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Up On The Rooftop

Gordon Bruner

One of the largest investments a restaurant owner will make is in the building and maintaining of the property that houses the daily operations. The owner may not be present on a daily basis, so it becomes necessary to rely on the store managers to inspect the property and identify potential problems. Having the managers spend just a few minutes every four to six weeks, inspecting the different aspects of the facility and providing the information necessary to identify potential problems early, can prevent financially crippling damages.

There is no better place to start a facility inspection than the roof. The roof of any building is its most volatile point: It receives the brunt of all exposure to the elements, and any damage found there can have a domino effect on the rest of the structure.

The general nature of the roof's exposure is compounded by the various rooftop units (RTUs) and other remote units that service the entire building. There are usually a large number of these units, and it is a good idea to inspect them on a regular basis.

The Lay of the Land

There are primarily three different types of roofing systems commonly found on the flat-roof sections of restaurants:

1. Single-ply roofs: Roofs that are made of various types of membranes and have either adhered or welded seams
2. Modified roofs: Roofs made of asphalt-based strips around 24 inches wide that run in the same direction and have a very fine gravel coating
3. Built-up roofs: Roofs that consist of several alternating layers of tar and felt paper and covered by a layer of large gravel

It is important to recognize the type of roof applicable to your building, as the variations in design create different areas to inspect for damages. At the same time, it will be beneficial to know this general information when discussing issues with service providers and scheduling maintenance calls. The more information you can provide in a service request, the better prepared the team will be.

A General Inspection

While inspecting the roof in general, be sure to notice any spots that are showing signs of deterioration and weak points, such as broken patches, that could result in leaks in the long run. Take a close look for signs of moisture on the entire roof, and especially around the various drainage lines. Police the entire roof and look for any trash, screws or scraps of hardware that have been left behind. Keep the roof as clean as possible, as any debris can easily become an obstruction to the systems operating there.

There will also be a number of drains on the roof to eliminate any moisture that accumulates. Be sure to examine these drains closely, and remove any debris that could hinder the flow of water. Similarly, gutters or downspouts should be checked for materials that will clog them and clean them out if necessary.

Standing water is definitely the enemy, as it will diminish the condition of the roof over time. If there is standing water around any of the drains, and the cause of the problem cannot be determined, be sure to contact your service provider immediately, as this is not a problem that should go unaddressed.

Roof Top Units

RTUs are the heating and air conditioning units that play an important role in any restaurant's operations. It is extremely important that these units be in optimal working order to maintain the desired temperature within the building, both in the front and back of the house, and at a minimal cost.

System failure can result in a less-than-desirable dining experience for customers and extreme working conditions for the staff. For that reason, it is a good idea to take a frequent look at these units and make sure they are all functioning at the desired levels.

A good place to begin is to examine the inner workings of the unit. Start by removing the access panel and visually inspecting the fan belt for cracks or dry rot. Do not reach into the unit, as the chance for injury is very high. Take a look at the coil and filters to make sure they are clean. These are a standard responsibility of a service provider, but it is a good idea to check on these to make sure the unit is being properly maintained.

Having inspected the inside of the unit, shift to the outside of the unit, specifically the wiring and conduit. Make sure both are in good condition, checking for cracks and dry rot or exposed wires. Keep in mind that anything that looks abnormal is an opportunity for disaster in the long run, and it is best to err on the side of caution.

Next, take a look at the fins on the condenser coil. Check to make sure they are not bent or flattened in any way, as this will inhibit airflow and result in the system performing below optimal level. The entire area should also be clear of any debris, as this presents potential causes of inhibited airflow. Again, the service provider should be taking care of this aspect of the unit, but it can't hurt to check and make sure there is not an issue that is going unaddressed.

Finally, every RTU has a drain system, and it is very important to make sure it is in good condition and functioning properly. Check for breaks in the line and evidence of moisture accumulation on the roof. Standing water on the roof will act as a magnifier and hasten the deterioration rate. Taking a few minutes to inspect these lines can easily avoid thousands of dollars in unexpected roof repairs or, even worse, damage to the walls and ceilings inside the building.

Condensing Units and Lines

The condensing units are remote units that service equipment inside the restaurant, such as ice machines, salad bars and walk-in coolers or freezers. These units can be visually examined in much the same way as the RTUs were.

The first thing to check is the fins on the condensers. Make sure none of them are bent or flattened, as this will again restrict the airflow to the unit. The service provider should be combing these fins out, but again, it is always wise to inspect them to make sure they are being properly maintained.

As these units play an essential role in the refrigeration units, it is crucial to confirm that the refrigeration lines are intact and properly insulated. The ambient temperature on the roof can climb to well over 100 degrees, so keeping these lines properly insulated will go a long way toward making sure your refrigeration units perform at peak levels.

Another warning sign is ice or a build-up of frost on the unit. If any ice or frost build-up is detected on the unit, there is a good chance an issue exists with the refrigerant levels or with the unit itself. Detection of frost is a valid reason to contact a service provider and have the unit thoroughly inspected and serviced. Failure to do so can result in the unit shutting down completely, leaving you in an emergency situation.

Just as with the RTUs, it is important to inspect the wiring on these units and ensure nothing is exposed to the elements or showing signs of decay. These units have boots that seal the lines going from the unit on the roof to the cooling equipment inside. Inspect these boots for signs of deterioration. Any moisture that can get past these boots is entering the building and is following a pathway through the ceiling and walls.

Exhaust Fans

There are several different types of exhaust vents located on the roof of a building. Restaurants in particular will have several different vent systems, including bathroom vents and dishwashing units. Do a visual inspection to make sure the belts and fans are working properly and are not hindered by foreign objects. Check the wiring for exposure and inspect the boots, making sure they are intact and sealed. It is also very simple to remove the top of the unit and inspect inside. Do not reach into the unit itself; a simple visual inspection of the belt system will suffice to make sure it is in place and functioning properly. Look for signs of breakdown or extreme wear, and if any of these are detected, contact the service provider to address the issue.

Hood Vents

The hood vents that service the fryers and cooking and grilling areas of the kitchen are probably the most important ventilation system found on the roof. For obvious reasons, this system requires the most attention.

Make sure all the boots and seals are intact and any wiring is completely sealed. Check all of the side panels on the unit and make sure they are in place and secure, as this protects the unit from the elements. Finally, look inside the unit and make sure it is clean, keeping your hands clear while doing so. The service provider for these units should be coming out periodically to clean the unit, and it is important to check from time to time and determine if a more aggressive maintenance schedule is needed.

Along the same lines, it is vital that you check the area around the grease exhaust and make sure it is clean. These units are usually cleaned using a pressure washer, and the grease that comes off during a cleaning can be very damaging to the roof itself.

Lighting

The roof is usually where the conduit and wiring that powers any neon or LED lights or signs are located. Inspect the conduit lines to make sure there are no opening or exposed wires. Check all the lights, making sure their wiring is intact and unexposed, and confirm that all the caps for the lights are in place and secure. Any exposure to the elements at such a critical point can result in a short in the lighting system.

Roof Access/Hatch

Finally, after completing your inspection, take a close look at the rooftop access. Whether the access is via a ladder on the outside of the building, or through a hatch on the inside, it is very important that the access remains locked and secured at all times. The goal is to keep anyone who should not have access to your roof from ever being there in the first place. So, buy a lock, and make sure the access to the roof is secured at all times.

In the end, it all comes down to common sense. By simply taking a few minutes to examine the roof, and all of the various units located there, it is possible to avoid major issues in the future and the hefty price tag that accompanies them. While the roof is the most volatile point of any building, it is not the only place where quick, simple inspections and minor adjustments can result in thousands of dollars saved.

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