Why the Bare Metal Standard Matters for Your Commercial Kitchen Exhaust

If you have ever stood under a hood canopy in a busy restaurant kitchen and looked up at the exhaust system, you know how much grease can accumulate in a short time. That layer of sticky residue is more than an eyesore. It is a serious fire risk, and it is exactly why the NFPA 96 standard exists. For kitchen managers and restaurant owners, understanding what the bare metal standard means can be the difference between passing a fire marshal inspection and facing a costly shutdown.

I have spent years working with commercial kitchen exhaust systems, and I can tell you that the bare metal standard is not just a suggestion. It is the benchmark that fire safety professionals use to judge whether a ventilation cleaning has been thorough enough. When a hood cleaning contractor tells you they meet the bare metal standard, they are saying that every surface inside the exhaust system has been stripped of grease buildup down to the original metal. No residue, no film, no hidden layers. Just clean metal.

What the Bare Metal Standard Actually Requires

The NFPA 96 standard lays out the requirements for fire safety in commercial cooking operations. One of its core principles is that all accessible surfaces in the exhaust system must be cleaned to bare metal. This includes the hood canopy, the exhaust fan, the ductwork from the hood to the exterior, and every grease filter along the way. The idea is simple: grease is fuel. The less of it present, the lower the chance of a kitchen fire igniting or spreading.

In practice, reaching bare metal means using the right tools and techniques. Scrapers, wire brushes, and high-pressure washing are common, but the key is that the cleaning must be thorough enough to remove all carbonized grease and hardened deposits. I have seen systems where a contractor sprays degreaser and wipes the surface, leaving a thin brown film behind. That film is still grease. It still burns. And it fails the bare metal standard.



The standard applies to every part of the exhaust path. The exhaust fan blades must be clean enough that you can see the metal grain. The ductwork interior must be free of any slick coating. The grease filters must be washed and free of clogs. Even the hood suppression system, which typically uses a UL 300 listed liquid agent, needs to be unobstructed by grease so it can discharge properly in an emergency.

Why Grease Buildup Is Such a Danger

Commercial kitchen exhaust systems are designed to remove heat, smoke, and airborne grease. Over time, that grease condenses on the interior surfaces of the ductwork and fan. A layer of grease just a few millimeters thick can burn at extremely high temperatures, and once it ignites, it can spread through the entire system in seconds. Kitchen fires are one of the leading causes of restaurant closures, and many of them start in the exhaust system.

I recall a case where a restaurant had been using the same hood cleaning company for years. The company always gave them a certificate, and the owner assumed everything was fine. But when a fire marshal conducted a surprise inspection, they found that the ductwork had a thick, tacky layer of grease that had never been properly removed. The cleaning company had been doing surface-level work only. The restaurant was cited, and the owner had to pay for an emergency cleaning and ductwork inspection before they could reopen. That is the real cost of ignoring the bare metal standard.

Grease containment is another factor. Even if the inside of the duct is somewhat clean, grease can accumulate in areas that are hard to reach, such as elbows and transitions. A proper

exhaust cleaning schedule must account for these hidden spots. The NFPA 96 standard requires that cleaning frequency be based on the volume of cooking and the type of food prepared. A high-volume steakhouse will need more frequent cleanings than a low-volume bakery, but the standard for each cleaning remains the same: bare metal.

How the Bare Metal Standard Affects Restaurant Compliance

Restaurant compliance with the kitchen fire code is not optional. Most local jurisdictions adopt NFPA 96 as part of their fire safety regulations. That means a fire marshal can walk in at any time and demand to see records of your exhaust cleaning. If the cleaning logs show that the last service was not done to the bare metal standard, you could be fined or shut down until it is corrected.

I have worked with many kitchen managers who thought they were in compliance because they had a cleaning contract. But the contract itself is not enough. The results matter. A good hood cleaning company will provide before and after photos of the ductwork, the exhaust fan, and the hood interior. They will show you that the surfaces are clean to bare metal. If your contractor does not offer that, ask for it. You need evidence that the work meets the standard.



The bare metal standard also affects the performance of your kitchen exhaust system. When ductwork is coated in grease, the fan has to work harder to move air. That reduces efficiency,

increases energy costs, and can lead to premature failure of the exhaust fan. Clean systems run cooler and quieter. They also produce less odor and smoke in the kitchen, which improves working conditions for your staff.

What to Look for in a Hood Cleaning Service

Not all hood cleaning companies are equal. Some will do a quick wipe and call it done. Others take the time to do a full kitchen exhaust cleaning that meets the NFPA 96 standard. Here are a few things to look for:

- They use mechanical methods, not just chemicals, to remove grease buildup.
- They clean the entire system, including the exhaust fan, ductwork, and hood canopy.
- They provide documentation, including photos, to prove that surfaces are clean to bare metal.
- They understand the specific requirements of your local fire code and can help you stay compliant.
- They recommend an exhaust cleaning schedule based on your cooking volume and grease output.

If a contractor tells you that a visible film of grease is acceptable, they are wrong. The NFPA 96 standard is clear. It does not say "mostly clean" or "visibly improved." It says bare metal. That is the only acceptable standard for fire safety in commercial kitchen exhaust systems.

The Role of the Hood Suppression System

Another critical component is the hood suppression system. These systems are typically UL 300 listed and use a wet chemical agent to extinguish grease fires. But if the system is coated in grease, the discharge nozzles can become blocked, and the agent may not reach the fire. Regular ventilation cleaning helps ensure that the suppression system remains unobstructed and ready to work when needed.

I have seen suppression systems that were completely caked in grease because the hood cleaning service focused only on the filters and the visible parts of the hood. The nozzles were buried under a thick layer of carbonized grease. That is a hidden danger that can turn a small flare-up into a major fire. A thorough cleaning to the bare metal standard prevents that.

Making the Bare Metal Standard Part of Your Routine

Incorporating the bare metal standard into your restaurant's routine does not have to be complicated. Start by reviewing your current hood cleaning contract. Ask your provider how they verify that the standard is met. If they cannot show you proof, consider switching to a

company that can. Schedule your cleanings based on the recommendations in the NFPA 96 standard, and keep all documentation on file.



Train your kitchen staff to recognize when the exhaust system needs attention. If they notice grease dripping from the hood canopy or a strong odor coming from the ductwork, it is a sign that the cleaning schedule may need to be adjusted. Regular ductwork inspections by a qualified professional can catch problems early and keep your system in compliance.

The bare metal standard is not just a technical requirement. It is a practical tool for keeping your kitchen safe, your staff protected, and your business running. By insisting on cleanings that meet this standard, you reduce the risk of fire, extend the life of your equipment, and avoid the headaches of failed inspections. It is one of the most important investments you can make in the safety of your commercial kitchen.