NATIONAL TAB

Comfort. Under control.

Summary

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

Building pressure was initially found to be negative (-0.023" wc) and approximately -2600 CFM. The outside air intakes were found to be shut.

RTU-1 (Dining) airflow was found to be at 4857 CFM which is very low (240 CFM/ton). There is a high static pressure in the return duct (-1.01" wc). The outside air damper was found shut and opening up likely increased supply airflow however did not have time to re-test.

RTU-2 (Kitchen) airflow is also low. It is operating at 2720 CFM (272 CFM/ton). There appears to be room to increase the speed however there is a high static pressure in the supply duct. Did not want to increase and cause issue by further increasing the static pressure. Increasing would also cause return air to increase which can be detrimental to hood capture. Left as is but recommend investigating the restriction in the supply duct further.

KEF-1 (Griddle exhaust) was balanced to 2317 CFM. Hood 1-A served by this fan is not in use for cooking

KEF-2 (Fryer exhaust) was balance to 1431 CFM. This is excessive for this hood and can likely be reduced closer to approximately 900 CFM for better efficiency and overall building performance. A pulley change will likely be required to reduce airflow.

MUA airflow is low for the application. Appears to be due to clogged intake air filters. Recommend thoroughly cleaning or replacing the filters. There was also one leg of voltage and amperage that was measured to be low which could be affecting the motor speed.

After balancing was completed the building pressure improved to -0.01" wc. However the net airflow is still approximately -1000 CFM. Once KEF-2 is reduced and the MUA filters are cleaned, the building pressure should be neutral to positive. Live cooking was observed and hood capture was satisfactory for both hoods.

Recommendations:

1. KEF-1, KEF-2, and MUA belts need to be changed with permanent cogged V-belts.
2. MUA mesh intake filter is clogged. Recommend cleaning/replacement
3. RTU-1 outside air filter is not installed. Recommend installing to prevent debris and animals from entering the unit.
4. RTU-2 was found with grease inside the compartment from the smoke loss. Recommend cleaning and then monitoring to make sure it does not accumulate.
5. EF-2 disconnect is hanging from the unit and not properly secured. Recommend resolving.
6. MUA has one leg of electricity that was measured to have low voltage. This can mean that there is a loose electrical connection and can degrade the performance of the motor. The rated voltage is 208V but 184V was measured on one leg inside the MUA compartment. Recommend having an electrician inspect.
7. Men's restroom exhaust fan is not running. Recommend servicing or replacement.

8. After the items above are resolved, recommend monitoring hood capture. If issue persists, National TAB will need to return to retest the deficient items.

See pictures on following pages for more details.