

CUSTOMER:

Shari's Café and Pies, Renton, Washington

PRODUCT SPOTLIGHT:

Remote Troubleshooting

Shari's Café and Pies contacted CaptiveAire on August 31, 2017 after noticing poor exhaust flow from an existing hood. The wide range of components in the exhaust system (a few listed below) made the troubleshooting task complex.

- Belt driven, 1.5 HP American Coolair CUBA exhaust fan
- Demand Control Ventilation (DCV) system controls
- Variable frequency drive (VFD) controlling the exhaust fan speed

However, Shari's utilized CASLink, CaptiveAire's proprietary building management system, which gave the sales engineer remote access to monitor the following VFD output data: Fan amperage, fan speed, fan energy usage, and automated fault alerts.

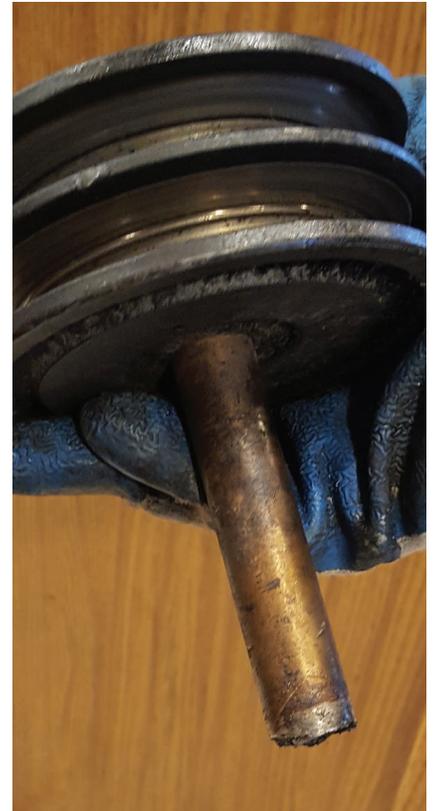
The sales engineer focused on troubleshooting mechanical components since CASLink did not generate any alerts to indicate bad electrical panel components. Using CASLink's VFD readings, he quickly identified the issue as a mechanical power transmission failure in the fan. The graph and description below show the engineer's analysis of the CASLink data.

The sales engineer immediately initiated a site visit from a mechanical technician who, upon arrival, confirmed the issue as a motor shaft failure (see the picture on the right). CaptiveAire supplied a new fan and now the system performs reliably.

Using CASLink to troubleshoot the issue and recommend next steps took the sales engineer less than 10 minutes. The insight obtained from the data saved a day of downtime and a minimum of \$170 for onsite service personnel to troubleshoot the full exhaust system.

CONCLUSION:

CASLink's ability to monitor VFD output data provides crucial insight and drives high quality service. Remote monitoring maximizes service efficiency by minimizing the cost and downtime associated with troubleshooting.



Troubleshooting Time:

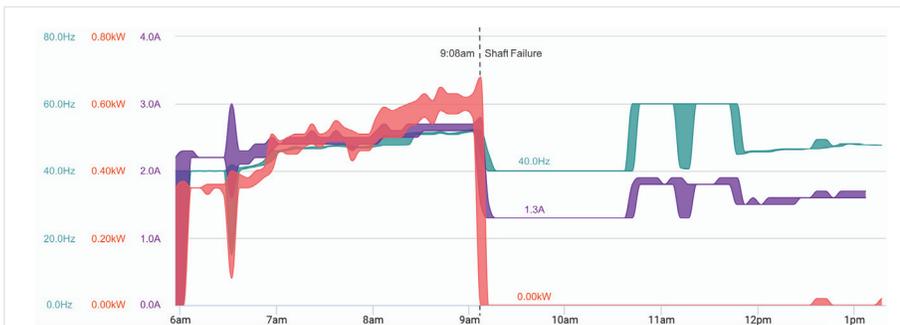
10
minutes

Minimum Savings:

\$170.00

CUSTOMER INFORMATION:

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This graph shows CASLink data from the VFD output at the moment the shaft failed. Note the drop in **amperage** and **energy usage**, indicating a loss of applied load, while the **shaft speed** remains within the normal range (between 40 and 60 Hz). Therefore, the data indicated that a component transferring the load from the blower to the motor (belt, shaft, pulley, etc.) had failed.