National TAB

Project Summary

The scope of this project was to complete a total flow TAB of the existing Shake Shack restaurant. RTU-2 was recently replaced, all other equipment is existing.

New Equipment

RTU-2 was found to be in good running condition. The final filters were removed for testing as they have a buildup of dirt and debris. NTi made a fan speed adjustment as well as set the outside air to approximately 20% of the supply airflow.

Existing Equipment

The kitchen exhaust fans were both found to be running upon arrival. Kitchen exhaust fan 1, serving the left side of the kitchen hood, was found to exhaust more air than is required. NTi was unable to make an adjustment to the fan speed due to the belt tensioner already being at max length. Therefore, reducing fan speed requires a shorter belt. This increased fan speed does not appear to be causing any issues within the space. KEF-2 was found to be operating within the design window and was not adjusted.

The restroom exhaust fan (EF-1) was found not to be operating. NTi checked for power at the disconnect switch and found no voltage.

RTU-1 was found to be outputting more airflow than recommended. NTi was unable to reduce fan speed as the motor pulley had fully tightened on itself and then seized in this position. It is recommended to free this pulley or replace it so that fan speed may be reduced. Approximately a 20% reduction in fan speed would be optimal. The outside air was set proportionally high so that fan speed may be reduced without finding a new outside air damper position.

RTU-3 outputs 352CFM/ton. This is acceptable, but slightly low compared to the other two RTUs. The return grille in the space was found to be dirty/clogged with dust and the final filters are also due for replacement. The outside air damper is also jammed. These are likely the main contributors to the reduced supply CFM performance. NTi opted not to adjust the motor pulley, airflow is expected to naturally increase once these maintenance issues are remedied.