

Drive-through operator increases life of refrigeration

Result

- PerformanceAlert™ diagnostics module avoided string of service calls.
- Compressor was saved from eventual failure saving \$2000 in material and labor cost.
- Walk-in system defect was quickly fixed ensuring proper operation.
- Saving nearly \$150 per year in operation and labor cost.

Application

Outdoor condensing unit for walk-in cooler.

Customer

Convenience store located in Western Ohio.

Challenge

Numerous service calls for failed components required hours of diagnostics. Contractor was not able to diagnose the root cause of the compressor protector trips. Customer desired a refrigeration solution with built-in diagnostics to ensure reliable compressor operation.

Solution

The Copeland PerformanceAlert™ module was installed and detected a **trip** alert code. The history data gathered by the module revealed that the trip code occurred at least once a day. The resulting service call uncovered that the system was pulling down past the low pressure cut-out where the compressor should have shut down. Instead the compressor ran continuously until it heated up and the compressor protector tripped. After the compressor cooled, the protector reset, and this cycle repeated.



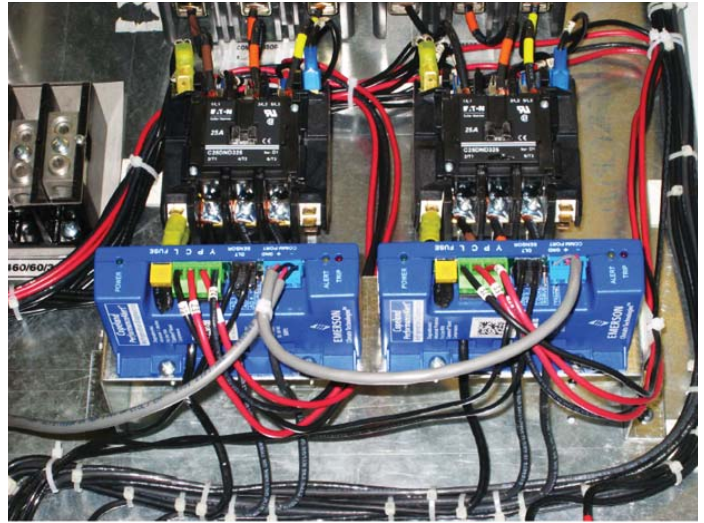
“My main concern is getting the equipment repaired the first time on the first visit. The main goal is that they get serviced quickly and we correct the problem.”

-Eck Refrigeration
Contractor



EMERSON
Climate Technologies

The refrigeration contractor determined that the low pressure cut-out was sticking and did not properly break the control circuit. The pressure control was replaced which fixed the system defect. Without the diagnosis from the Copeland PerformanceAlert™ module, this problem would not have been found, since the technician would have to be on site when the compressor protector tripped. Eventually the compressor protector would have fatigued and the compressor would have failed due to the overheating. The diagnostics module saved many service resulting to \$2000 savings in material and labor costs.



Advanced protection and early warning against common failure conditions will help lower maintenance costs. To avoid unneeded service, protection against common nuisance conditions is also included. With the fault code retrieval capabilities of the diagnostic controller, accuracy in the diagnosis of field issues is greatly enhanced, facilitating the service process to further reduce repair expenses.

Potential annual savings:

Greater refrigeration uptime = Improved reliability / lower maintenance cost

Prevent one compressor failure over life

- 1 Failure X \$300-\$1500 compressor / 10 years = \$90
- Faster diagnosis of failure modes
- Reduces time by ½ hour X \$90-\$120 per hour X 4 calls over life = \$20
- External monitoring reduces contractor time
- Reduces time by ½ hour X \$90-\$120 per hour X 4 calls over life = \$20
- Eliminate 1 service callback over life
- Service call: \$90 - \$270 / 10 years = \$18
- total \$148



Greater refrigeration uptime

- Reduced food loss & spoilage \$\$\$
- Contractor saved the day because saved system and eliminated downtime priceless

Other - energy savings

- Discharge line overheat protection
- Low voltage protection
- Short cycling / min on & off time

Resources

Learn more about the Copeland PerformanceAlert™ at EmersonClimate.com/copelandperformancealert

EmersonClimate.com

2010ECT-1 (09/10) Emerson and Copeland PerformanceAlert are trademarks of Emerson Electric Co. or one of its affiliated companies. ©2010 Emerson Climate Technologies, Inc. All rights reserved. Printed in the USA.