

CARB Recommends Fleets Re-verify Compliance Status

Owners of transport refrigeration units (TRUs) subject to California Air Resources Board (CARB) regulations are advised to re-verify their equipment compliance status with the Air Resources Board Equipment Registration database, known as ARBER.



CARB now requires TRU OEMs to provide the original manufacturing information related to a TRU serial number – such as engine serial number and model year – for TRU model years 2006 and newer. In order to improve ARBER accuracy, CARB then compares this OEM supplied data to the information that fleets previously entered into ARBER to look for mis-keyed information or other errors. If a conflict arises, this may change a TRU's status from "compliant" to "pending verification" until the error is corrected

According to a recent CARB advisory, fleet managers are encouraged to log into ARBER to see if previously compliant TRUs or gen sets now have a "pending verification" status. If so, the unit serial numbers should be double checked with corrections submitted through the TRU Help Line, 1-888-878-2826.

For more information, Review the [ARBER TRU Registration ListServ alert](#).

Dealer Locator

New 60-Series Truck Units Continue Supra™ Legacy, Deliver Improved Performance Plus EPA Compliance

"Supra™ diesel-powered truck units have a long-standing reputation for high performance and reliability," says David Dunn, Carrier Transicold's product manager for truck products.

"Our new 60-series continues to build upon that legacy and makes them even better."

A significant upgrade to the Supra line, the 60-series units deliver higher capacities and enhancements that improve reliability and reduce maintenance. Their engines also comply with EPA Tier 4 emissions standards, including the new test requirements introduced for 2013 models.

[Learn more about the Supra 60-series can fulfill your straight truck refrigeration needs.](#)



Using Two Setpoints Instead of One Saves Fuel

Part 2 in our series on reducing fuel consumption through smarter refrigeration discusses Range Protect, an innovative Carrier control feature that uses two setpoints rather than one.



Range Protect is based on the fact that not all refrigerated cargo needs to be cooled to a precise setpoint. For some cargoes, it's just a matter of making sure a product doesn't freeze when it's cold outside – or become damaged by excessive ambient heat. It's about managing a reasonable temperature range and assuring the cargo area is not too hot and not too cold.

"Range protect is innovation only found with Carrier's APX and Advance control systems," says Kevin Williams, Carrier Transicold trailer product manager. "We're thinking outside the box to help customers manage temperatures inside the box, while optimizing the runtime of their refrigeration unit."

[Learn more about Range Protect and other fuel-saving control strategies.](#)

Know someone who would like to receive eFlash? Simply forward this copy and tell them to subscribe using the button below!

Subscribe to eFlash

New 60-Series Truck Units Continue Supra™ Legacy, Delivering Performance and EPA Compliance

"Supra™ diesel-powered truck units have a long-standing reputation for providing high performance and reliability by using systems engineered for lower engine and compressor RPMs than competitive models," said David Dunn, product manager, truck products, Carrier Transicold. "Lower speeds mean better durability, longevity and reliability over the life of the unit. Our new 60-series continues to build upon that legacy."

Carrier Transicold's new Supra 60-series truck refrigeration units feature improved refrigeration performance, enhanced reliability and compliance with 2013 emissions requirements from the U.S. Environmental Protection Agency.

Among the 60-series' improvements are:

- Optimized electric standby systems, resulting in significant refrigeration standby capacity improvements for most models and the highest electric standby capacities among truck refrigeration systems available in North America
- New high-performance, maintenance-free integrated fan/motor assemblies with an expected 10,000+ hour motor life
- A maintenance-saving Extended Service Interval (ESI™) oil system with a 1,500-hour service period
- Various drive system upgrades for enhanced performance and reliability
- Improvements to the electrical system, such as the use of sonic welds and the elimination of splice points for fewer connections and increased reliability



"These advancements represent a significant upgrade to Carrier Transicold's Supra product line," Dunn said. "The improvements, including use of maintenance-free and extended service interval components, significantly reduce the total cost of ownership for the Supra 60-series."

The Supra 60-series comprises five single-temperature models – the Supra 560, 660, 760, 860 and 960 – covering the full spectrum of straight truck refrigeration needs, with refrigeration capacities up to 32,000 BTU (at 35° F) for the Supra 960.

SUPRA 60-SERIES CAPACITIES (BTU/h) 100° F Ambient, 35° F Setpoint

Percentages show capacity improvement over comparable competitive standard-equipped units.

	Supra 560	Supra 660	Supra 760	Supra 860	Supra 960
Engine	14,500	17,500	20,000	23,000	32,000
Powered	--	--	8% more	7% more	16% more
Electric	14,000	15,500	18,000	22,000	31,000
Standby	8% more	3% more	13% more	19% more	38% more

Engines are certified to the EPA Tier 4 standard for non-road engines of less than 25 horsepower, which for 2013 adds a not-to-exceed (NTE) requirement. The NTE standard requires that engines not exceed maximum allowable emissions regardless of how they operate, including factors such as altitude and ambient temperature.

For more information about the Supra 60-series diesel-powered single-temperature truck units from Carrier Transicold, turn to the experts within the Carrier Transicold dealer network or visit www.trucktrailer.carrier.com.

Reducing Fuel Consumption with Smarter Refrigeration Units – Part 2

In a [previous issue of eFlash](#), Carrier Transicold Trailer Product Manager Kevin Williams discussed some of the special control applications, such as IntelliSet™ and ProductShield™, that enable customers to fine tune refrigeration control and fuel efficiency for specific requirements. This issue discusses Range Protect, a Carrier-exclusive application that uniquely uses a pair of setpoints to control refrigeration.

For many cargoes, precision temperature control is the name of the game. Lettuce: 33° F, plus or minus a degree. Ice cream, nothing greater than -15° F. But for some cargoes, maintaining temperatures to a setpoint is less essential. It's just a matter of making sure a product doesn't freeze when it's cold outside – or become damaged by excessive ambient heat.

The Range Protect application uniquely allows two setpoints to govern operation of the refrigeration system.



"The solution," explained Kevin Williams, trailer product manager, "is to manage a temperature range, assuring the cargo area is not too hot and not too cold. In this case, you're making sure the temperature is 'just right' without using unnecessary and excessive fuel."

The Range Protect mode, used with Carrier's APX and Advance control systems, is uniquely designed to optimize fuel savings by using two setpoints to control the unit's refrigeration cycle. When used, the refrigeration unit only runs if the trailer's interior temperature deviates beyond user-defined upper and lower limits, helping to further reduce fuel consumption and system hours from the already fuel-efficient start/stop operation.

An example might be a company that hauls candy year-round through multiple climate zones. In frigid weather or climates candy needs to be protected from freezing; and above 70° F, from melting. In this instance, lower and upper boundaries are set – for example, 40° F and 65° F. Depending on the time of year and climate, it's possible that for much of a haul the refrigeration system may not run at all. Should interior trailer temperatures reach the upper setpoint, the refrigeration system kicks into cooling mode. Likewise, if temperatures fall below the lower threshold, the refrigeration system's heating function takes over.

"With Range Protect, the fuel savings and reduced engine run time can be significant, compared to the alternative of continuously running the refrigeration unit around an arbitrary single setpoint to maintain a constant temperature," Williams said. "This innovative application shows how we think outside the box to help customers manage temperatures inside the box, while optimizing the runtime of their refrigeration unit."

While the example above highlights Range Protect's benefits in hauling candy, many fleets have found expanded uses of this fuel saving feature, such as transporting soup, beverages, spirits, paint, and other less temperature sensitive products.

The Hardware and Humanware Matter, Too

Williams also said that while fuel consumption is important to fleets, there are many more aspects of efficiency to consider, especially with regard to some of the new 2013 models.

"New Tier 4 compliant platforms offer much higher efficiency, which delivers a number of benefits without tradeoffs – so you can achieve lighter weight, higher capacity, faster pulldown, use less refrigerant, and operate more quietly as a result of lower engine RPMs."

Proper training, Williams said, is also vital.

"Software and hardware are keys to efficiency, but the final component is 'humanware,'" Williams said. "We want to ensure that fleets and operators understand how to use the equipment and that it's running in the proper operating mode for the commodity being hauled. If the driver sets it to continuous-run mode and then accidentally leaves it there for weeks when it should be running in automatic start/stop, that is going to use significantly more fuel."

Williams noted that manufacturers such as Carrier Transicold offer training programs, including hands-on exercises with control module simulators to help customers understand and get the most value from their systems.

"Fleets and operators who thoroughly know how to tune their refrigeration equipment for efficiency, combined with highly efficient systems, are an excellent formula for fuel-saving success today, and in the future."



Mastering refrigeration unit controls are keys to efficiency. Take advantage of manufacturer-provided training programs.