

February 8, 2008

Subject: California Air Toxic Control Measures (ATCM) for Transport refrigeration Units (TRU)

California has instituted an Air Toxic Control Measure to reduce diesel particulate matter in Transport Refrigeration Units. **The ATCM for TRU's becomes effective 12/31/2008 and affects all refrigerated transportation companies doing business in California.** TRU's that operate in California are required to meet performance standards on a phased compliance schedule, based on the engine model year of the TRU. Remember these requirement references the engine model year of the refrigeration unit. With trailer new model years starting early in the preceding calendar year, the unit date of manufacture is many times a year earlier than the trailer model.

The Compliance Schedule stipulates when a TRU engine model year must be upgraded with an approved control strategy if operated in California. Engine compliance is possible in three different ways:

1. Meet the engine certification value (less than 7-years old or manufactured to CARB standards).  
Note: At this time we know of no TRU engine manufactured to meet the ULETRU standard. This means that a unit placed in service with a model year 2008 engine will have to be replaced or retrofitted with an approved ATCM in 2015.
2. Installing the required level of verified diesel emission by using an approved control strategy  
Note: Thermo King uses a particulate filter or a new engine as an approved control strategy. Exceptions and limitations apply.
3. Using an approved Alternative Technology  
Note: We have no information on approved alternative technologies.

| Transport Refrigeration Unit Compliance Schedule                            |  |                   |
|---|--|-------------------|
| TRU Engine Model Year   | In-Use Compliance Standard Compliance Date |                   |
|   | LETRU Required                             | ULETRU Required   |
| 2001 and older  | December 31, 2008                          | December 31, 2015 |
| 2002  | December 31, 2009                          | December 31, 2016 |
| 2003  | Does Not Apply – Requires ULETRU           | December 31, 2010 |
| 2004  | Does Not Apply – Requires ULETRU           | December 31, 2011 |
| 2005  | Does Not Apply – Requires ULETRU           | December 31, 2012 |
| 2006  | Does Not Apply – Requires ULETRU           | December 31, 2013 |
| 2007  | Does Not Apply – Requires ULETRU           | December 31, 2014 |
| 2008  | Does Not Apply – Requires ULETRU           | December 31, 2015 |
| 2009  | Does Not Apply – Requires ULETRU           | December 31, 2016 |
| 2010  | Does Not Apply – Requires ULETRU           | December 31, 2017 |
| 2011  | Does Not Apply – Requires ULETRU           | December 31, 2018 |
| 2012  | Does Not Apply – Requires ULETRU           | December 31, 2019 |
| 2013  | Does Not Apply – Requires ULETRU           | December 31, 2020 |
| 2014  | Does Not Apply – Requires ULETRU           | December 31, 2021 |
| LETRU – Low Emissions Transport Refrigeration Unit. See Table 1             |  |                   |
| ULETRU – Ultra Low Transport Refrigeration Unit See Table 2                 |  |                   |
| Generally, the compliance date is December 31st of model year plus 7 years. |  |                   |

**TABLE 1**

| <b>TABLE 2, LETRU<br/>(Low-Emission In-Use Performance Standards)</b>        |                                   |   |
|--|-----------------------------------|---|
| Horsepower   | Engine Certification              | Verified Diesel Emission Control Strategy     |
| less than 25   | 0.30 gram per hp-hr               | Level 2 or better (at least 50% PM reduction) |
| 25 or greater  | 0.22 gram per hp-hr               | Level 2 or better (at least 50% PM reduction) |
| <b>TABLE 3, ULETRU<br/>(Ultra-Low Emission In-Use Performance Standards)</b> |                                   |   |
| Horsepower   | Engine Certification              | Verified Diesel Emission Control Strategy     |
| less than 25   | Not Applicable – use other option | Level 3 (at least 85% PM reduction)           |
| 25 or greater  | 0.02 gram per hp-hr               | Level 3 (at least 85% PM reduction)           |

The Transport Refrigeration Unit Compliance Schedule (Table 1) stipulates that on or before December 31, 2008 a refrigerated trailer with a 2001 (or older) Transport Refrigeration Unit (TRU) must be fitted with an approved Air Toxic Control Measure (ATCM) that meets the Low Emission in-use performance standard for Transport refrigeration Units (LETRU). Furthermore that same unit will require an ATCM that meets the Ultra Low in-use performance standard for Transport refrigeration Units (ULETRU) on or before December 31, 2015. Generally, on or before December 31 of subsequent years, TRU's with engines 7-years old must be fitted with an approved ATCM according to the Transport Refrigeration Unit Compliance Schedule.

Owners of TRU's based in California will be required to apply for an California Air Resource Board (CARB) identification number (IDN) and submit an Initial Operator Report to ARB that provides information about the TRU's they operate in California. The regulation also requires Operator Report Updates and IDN Information Revisions to be submitted to ARB within 30 days of information changes. The information is needed to assist in the implementation of the ATCM. Owner/operators of non-California-based TRU's and TRU generator sets that are used in California may choose to voluntarily apply for an IDN. The coded identification numbers include information that will reduce roadside inspection time. The registration process is not in place. It is expected to be in place by the end of 2008. Start now to capture this information. Although we are not sure what all information is needed, we can assume much of it. Again, the engine model year is used to determine the compliance date for the in-use performance standards. Don't confuse the TRU model year with the engine model year when it comes to determining the compliance date. They can be different. You must go by the engine model year, not the TRU model year. So, the first thing you need to do is list all of your TRU's by engine model year. And while you're at it, you may as well list the engine make, engine model, engine serial number, the TRU make, TRU model and TRU serial number, and how many hours are on the TRU engine. ARB believes you'll need all of this and maybe more to develop your compliance plan. This information coupled with the trailer make, model, VIN, model year and trailer number should provide a good start.

*Note: CARB has indicated the U.S. EPA has not approved the California Air Resources Board's waiver application. CARB is confident the U.S. EPA will approve the waiver application. CARB is required by California law to implement and enforce this regulation. The lack of a decision by U.S. EPA does not limit ARB's mandate under state law.*

Thermo King of Delphos has a number of options to assist TRU users in meeting the requirements of the California Air Toxic Control Measure. We can also help you prepare information for the Air Resource Board Identification Number. Contact us and we will be happy to discuss alternatives that might assist in complying with this initiative.