

## Essential Steps to Assure Your Dealership Floors Will Clean by Barry Wells (AutoStone Floor Systems)

This outlines important steps when if followed will result with your dealership having beautiful and clean floors. Each step is a building block which leads to a successful floor being delivered to the owner at the end of the construction period, prior to their move-in. Once the dealership moves into the facility, the success of the previous steps will assure that their floors have the best chance to be cleaned with regular cleaning practices as recommended by AutoStone.

There are (3) parties (steps) involved in the process for delivering a clean floor for successful cleaning:

1. Tile contractor, post grout installation floor clean.
2. General Contractor's final clean.
3. Dealership general (maintenance) floor cleaning practices.



### STEP (1): Tile Contractor - Post Grout and Haze Removal Recommendations.

After floors are grouted by tile contractor the necessary steps to remove all grout haze is an important step. Excess grout haze remaining on tile surface is difficult to see, bonds to the tile surface and if not properly removed will make tile floor difficult to clean by dealership (owner).

Grout haze must be removed with the proper cleaner as recommended by the grout manufacturer. Regardless of what grout removal chemical is used, there must be a clean water flood rinse to remove any chemical residue from the grout removal process. Successive clean water rinses should be applied until PH neutral range is achieved.

### ***Flood rinsing floors***

A flood rinse (of clean water) must be applied to remove any chemical residue left behind from the grouting process. A flood rinse must be re-applied as many times as necessary to make sure that the floor is as close to PH neutral as possible.

PH neutral does not have to be met, but the closer to PH neutral indicates that the acidic residue has been removed. An “ideal” PH level is between: **7.0 to 7.6**. However an acceptable range is 6.8 to 8.0.

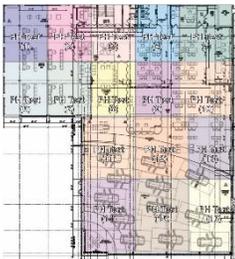
### ***PH testing***

An easy and inexpensive method to assure that your floor is rid of any chemical residue is to perform a PH test (available from Grainger or similar type store), with indicator strip from 0.0 to 14.0, in areas throughout the facility.

Tile contractor should take bottled water such as: Dasani, Ozarka, etc., (not tap water), and drip water in the (4) corners of the tile and grout joints, wait about 1 minute (for water and surface residue to mix) and place test strip. You should test for every 400 to 500 square feet. Therefore a 10,000 square foot showroom should provide you 20-25 testing spots.

### ***Documenting***

A digital image should be taken of each location confirming the PH test result. Each image should be documented with a legend that ties to the floor plan. These should be put in a digital file and forwarded to the General Contractor and dealership owner to confirm that the floor they are turning over is cleaned and free of any chemical residue that might inhibit the future cleaning practices of the dealership.



Above:  
Example of floor grid.



Above:  
Example of PH testing in 4-corners of tile.

### **STEP (2): Final Clean by General Contractor Recommendations.**

The 2<sup>nd</sup> important step is the final clean performed by the General Contractor prior to the dealership taking occupancy of the facility. Standard practices reflect the GC hiring a 3<sup>rd</sup> party cleaning contractor for the final-clean. It is important to make sure that these cleaning contractors comply with recommended cleaning steps.

### ***Important Supervision Note***

It has been Auto Stone’s experience that the response from the manager/owner of the 3<sup>rd</sup> party cleaning company is a “yes” or “no problem”. However, this information does **not** always get down to the person or persons doing the work. AutoStone strongly recommends that the GC Site Supervisor, supervise, review and confirm that their work performed

and chemicals used are documented. Digital images should be taken of every cleaner used, type of machine and cleaning pads and practices used.

## **Language Barrier**



There may be a language barrier that prevents these best practices from being relayed. If you find that there is a language barrier – call AutoStone. We have bi-lingual staff that will assist and verbally review best practices with cleaning crews to make sure the actual cleaning team understands our best practices and recommendations. We encourage every effort be made to make sure it gets filtered to the actual players doing the work.

Before using any chemical is used to clean the floor tile, the following steps should be taken:

1. Sweep your floor clean of construction debris, materials, sand (small particulates that fall to the floor during the construction process).
2. After sweeping, use a dry-vacuum to also suck-up fine (smaller particulates) that may remain behind a simple broom sweep.
3. Perform a clean water (only) flood rinse to further remove debris such as: sand, sheet rock dust, dryfall, etc.

**Debris note:** if dryfall, sheet rock dust or other similar construction debris are on the floor and/or in the grout joint, we recommend you contact AutoStone prior to cleaning. Dryfall, sheet rock dust and/or other similar type debris should **not** be present on the tile surface or in the grout joints. No painting, sheet rocking or similar trade should follow the installation of our floor system. If such trades are to work on the floor – after – the final clean of an AutoStone crew, the GC should require other trades to put protective covering over the entire floor to assure no impact on the floor system already installed.

## **Chemicals**

Many 3<sup>rd</sup> party cleaning contractors use a high concentrate acid cleaner (usually muriatic acid) for clean-up. We do **not** recommend the use of muriatic acid or use of industrial concentrated chemicals for your clean-up.

Here are things that impact what chemicals are appropriate, might be used and how used:

1. Tile finish: polished, natural, honed, etc.
2. Grout type and manufacturer: sanded, pre-sealed, premium pre-sealed, epoxy and/or urethane. In all cases, you should follow the directions of the grout manufacturer.
3. Water temperature: hot, warm or cold?

## **Chemicals recommended and how to apply**

The following is a listing of recommended chemical, chemical form and water temperature:

- Sulfamic crystals (acid). This should only be used in low concentration.

- You should only use it in crystal form and with cold water.
- You should read and follow the directions from the chemical manufacturer about concentration.
- You should ONLY use COLD water.
- If you use warm or hot water, you will increase the concentration of the crystals and you can etch or burnish your tile surface. Warm / hot water will allow for greater quantities of crystals to dissolve in liquid solution.
- FILA or other porcelain tile cleaners, specifically recommended for tile cleaning.
  - You should read and follow the directions from the chemical manufacturer about concentration.
- Regardless of chemical used, please instruct your cleaning contractor crew to not over-apply any chemical when cleaning the floors of the dealership.
- Make sure that follow the chemicals manufacturer's directions for concentration levels.
- In all cases – you should always follow-up with a series of clean-water, flood rinses to deliver a PH neutral floor.

### ***How to avoid acid etched and/or burnished tile surfaces***

You can acid-etch, burnish, and scratch the surface of a tile floor if high concentrations of acids are applied. Highly concentrated cleaners can embed in the tile surface and have the following unfavorable results:

- Darkened tile appearance.
- Tiles look dirty all times.
- Optical hazing because the high polished factor of the tile is compromised.
- Burnished appearance in the high polished tile surface.
- Milky, cloudy appearance because of damage done by the acidic crystals in micropores.

You can scratch the surface of a polished tile with a high concentration of acid cleaner combined with the use of a buffer, scrubber pad, swing-arm or similar device – if they are used to scrub the floor surface. When these small particulates are left behind on the floor surface and combined with highly concentrated acid cleaners, together they can damage the surface of your floor tile.

### ***Floor rinsing of floors***

This step is exactly the same as the post grouting tile contractors flood rinse. A flood rinse (of clean water) must be applied to remove any chemical residue left behind from the final cleaning process. A flood rinse must be re-applied in as many times as necessary to make sure that the floor is as close to PH neutral as possible.

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A digital image should be taken of each location confirming the PH test result. The image should be documented with a legend that ties to the floor plan. These should be put in a digital file and forwarded to the dealership owner as part of their construction file. This documents that the floor they are turning over is cleaned and free of any chemical residue that might inhibit the future cleaning practices of the dealership, when they take possession of their floor.

### **Step (3): Dealership Cleaning Recommendations.**

#### ***a Culture of Clean – embracing better cleaning practices***

Regardless if you purchased our shop floor, service drive or showroom floor system, your floors should be cleaned on a regular basis. Your floors need to be cleaned with standard floor scrubber-sweeper equipment. Your cleaning crews should be trained on proper cleaning techniques and practices.

AutoStone supports your project with a review of your equipment and will discuss with your staff the best practices to achieve a clean and beautiful floor. AutoStone is invested in helping you achieve a culture of clean.

#### ***Mops – when to use***

They should be used for “spot-cleaning” events. They work well to mop-up spills or the like. They are to remove excessive spills which might create an STF (slip, trip or fall) event or pose a surface or grout stain if left unattended.

#### ***Mops - are not for cleaning***

Using a mop is NOT cleaning your floor. Mops only sling around dirty water, which dries and leaves soap and dirt contaminants behind. Once the water evaporates from your floor, all that remains is the dirt, soap and other chemicals/contaminants both in your grout joint and on your tile surface.

#### ***Multi-step “sponge” mopping***

While we don’t recommend this, we have seen limited success with the multi-step “sponge” mopping to address grout joints in showroom applications. This requires (2) sponge mops and (2) separate buckets of water. The 1st sponge mop uses a slight chemical and water to address the grout joint. The 2nd sponge mop consisting only of clean water and clean mop sponge head is to act as the final clean water rinse.

In both cases, you need to empty the buckets of water, especially the 2nd bucket to make sure that you are not just re-applying chemicals to the grout joint. You can substitute the 2nd sponge mop with a good wet-vacuum system to suck up the chemicals.

This low-tech manner can help get your grout joints back to a cleaner state.

## ***Floor cleaning machines***



AutoStone associates can review your equipment to assist you in making sure your floor scrubber-sweeper is correctly configured to maximize its ability to clean your tile and grout. AutoStone does **not** sell and is not affiliated with any floor cleaning manufacturer and/or distributor. AutoStone representatives will not recommend or comment on any particular manufacturer, but will review the equipment you have and suggest features that are preferred.

AutoStone does recommend you have at least (2) floor scrubber-sweepers for your dealership. One for your AutoStone shop and service drive and another unit specifically for your showroom.

Each facility has its own unique set of requirements and needs. Historical evidence has shown that when floor scrubbers get dirty from cleaning the shop, they have a tendency to leave them outside the showroom use.

## ***What makes a good floor cleaning machine?***

Your floor scrubber-sweeper machine should have these components in which to deliver optimal cleaning support:

1. A scrubber should engage the floor and scrub the tile surface. Scrubbers are disposable and should be replaced frequently. AutoStone encourages a good friction engagement with the floor surface.
2. Bristle brush to get into grout joints and sweep/scrub them clean. Brushes are disposable and should be replaced frequently.
3. Strong wet-vacuum to suck up dirty water. You must have sufficient “lift” power to suck-out the liquids and contaminants in the grout joints.
4. Good squeegee blade to snugly engage the floor surface. Blade must be kept in good condition (not bent or have broken edges). Blades are disposable and should be replaced frequently.
5. Long battery life so you floor can be cleaned entirely with one electrical charge.
6. Large clean water tank so floor can be cleaned entirely with one tank.
7. For large areas (shop floors), we recommend a riding machine.
8. An investment in a quality floor scrubber-sweeper machine helps you realize the beauty of your floor by helping you keep and maintain them in a clean manner. Clean = Beautiful, Quality and Higher CSI ratings.

Former cleaning practices need to be re-evaluated and a new understanding of your floor system should be embraced. There are two components that need to be cleaned: your tile surface and your grout joint. Both can be addressed in the same cleaning process with correct and proper cleaning equipment and techniques.

## ***Cleaning Grout Joints***

Dealers tell us the biggest problems they face is contamination in the grout joint. Whitening of grout joints is usually related to construction debris (dryfall), dried soap residue (poor cleaning practices) or efflorescence residue. The grout is not actually getting white, there are contaminants in the grout joint that need to be removed.

Grout joints are the lowest point on the floor. Therefore all the contaminants usually end up in the grout joint. The best manner and method to keep your grout clean and true in color is to have a machine that scrubs out the joints and has enough “lift” or suction power to pull-up the cleaning chemical left behind after scrubbing.

If your wet-vacuum is under powered, clean your floor on the diagonal, instead of vertically or horizontally. The diagonal clean allows for the vacuum suction to pull longer over the grout joint instead of the short time pass, when on the vertical and/or horizontal.

The best method to address dryfall is to not have dryfall be an issue. We urge you to cover the floor with protective covering if there is to be any wall or ceiling painting performed during or after the floor installation. Dryfall is the small paint particulates that fall from the painting process. Once in the grout joint, they are almost impossible to remove. In the very least, require your painters to cover all flooring in areas where painting for the entire painting process + 24-hours after painting. Dryfall remains in the air for at least that long after painting.

***Tire tracking – the signature of too much acidic cleaning compound***

When you see rubber transfer (tires, shoes, wheels, etc.) on your floor that appears soon after cleaning, it is usually the indication that there is an acidic residue that remains on your floor. Acidic chemicals are used by most cleaning crews and without a flood rinse to remove it, it stays on your floor and holds onto rubber when activated with water, etc.

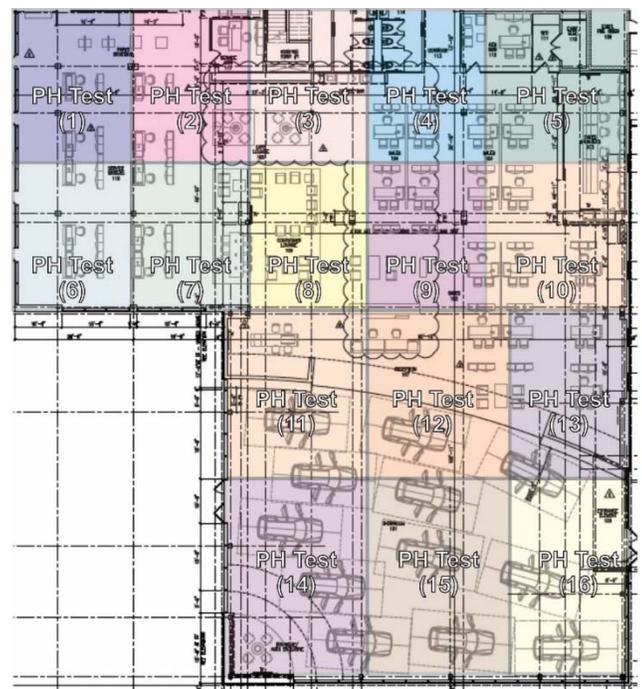
The PH testing strips provide a good indicator if there is an acidic compound on the floor. Acids are problematic and does remain on the floor tile surface and needs to be rinsed off a number of times with a clean water rinse.

Here is an example of Post-Grouting Installation Floor Cleaning – PH Testing Documentation

## EXAMPLE

Project Name: Home Town Dealership  
 Date of Report: June 1, 2016  
 PH Test Locations: (16) showroom areas

**PH Test (1):**  
 Range: 6.8 to 8.0 acceptable



### PH Test (2)

Range: 6.8 to 8.0                      acceptable



### PH Test (3)

Range: 6.8 to 8.0                      acceptable



### PH Test (4)

Range: 6.8 to 8.0                      acceptable



The rest of the pages will be filled out with pictures of the PH level taken from the (4) corners of the tiles for each zone. This information will confirm that the floor has been properly cleaned which is essential for proper dealership cleaning practice.