

## Remote Operating Center

Real-time support from monitoring through resolution.



# INNOVATIVE ROADSIDE ASSISTANCE FOR REFRIGERATION UNITS

Moving temperature-sensitive cargo can be risky business. Lost loads mean lost revenue. And food waste is a leading contributor to climate change\*. When a transport refrigeration unit (TRU) is in trouble, remote monitoring doesn't go far enough. You need action—ASAP.



**Thermo King's Remote Operating Center (ROC)** combines our advanced technology and hands-on expertise to deliver remote monitoring, predictive analytics and guided response to achieve a full resolution. Our involvement doesn't end until every alarm is diagnosed, resolved, recorded and reported.

## EVERY ALARM HAS AN ACTION PLAN.

When an alarm is received from your TRU fleet, our ROC team knows exactly what to do. Our defined and documented best-practice responses can be customized to your specific needs. Your preferred actions are kept in a database to ensure consistent reactions, on demand.



## KNOW WHEN IT'S AN EMERGENCY, AND WHEN IT'S NOT.

Categorizing alarm criticality is part of our process.

### GREEN:

No immediate action needed.

### YELLOW:

Guide driver through resolution steps or recommend to repair at the end of the day or after unloading.

### RED:

Follow smart routing to the closest, most qualified dealership.

\* Reduced Food Waste, Project Drawdown, [drawdown.org](http://drawdown.org)



## OUR INSIGHT CAN MAXIMIZE YOUR ROI.

Budget constraints may push the limits on aging units. After years of reliable service, risks can begin to increase. Preventing breakdowns is the best way to prevent the high cost of unplanned downtime, emergency repairs and load loss, and that's where our predictive algorithm steps in. We can accurately flag developing problems before they become noticeable, giving you time to fix them before trucks hit the road. So, you can feel more confident about keeping older units on the road longer, and phase-in newer units as your finances allows.



## FIND OUT ABOUT EMERGING PROBLEMS IN TIME TO PREVENT THEM.

Our cutting edge algorithm can predict failures before they occur. >90% of the time, reefer failures follow these predictions if no action is taken.

For example:

- **Charging system faults** – batteries, alternators, battery chargers, wiring harness issues
- **Low refrigeration capacity** – refrigerant leak detection, plugged coils, solenoid, inefficient loading practices, chutes, door seal degradation
- **Fuel system failures** – fuel filter plugging, injector failures, fuel pump failures
- **Diesel engine failures** – high coolant temps, head gasket
- **Low fuel conditions**



## STEER DRIVERS IN THE BEST DIRECTION.

When a TRU urgently needs hands-on attention, smart routing saves time by directing the driver to the closest dealership that has the time, parts and qualified labor available to complete the work without delay. With over 180 authorized service locations, 500 mobile trucks and 1,000 skilled technicians, Thermo King has options. We'll recommend the best one based on both proximity and current ability to complete the work.

# ROC in Review

## 24/7 Real-Time, Remote Monitoring

Enabled by TrackKing® ConnectedSuite™ and reviewed personally by Thermo King experts.

## Predictive Analytics

Our cutting edge algorithm can predict failures before they occur. >90% of the time, reefer failures follow these predictions if no action is taken.

## Two-Way Enhanced Communication/Notifications

The ROC team contacts you when an alarm requires action and tells you what to do next.

## Remote Diagnosis and Remediation

When possible, we'll take corrective actions remotely, or guide drivers through DIY repair steps.

## Best-Practices Responses

Prescribed reactions to every alarm are documented in a database.

## Smart Routing

Drivers are directed to the nearest Thermo King dealer that can complete the necessary repairs—without delay.

## Corrective Actions

At the dealership, diagnosis and repairs are performed by Thermo King Certified technicians.

## Data Records

See weekly/monthly fleet reports and access more detailed records via TrackKing. Track events and use the data as your guide to optimize fleet operations.



Thermo King – by Trane Technologies (NYSE: TT), a global climate innovator – is a worldwide leader in sustainable transport temperature control solutions. Thermo King has been providing transport temperature control solutions for a variety of applications, including trailers, truck bodies, buses, air, shipboard containers and railway cars since 1938. For more information, visit [thermoking.com](http://thermoking.com) or [tranetechnologies.com](http://tranetechnologies.com).