

## Advance™ Video Teaches Control Basics

Thanks to a new training video from Carrier Transicold, 12 minutes is all it takes for drivers to learn the fundamentals of one of the most sophisticated trailer refrigeration controllers available, the Advance™ microprocessor controller.

The new video explains operation basics, including the purpose of various indicator lights and buttons, and the enhanced functionality provided by the IntelliSet™ and Product Shield™ options.



The video is available as a DVD from Carrier Transicold dealers, or it can be [viewed online](#).

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## e Don't 'Fuel Around' When Hauling Refrigerated Cargo

Keeping a watchful eye on the fuel gauge is a natural part of driving, but reefer operators also need to be attentive to the refrigeration system fuel tank. If you run out of fuel for the reefer, you run out of cold, so to speak – a problem that can put cargo at risk.

Additionally, restarting the refrigeration unit may be problematic, because when the tank runs dry the engine can lose its prime. That can force a costly service callout.

Avoiding situations like that is the reason behind Carrier Transicold's new FuelCheck™ ultrasonic monitoring option for Vector™ and X2 Series trailer refrigeration units. The FuelCheck system is designed to help reduce operating costs and protect the integrity of the load by alerting drivers when low-fuel situations could lead to a system shutdown.

The FuelCheck system also enables fuel-consumption tracking, helping to improve fuel management across entire fleets.

[Learn more about how it works and the benefits it can offer your fleet.](#)



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## Don't 'Fuel Around' When Hauling Refrigerated Cargo

**Keeping a watchful eye** on the fuel gauge is a natural part of driving, but reefer operators also need to be attentive to the refrigeration system fuel tank. If that tank goes dry, you not only run out of cold, so to speak, but restarting the refrigeration unit may be difficult because the engine might lose its prime, requiring a costly service callout.

Avoiding situations like that is the reason behind Carrier Transicold's FuelCheck™ ultrasonic monitoring option for Vector™ and X2 Series trailer refrigeration units.



The FuelCheck system is designed to help reduce operating costs and protect the integrity of the cold chain by alerting drivers when low-fuel situations could lead to a system shutdown. In conjunction with the on-board datalogger or an optional telematics system, it also enables fuel-consumption tracking, helping to improve fuel management across entire fleets.

"The FuelCheck option is a perfect example of how Carrier Transicold applies technology to develop dependable solutions for the everyday challenges fleet operators face," said Kevin Williams, Carrier Transicold trailer product manager. "We expect it to help improve refrigerated operations for drivers and transport managers, while also helping to increase efficiencies and avoid costs associated with unnecessary breakdowns."

Service calls due to units running out of fuel and losing their prime can be among the most costly maintenance expenses faced by a fleet, according to Williams. "Those avoidable situations can also inconvenience a fleet's customers and risk the integrity of cargo," he said.

**Diesel fuel prices are at their highest levels in two years** and are projected to stay that way for some time, according to U.S.

Department of Energy reports. That means fuel consumption monitoring and analysis are more important than ever, said Williams.

FuelCheck software tracks the fuel level via the on-board integrated data recorder in the refrigeration unit's Advance™ microprocessor controller. Such information is important for fleet efficiency and can also help spot problems, such as fuel theft, especially when monitoring is done remotely via telematics.

In use, the Advance microprocessor continuously monitors the level of diesel in the refrigeration unit's fuel tank, as sensed by the FuelCheck ultrasonic transducer mounted at the top of the tank. Unlike capacitance sensors, ultrasound measurement provides accuracy regardless of the fuel type, be it ultra-low-sulfur diesel, a biodiesel blend or fuel with special conditioners or additives.

If the fuel level drops below 15 per cent for more than 30 seconds, the refrigeration unit's LED light bar glows a cautionary yellow to warn the driver, and the control unit's message center displays "**LOW FUEL WARNING.**" If the fuel level drops below 10 percent for more than 60 seconds, the controller continues to show the alarm warning while also automatically shutting down the unit to prevent loss of prime in the fuel lines.

"It's essential to the integrity of the cargo and the proper operation of the refrigeration system to ensure that it doesn't run out of fuel," said Williams. "Once the tank runs dry, air can be drawn into the system, and a technician will need to bleed the fuel lines before restarting. The FuelCheck option helps avert this, enabling the driver to restart the system as soon as the tank is refilled, without incurring the cost of an emergency call-out or requiring any other technical intervention."

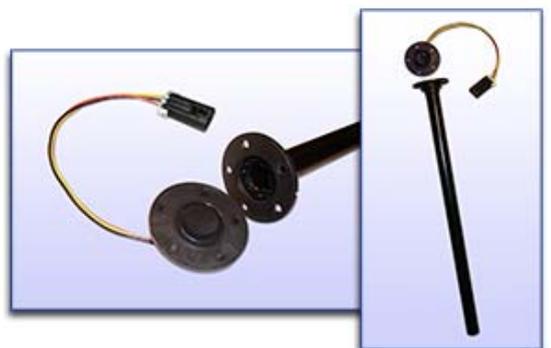
**A fuel level sensor is even more effective** when used with telematics for remote monitoring. The remote monitoring system can:

- Provide a real-time alert to theft by siphoning (unusual fast loss-of-fuel event).
- Identify possible fuel fraud by capturing how much fuel is actually added on refills.
- Alert a shipper that their asset is being used for cold storage, if it's stationary and consuming fuel.
- Provide fuel alerts concerning unattended assets, such as intermodal units or units running in a drop yard or over the weekend.
- Provide fuel consumption levels for fleet efficiency analysis.

The FuelCheck option consists of a transducer (sensor) mounted to the top of the fuel tank and a "focus tube" that extends into the tank. The tube provides the sensor with a more stable fuel surface to sense, which makes it less likely to be affected by fuel sloshing from side-to-side on rough roads or during cornering. Additionally, the FuelCheck software includes "debouncing" logic for digital filtering of fuel movement, as well as diagnostic programming to help ensure the sensor is always operating properly.

"Low fuel sensing logic is a capability we've had with the Advance microprocessor for years," said Williams. "However this improved sensor technology, coupled with the rising cost of fuel, makes FuelCheck an especially smart option for fleets to take advantage of now."

For more information about the FuelCheck option, turn to the experts within the Carrier Transicold dealer network or visit [www.trucktrailer.carrier.com](http://www.trucktrailer.carrier.com).



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