

Summary

Purpose of the visit to the Freddy's in Fredericksburg, VA was to address complaints of poor hood capture.

Building pressure was initially found to be negative (-0.044" wc) and approximately net -600 CFM. The outside air intakes were found to be shut which is primary cause for the negative pressure. This negative pressure also affects hood capture because as doors are opened it creates air drafts. Closing the OA intakes also increases the return air in the kitchen which becomes detrimental for hood capture.

Initial smoke test was performed on both KEF-1 and KEF-2 and was poor on both hoods.

RTU-1, 2 & 3 supply airflow was found to be acceptable. The outside air for each unit was set to the original design. RTU-3 outside air damper actuator is not functioning however and the damper had to be manually set.

KEF-1 serving the griddle hood was found to be operating at 1086 CFM of 2400 CFM design and was increased to 2016 CFM. A temporary belt was found installed and after replacing with a proper V-belt the airflow increased substantially. The hood capture improved significantly after airflow increased.

KEF-2 serving the fryer hood was found to be operating at 958 CFM and was reduced to 787 CFM (Design is 775 CFM)

MUA-1 airflow was measured as 1563 CFM out of design of 2592 CFM. The outside air intake filters are clogged and need to be cleaned.

After balancing was completed the building pressure improved to -0.021" wc. The building is still negative due to the MUA being low on flow. Smoke capture was tested on fryer and capture is approximately 90-95%. Capture on griddle hood is 95-100% while observing live cooking. Hood capture is greatly improved but there are some recommendations that need to be completed to further improve:

Recommendations:

1. Temporary belt was found on EF-1 and replaced with permanent V-belt which increased airflow significantly. Ensure that preventative maintenance company replaces with proper V-belt moving forward.
2. MUA mesh intake filter is clogged and restricting airflow. Recommend cleaning.
3. EF-1 (Restroom) is not running. Recommend servicing.
4. Hood filters on both the fryer and griddle hoods need to be cleaned.
5. Hood alarm "Temp sensor 4 not connected". Recommend contacting Captive Aire service.
6. Inside of KEF-1 housing has significant amount of grease buildup. Recommend cleaning.
7. KEF-2 has noticeable vibration. Recommend servicing.
8. RTU coils are dirty and need to be cleaned.
9. RTU filters are dirty and need to be cleaned.

See pictures on following pages for more details.