clean them off with a brush or vacuum so there are no grounds in your way.

Then slowly run your finger along the outside cutting edge on both burrs. You should feel the metal catching the lines on your finger like a sharp kitchen knife would. If your finger moves across the burrs with little to no resistance, you know it's time for a fresh set. All manufacturers publish their products' burr life expectancy. In fact, we keep a handy cheat sheet that we created because there are so many different types of burrs/makes/models. It's a great tool for reference, but we've noticed that most people start to get frustrated with having to make all the adjustments and deal with dose issues at about the halfway point. For most of the cafés we work with, we recommend replacing the "regular" burrs twice a year, and the decaf burrs once a year. There are definitely more scientific ways to help

you decide if you need to change your burrs or not. But we think paying attention to the volume of coffee and functionality of the grinder are most important.

-Double J

Should my staff be turning off our espresso machine every night, or is it better to leave it on?

This is a great question, and we get it a lot. We always recommend leaving your machine on overnight-for a few reasons. One is that the electronics in your machine like to be in as stable an environment as possible. Heating up for the day and cooling down to room temperature every night can cause some circuit boards and switches to fail prematurely due to stress. Also, depending on the size and electrical wattage of your

we'll do some experimenting on that ourselves for some future column.

One thing you should check is whether your machine has an eco mode or night mode. Some machines have the capability to lower the set temp on your boiler to, say, 140°F from the time you close to the hour before you open. That way, you get the best of both worlds: You're using less electricity/energy when no one is pulling shots, but your opening barista walks in first thing in the morning to a hot and ready machine. Check with your local tech and see if your machine can be programmed this way. There are many brewers and hot water towers with this feature too!

-Alex

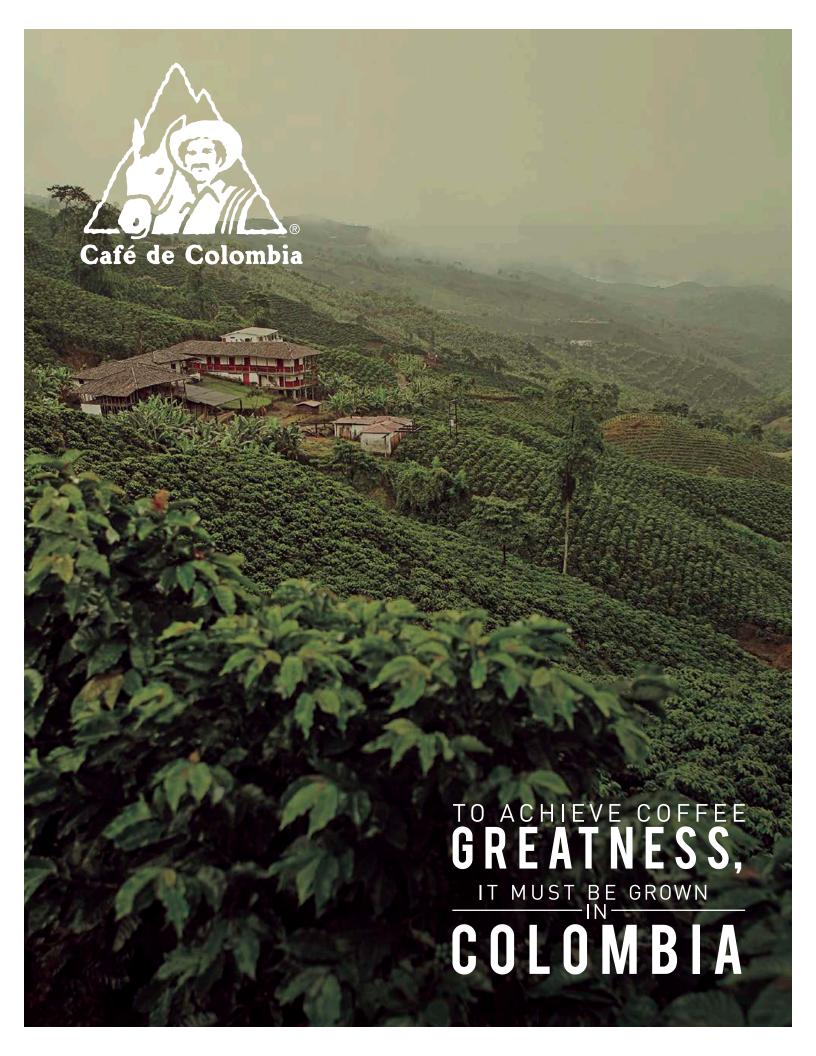
"If your finger moves across the grinder burrs with little to no resistance, you know it's time for a fresh set."

machine, it could take a really long time to heat up fully to the point where you or your staff can even begin to dial in the shots in the morning.

My last reason for why you should leave the machine on 24/7 is more of a hunch, and you'd probably need to get scientific confirmation from someone like Mr. Gregory Scace, but I imagine that heating a machine up from cold everyday, utilizing the full potential wattage of your machine (read that as sucking up a lot of electricity) versus just gently maintaining the temperature in your boilers overnight, would potentially use more energy over the long term. Perhaps

Regarding weighing espresso shots: What does it mean when people talk about how many grams you put in versus how many "grams out"?

This is probably more of a training or theory question, but it's one I got out in the field recently and it came up again from a reader, so I thought I would address it. "Grams in" refers to how much ground coffee you are putting in the portafilter before you pull the shot, and "grams out" is the weight of the actual espresso. Weighing the coffee before and after brewing is a really great practice to make sure your recipes stay consistent. An espresso recipe for a ristretto-style shot, for example,



could be something like 18 grams in, 36 grams out, so a 1:2 ratio. I always recommend connecting with your roaster or coffee trainer to make sure you have the correct recipe. I have no doubt that the best roasters put in a lot of time developing a recipe that highlights their coffees' best attributes.

-Double J

sure gauge that screws onto a standard portafilter if it has a threaded spout, for \$50 or less. Or you can get the next step up with a fully integrated handle/gauge for around \$100 from a few places. You would need to be sure you get the right one for your machine, and know how to properly interpret your results, but that's a whole other conversation.

-Alex

What's the best way a small, independent coffee shop could

check their coffee machine's pressure stability if they can't afford a pressure meter? What's the next best way to figure it out?

Virtually every commercial espresso machine has a pressure gauge somewhere, but you need to be able to tell if it is reading accurately. One tool many technicians have in their kit is a portafilter manometer. Manometer is basically a fancy word for pressure gauge. These tools are extremely handy, and range from super basic (literally just a pressure gauge attached to a portafilter spout or handle), to super precise temperature- and pressure-reading combination tools. The one most people have heard of is the "Scace II thermofilter," which is casually referenced in our coffee world as simply the Scace, named for its designer, Gregory Scace. Greg is an engineer with a love for coffee who has been hugely influential with the development of systems to bring espresso machine temperature stability in line with other industry process controls (for example with PID controllers), among other things. If you've never heard of him, you should definitely look him up. We all owe a pretty big debt to his contributions to coffee.

The Scace II is a fairly spendy tool for the average coffee shop owner and the procedure for using it is complicated and lengthy if you follow the proper procedures laid out by Greg, so it's probably best to leave the investment and application of one to experienced technicians. If all you need is to check your pressure at the group and compare it to what your machine's gauge reads, you can get a super basic portafilter pres-

