

## Project Summary

The Purpose of this visit was to perform a Test, Adjustment, and Balance at Wendys #5401 in Appleton Wisconsin. Initially the store building pressure measured at  $-0.10$  " W.C.. with all systems operating. This is extremely negative. The dining RTU (RTU-2) has been replaced and was balanced to design. Economizers on both RTUs are now operational and these were set for performance and efficiency. As stated during our initial visit, without an additional source of outside air (besides the RTUs), it does not appear possible to bring this store within an acceptable pressure range. We were able to bring the building to  $-0.048$ " W.C., cutting the stores negative pressure in half. Typically, a store should fall within tolerance of  $-0.02$ " W.C. to  $+0.02$ " W.C. This helps with the overall comfort and efficiency of the space. Although we cannot push the building positive with installed equipment, there are several other issues that can be addressed to improve the performance of this system. These issues and recommendations to address them are described in the report below.

## Technical Summary

RTU-2 was replaced, and we were able to balance this unit to design based on tonnage. The unit is 12.5 ton and was balanced to 4534 cfm or 362 cfm/ton.

RTU-1, serving the kitchen, is still low on airflow. RTU-1 is a 12.5 ton unit and should be supplying 350 cfm/ton or 4,375cfm for performance and efficiency. The unit was initially measured to be supplying 3014 cfm and was increased to 3417 cfm by adjusting the motor sheave to 0 turns open. There is still some room left on the motor for an increase in fan speed, but we believe the curb adapter installed on this unit is restricting airflow. RTU-1 has had its economizer repaired, and it is now operational. Both units OA was set to roughly 20% of total supply air. Neither unit has humidity control, so increasing the level of outside air much beyond 20% will start to have a negative impact on the performance of the RTUs.

EF-1 is in a state of disrepair. The fan cover is barely attached, and we recommend replacement. The fan is performing well, however, and smoke capture is 100% on HD-1. Both exhaust hoods are performing well. 4-way diffusers installed in kitchen do not appear to be impacting hood performance, however, recommend perforated style installed should supply airflow on RTU-1 be increased.

HD-2 had its lights and capture jets operating during our initial visit. These are no longer operating. Recommend this is investigated and serviced.

RTU-1 could still use some cleaning to improve its performance. General cleaning of the coils and blower wheels can improve unit performance and efficiency. Recommend pleated filters or filter media is installed in RTU-2 as the unit still has its construction filters installed.

The restroom exhaust fan is still not functional.